STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET

This contract authorizes the professional services contractor to provide professional services. (Authority: 1984 PA 431)

CONTRACT FOR PROFESSIONAL LABORATORY TESTING SERVICES: Indefinite Scope-Indefinite Delivery

THIS CONTRACT, authorized this 11th day of February in the year two-thousand and twenty (2020), by the Director, Department of Technology, Management and Budget, BETWEEN the STATE OF MICHIGAN acting through the DESIGN AND CONSTRUCTION DIVISION of the DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET, State Facilities Administration, 3111 W. St. Joseph Street. Lansing, Michigan, hereinafter called the Department, and

Fibertec, Inc.
1914 Holloway Drive
Holt, MI 48842

the Prime Professional Laboratory Testing Services Contractor, hereinafter called the Professional.

WHEREAS, the Department proposes securing professional services for:

Indefinite-Scope, Indefinite-Delivery Contract No. 00869

File Number 761/20138.AGY **Contract Y No. 20153**

Department of Technology, Management and Budget, Design and Construction Division, Indefinite-Scope, Indefinite-Delivery Contract (ISID) for Minor Projects – Professional Laboratory Testing Services
Various State Departments and Facilities
Various Site Locations, Michigan

NOW THEREFORE, the Department and the Professional in consideration of the covenants of this Contract agree as follows:

I. The Professional shall provide the professional laboratory testing services, technical staff, and support personnel for each assigned Project provided and to the extent authorized by the Department of Technology, Management and Budget, Design and Construction Division (DCD) [The Department], and be solely responsible for such professional services. The Professional's services shall be performed in strict accordance with the Project.

II. The State of Michigan shall compensate the Professional for providing their professional services for the Project in accordance with the conditions of this Professional Services Contract.

IN WITNESS, WHEREOF, each of the parties has caused this Professional Services Contract to be executed by its duly authorized representatives on the dates shown beside their respective signatures, with the Contract to be effective upon the date on which the Professional received a copy executed by the authorized State of Michigan representative(s) by regular, registered, or certified mail or by delivery in person. This contract constitutes the entire agreement between the parties.

FOR THE PROFESSIONAL:

F1 Bentec, Inc.
Firm Name

CV0032040
SIGMA Vendor ID Number

Signature

2/14/20
Date

President
Title

FOR THE STATE OF MICHIGAN:

Director, Department of Technology, Management and Budget

03-04-2020
Date

DTMB/OES/OA&CONST.
20FEB20LAW10:52

Task Cost Table - All Except PFAS and ISM

Instructions:

All costs presented shall include digestion or extraction and disposal costs.
Costs are to be presented on a per sample basis for the method, matrix, preparation, and target compound list (TCL) specified.
When a method is not specified, the Contracted Laboratory shall indicate the method(s), as appropriate.
When the target compound list is specified as Contracted Laboratory TCL, the Contracted Laboratory shall include its target compound list as an attachment to the proposal.
Per- and Polyfluoroalkyl Substances (PFAS) TCLs are not provided. Costs for PFAS analytical tasks shall include up to the number of listed of PFAS compounds, not a specific set of PFAS compounds. This specific TCL will be determined by the Project Manager.
The reporting limit for 1,4-dioxane has not been provided. The specific reporting limit will be determined by the Project Manager.

Costs Applicable to Cleanup Procedures

Costs are applicable only when additional cleanup is required beyond that routinely conducted on samples.
The costs for cleanups routinely conducted for an analysis are included into the analytical costs.

Task #	Task Description	Matrix	Method	Cost Per Sample
1	Alumina Cleanup	Extract	3610	N/A
2	Alumina Cleanup	Extract	3611B	N/A
3	Florisil Cleanup	Extract	3620	$25.00
4	Silica Gel Cleanup	Extract	3630	N/A
5	Gel Permeation Cleanup	Extract	3640	N/A
6	Sulfur Cleanup	Extract	3660	$25.00
7	Sulfuric Acid Perm. Cleanup	Extract	3665	$25.00
8	Mercury Cleanup	Extract		N/A

Costs for Leaching Procedures to Evaluate the Mobility of Contaminants in Soil/Sediments

The following costs apply to leaching procedures required when the mobility of contaminants in Soil/Sediments are being evaluated.

Task #	Task Description	Matrix	Method	Cost Per Sample
10	SPLP Bottle Shake Leach	Soil/Sediment	1312	$35.00
11	SPLP ZHE Leach	Soil/Sediment	1312	$50.00
12	SPLP Bottle Shake Leach	Oil/Product	1312	$50.00
13	Neutral ASTM Leach	Soil/Sediment	D 3987-04	$35.00
14	Single ASTM Batch Leach	Soil/Sediment	D 5233-92	N/A
15	TCLP Bottle Shake Leach	Soil/Sediment	1311	$35.00
16	TCLP ZHE Leach	Soil/Sediment	1311	$50.00
17	TCLP Bottle Shake Leach	Oil/Product	1311	$50.00

Cost Per Sample for a Suite of Metals

Task #	Task Description	TCL	Matrix	Cost Per Sample
20	Michigan 10 Metals	Michigan 10 Metals	Aqueous	$81
21	Michigan 10 Metals	Michigan 10 Metals	Soil/Sediment	$81
22	Michigan 10 Metals	Michigan 10 Metals	Oil/Product	$81
23	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Aqueous	$144
24	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Soil/Sediment	$144.00
25	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Oil/Product	$144

Cost Per Sample for Individual Metals by ICPAES or ICPMS

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample per metal
30	Individual Metals (Total or dissolved)	NA	Aqueous	200.8/6020	$7.00
31	Individual Metals (Total or dissolved)	NA	Aqueous	200.7/6010	N/A
32	Individual Metals	NA	Soil/Sediment	200.8/6020	$7.00
33	Individual Metals	NA	Soil/Sediment	200.7/6010	N/A
34	Individual Metals	NA	Oil/Product	200.8/6020	$7.00
35	Individual Metals	NA	Oil/Product	200.7/6010	N/A

Costs for Chromium VI and Mercury Analyses

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
40	Chromium VI - Color	Aqueous	Filter 0.45 microns	7196A; 218.6; 3500-CRB	$18.00
41	Chromium VI - Color	Soil/Sediment	3060A	7196A	$45.00
42	Mercury - Total or dissolved	Aqueous		7470A 245.1	$18.00 $18.00
43	Mercury - Total	Soil/Sediment		7471A	$18.00

44	Mercury - Total	Oil/Product			$18.00
45	Mercury - Low Level	Aqueous		1631E	$65.00
46	Mercury - Total	Wastewater		245.1	$18.00
47	Mercury - Low Level	Soil/Sediment	1631 Appendix B	1631E	N/A
48	Mercury - Total	Air		NIOSH 0600	$60.00

Costs to Establish Soil/Sediment Fractions

The following cost applies when fine and coarse soil/sediment fractions must be established for metal analyses.

Task #	Task Description	Matrix	Method	Cost Per Sample
50	Soil/Sediment Fraction Preparation	Soil/Sediment		$50.00

Costs for Gasoline/Diesel Range Organics

For the below analyses, EGLE Lab TCL for carbon ranges must be used.

Task #	Task Description	Matrix	Method	Cost Per Sample
60	Gasoline Range Organics (C6-C10)	Aqueous	8015B	$35.00
61	Gasoline Range Organics (C6-C10)	Soil/Sediment	8015B	$40.00
62	Gasoline Range Organics (C6-C10)	Oil/Product	8015B	$40.00
63	Gasoline Range Organics (C6-C10)	Aqueous	GC/MS	N/A
64	Gasoline Range Organics (C6-C10)	Soil/Sediment	GC/MS	N/A
65	Gasoline Range Organics (C6-C10)	Oil/Product	GC/MS	N/A
66	Diesel and Oil Range Diesel (C10-C20) and Oil Range Organics(C20-C34)	Aqueous	8015B	$50.00
67	Diesel (C10-C20) and Oil Range Organics(C20-C34)	Soil/Sediment	8015B	$50.00
68	Diesel (C10-C20) and Oil Range Organics(C20-C34)	Oil/Product	8015B	$50.00

Organics with Contracted Laboratory TCLs

Costs for the below tasks require analyses using the Contracted Laboratory's TCL.

The Contracted Laboratory must provide a TCL for the analyses immediately after signing a contract.

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample
70	Herbicides	Contracted Laboratory TCL	Aqueous	8151A	$150.00
71	Herbicides	Contracted Laboratory TCL	Soil/Sediment	8151A	$150.00
72	Herbicides	Contracted Laboratory TCL	Oil/Product	8151A	$150.00
73	Carbonyls	Contracted Laboratory TCL	Aqueous	8315A	N/A
74	Carbonyls	Contracted Laboratory TCL	Soil/Sediment	8315A	N/A
75	Carbonyls	Contracted Laboratory TCL	Oil/Product	8315A	N/A
76	N-Methylcarbamates	Contracted Laboratory TCL	Aqueous	8318	N/A
77	N-Methylcarbamates	Contracted Laboratory TCL	Soil/Sediment	8318	N/A
78	N-Methylcarbamates	Contracted Laboratory TCL	Oil/Product	8318	N/A
79	Organophosphorus Compounds	Contracted Laboratory TCL	Aqueous	8141A	N/A
80	Organophosphorus Compounds	Contracted Laboratory TCL	Soil/Sediment	8141A	N/A
81	Organophosphorus Compounds	Contracted Laboratory TCL	Oil/Product	8141A	N/A

Cost for Sampling Kit to Collect Soil/Sediments Using Methanol Preservation

The cost for a methanol sampling kit applies only when not used to return a sample to the Contracted Laboratory.

Task #	Task Description	Matrix	Method	Cost Per Sample
90	Methanol Sampling Kit	Soil/Sediment	5035A	$5.00

Organics with EGLE Laboratory TCLs

The costs below apply for analyses conducted for the target compound lists indicated, and included into this document.

Note: These TCLs can change. Contracted laboratory(s) will be notified of any changes.

Task #	Task Description	EGLE Lab TCL	Matrix	Method	Cost Per Sample
100	Chlorinated Pesticides	Pesticides	Aqueous	8081A	$90.00
101	Chlorinated Pesticides	Pesticides	Soil/Sediment	8081A	$90.00
102	Chlorinated Pesticides	Pesticides	Oil/Product	8081A	$90.00
103	Chlorinated Pesticides - NPDES	NPDES Scan 3	Aqueous	608/612	$90.00
104	Polychlorinated Biphenyls, Aroclors	PCBs	Aqueous	8082	$50.00

105	Polychlorinated Biphenyls, Aroclors	PCBs	Soil/Sediment	8082	$50.00
106	Polychlorinated Biphenyls, Aroclors	PCBs	Oil/Product	8082	$50.00
107	Volatile Organic Compounds, w TICS	Volatiles	Aqueous	8260B	$145.00
108	Volatile Organic Compounds, w TICS	Volatiles	Soil/Sediment	8260B	$145.00
109	Volatile Organic Compounds, w TICS	Volatiles	Oil/Product	8260B	$145.00
110	Volatile Organic Compounds, w/o TICS	Volatiles	Aqueous	8260B	$70.00
111	Volatile Organic Compounds, w/o TICS	Volatiles	Soil/Sediment	8260B	$70.00
112	Volatile Organic Compounds, w/o TICS	Volatiles	Oil/Product	8260B	$70.00
113	VOC's	EGLE TCL	Air-tedlar	TO-15	$90.00
114	VOC's	EGLE TCL	Air-bottle vac	TO-15	$175.00
115	VOC's	EGLE TCL	Air-canister	TO-15	$200.00
116	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Aqueous	8260B	$45.00
117	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Soil/Sediment	8260B	$50.00
118	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Oil/Product	8260B	$50.00
119	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Aqueous	8270C	$205.00
120	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Soil/Sediment	8270C	$205.00
121	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Oil/Product	8270C	$205.00
122	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Aqueous	8270C	$130.00
123	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Soil/Sediment	8270C	$130.00
124	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Oil/Product	8270C	$130.00
125	Semi-volatiles Organic Compounds - NPDES	Semivolatiles	Aqueous	625	$130.00
126	Polynuclear Aromatic Hydrocarbons	PNAs	Aqueous	8270C	$55.00
127	Polynuclear Aromatic Hydrocarbons	PNAs	Soil/Sediment	8270C	$55.00
128	Polynuclear Aromatic Hydrocarbons	PNAs	Oil/Product	8270C	$55.00
129	Phenols	Phenols	Aqueous	8270C	$75.00
130	Phenols	Phenols	Soil/Sediment	8270C	$75.00
131	Phenols	Phenols	Oil/Product	8270C	$75.00
132	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Aqueous	8260B-SIM 8011 or 504.1	$40.00
133	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Soil/Sediment	8260B-SIM 8011 or 504.1	N/A
134	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Oil/Product	8260B-SIM 8011 or 504.1	N/A
135	Dissolved Gases Methane/Ethane/ Ethene	EGLE TCL	Aqueous	RSK 175 or Isotech or 8015	$45.00
136	Methane/Ethane/ Ethene	EGLE TCL	Air	RSK 175 or Isotech or 8015	$65.00

Cost for Library Search or Fingerprint Analysis

The cost for a library search applies when analyses conducted using Gas Chromatography with Mass Selective Detection was used but tentative identified compounds were not initially requested, or when a search for specific compounds identified by the state must be conducted.

Task #	Task Description	Method	Cost Per Sample
140	Fingerprint	8270C	**$90**
141	Library Search	8260B 8270C	$75.00

Costs for Cyanide Analyses

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
150	Cyanide - Total	Aqueous		9012A; 9014; 335.4; ASTM D7284	$25.00
151	Cyanide - Total (Extractable)	Soil/Sediment	9013A	9012A 9014 335.4	$40.00
152	Cyanide - Available	Aqueous		OIA 1677; ASTM D6888	$60.00
153	Cyanide - Available (Extractable)	Soil/Sediment	9013A	OIA 1677; ASTM D6888	$75.00
154	Cyanide – Total Preservation Kit	Aqueous		Provided with Kit	$15.00
155	Cyanide Available Preservation Kit	Aqueous		Provided With Kit	$15.00
156	Cyanide - Amenable	Aqueous			$70

Costs to Determine Nitrogen Forms

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
160	Ammonia	Aqueous		350.1 4500 NH3	$18.00
161	Ammonia	Soil/Sediment		350.1 Mod	N/A
162	Kjeldahl Nitrogen	Aqueous		351.1 351.2	N/A
163	Kjeldahl Nitrogen	Soil/Sediment		351.1 Mod. 351.2 Mod.	N/A
164	Nitrate, Nitrite, Nitrate + Nitrite	Aqueous		353.2 4500 NO3 F	N/A
165	Nitrate, Nitrite, Nitrate + Nitrite	Aqueous		300.0 300.1	$35.00
166	Nitrate, Nitrite, Nitrate + Nitrite	Soil/Sediment	D 3987-04	353.2 4500 NO3 F	N/A
167	Nitrate, Nitrite, Nitrate + Nitrite	Soil/Sediment	D 3987-04	300.0 300.1	$40.00

Costs for Organic Carbon

Task #	Task Description	Matrix	Method	Cost Per Sample
170	Total Organic Carbon (TOC)	Aqueous	415.1 5310C	N/A $25.00
171	Dissolved Organic Carbon (DOC)	Aqueous	415.1 or 5310C	$25.00
172	Total Organic Carbon (TOC)	Soil/Sediment	Loyd Kahn, Walkley-Black, Combustion	N/A
173	Fraction Organic Carbon	Soil/Sediment	Walkley-Black	N/A
174	Fraction Organic Carbon	Soil/Sediment	Combustion	N/A
175	Fraction Organic Carbon	Soil/Sediment	D2974-87	N/A

Waste Characterizations

The RCRA lists are provided in the latest guidance for waste characterization.

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample
180	Ignitability - Pensky-Martens	NA	Various	1010	$15.00
181	Ignitability - Setaflash	NA	Various	1020A	N/A
182	Corrosivity - Ph	NA	Various	9040B	$10.00
183	Corrosivity - Towards Steel	NA	Various	1110	N/A
184	Volatile Organic Compounds	RCRA List	Extracts	8260B	$70.00
185	Semi-volatile Organic Compounds	RCRA List	Extracts	8270C	$130.00
186	Pesticides - RCRA	RCRA List	Extracts	8081A	$90.00
187	Polychlorinated biphenyls, Aroclors	RCRA List	Extracts	8082	$50.00
188	Herbicides	RCRA List	Extracts	8151	$150.00
189	Metals	RCRA List (8)	Extracts	Various	$67.00
190	Paint Filter Liquids Test	NA	Various	9095	$10.00

Costs for Common Environmental Parameters and Non-common Sample Extractions for Soil/Sediments

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
200	Alkalinity	Aqueous		2320 B 310.2	$13.50 $13.50
201	Biochemical Oxygen Demand	Aqueous		5210 B	$25.00
202	Carbonaceous BOD	Aqueous		5210 B	$30.00
203	Chemical Oxygen Demand	Aqueous		410.3 410.4 5220 D	$25.00
204	Conductivity	Aqueous		120.1 2510 B	$13.50
205	Filtration - Dissolved Metals	Aqueous		3030 B	$10.00
206	Hardness - Ca-Mg Calculated	Aqueous		2340 B	$20.00
207	pH, Aqueous	Aqueous		9040C 4500H+B	$10.00 $10.00
208	pH, Soil/Sediments	Soil/Sediment		9045D	$15.00
209	Phenol	Aqueous		420.2 420.4 9066	$30.00

210	Solids - Total Dissolved	Aqueous		2540 C	$13.50
211	Solids - Total Suspended	Aqueous		2540 D	$13.50
212	Silica - Dissolved or Total	Aqueous		200.7 3120 B 4500-Si D 4500-SiO2 C	N/A N/A
213	Sulfide - Total and Dissolved	Aqueous		4500S2- D	$18.00
214	Sulfide - Extractable	Soil/Sediment	9031	4500S2- D	N/A
215	Total Solids	Aqueous		2540 B	$13.50
216	Turbidity	Aqueous		180.1 2130B	$15.00 $15.00
217	TPH - Aqueous	Aqueous		1664	$50.00
218	TPH - Solids	Soil/Sediment		9071A	N/A
219	TPH-Other	Oil/Product			N/A
220	Chloride	Aqueous		4500 Cl^- E	N/A
221	Chloride	Aqueous		300.0 300.1	$13.50
222	Chloride	Soil/Sediment	D 3987-04	4500 Cl^- E	N/A
223	Chloride	Soil/Sediment	D 3987-04	300.0 300.1	$35.00
224	Sulfate	Aqueous		375.2	N/A
225	Sulfate	Aqueous		300,0 300.1 ASTM 516-90(02)	$13.50
226	Sulfate	Soil/Sediment	D 3987-04	375.2	N/A
227	Sulfate	Soil/Sediment	D 3987-04	300,0 300.1 ASTM 516-90(02)	$35.00
228	Fluoride	Aqueous		4500-F B D E	N/A
229	Fluoride	Aqueous		300.0 300.1	$13.50
230	Fluoride	Soil/Sediment	D 3987-04	4500-F B D E	N/A
231	Fluoride	Soil/Sediment	D 3987-04	300.0 300.1	$35.00
232	Perchlorate	Aqueous		314.0 or Equivalent	N/A
233	Perchlorate	Soil/Sediment	D 3987-04	314.0 or Equivalent	N/A
234	Ortho-phosphorus	Aqueous		365.1	$13.50
235	Phosphorus - Total	Aqueous		365.4 4500P F 365.1	$18.00
236	Phosphorus - Total	Soil/Sediment		365.4 Mod	$33.00

Other Services

Task #	Task Description	TCL	Matrix	Method	Cost per Sample
250	Asbestos		ALL	600/R-93/116	$9.00
251	Formaldehyde		Aqueous	8315	N/A
252	Formaldehyde		Soil/ Sediment	8315	N/A
253	Explosives-Energetics	Explosives-Energetics TCL	Aqueous	8330	N/A
254	Explosives-Energetics	Explosives-Energetics TCL	Soil/ Sediment	8330	N/A
255	Nitroglycerin and PETN		Aqueous	8332	N/A
256	Nitroglycerin and PETN		Soil/ Sediment	8332	N/A
257	Bromide		Aqueous	300.0 9056	$13.50
258	Bromide		Soil/ Sediment	300.0 9056	$30.00
259	Total Volatile Solids		Aqueous	2540	$27.00
260	Chlorinated Hydrocarbons	Cl Hydrocarbons TCL	Aqueous	8121	N/A
261	Chlorinated Hydrocarbons	Cl Hydrocarbons TCL	Soil/ Sediment	8121	N/A
262	Acrylamide		Aqueous	8316	N/A
263	Acrylamide		Soil/ Sediment	8316	N/A
264	Total Organic Halogens (TOX)		Oil	9076	N/A
265	Total Organic Halogens (TOX)		Aqueous	9020B	N/A
266	Extractable Organic Halogens		Soil/ Sediment	9023	N/A
267	Alcohols	Alcohol TCL	Aqueous	8015B	$65.00
268	Alcohols	Alcohol TCL	Soil/ Sediment	8015B	$65.00
269	Color		Aqueous	NCASI 71.01	N/A
270	Carbon Dioxide		Aqueous	SM 4500	N/A
271	Dioxins/Furans		Aqueous	1613/8290	N/A
272	Dioxins/Furans		Soil/ Sediment	1613/8290	N/A
273	2,3,7, 8-D/F Congeners only		Aqueous	1613 or 1613B	N/A

274	2,3,7, 8-D/F Congeners only		Soil/ Sediment	1613 or 1613B	N/A
275	Grain Size		Soil/ Sediment	ASTM D421/422	N/A
276	Iron, Ferrous		Aqueous	SM 3500	$25.00
277	Dehalococcoides		ALL	qPCR	N/A
278	Functional Genes		ALL	qPCR	N/A
279	DNA Sequencing		ALL		N/A
280	Method 24		Paints	EPA 24	N/A
281	Phenolics- chlorinated		Aqueous	1653	N/A
282	PCB Congeners (209 list)		Aqueous	1668	N/A
283	PCB Congeners (209 list)		Soil/ Sediment	1668	N/A
284	WHO PCB Coplanars		Aqueous	1668	N/A
285	WHO PCB Coplanars		Soil/ Sediment	1668	N/A
286	Reactive Cyanide		Aqueous	SW 846	$40.00
287	Reactive Cyanide		Soil/ Sediment	SW 846	$40.00
288	Reactive Cyanide		Oil/Product	SW 846	$40.00
289	Reactive Sulfide		Aqueous	SW 846	$40.00
290	Reactive Sulfide		Soil/ Sediment	SW 846	$40.00
291	Reactive Sulfide		Oil/Product	SW 846	$40.00
292	Surfactants (MBA's)		Aqueous	SW5540	N/A
293	VOC Exempt from method 24		Paints	EPA 8260	N/A
294	Volatile Fatty Acids		ALL		N/A
295	Glycol	Glycol TCL	Aqueous	8015	$55.00
296	Glycol	Glycol TCL	Aqueous	8015	$55.00
297	Pesticides Specialty List	Pesticide Specialty TCL	Aqueous	8081A	N/A
298	Pesticides Specialty List	Pesticide Specialty TCL	Soil/ Sediment	8081A	N/A
299	1,4-dioxane		Aqueous		N/A
300	1,4-dioxane		Soil/ Sediment		N/A
301	1,4-dioxane		Oil/Product		N/A
302	Chlordane	Chlordane	Aqueous	8081/8082	$50.00
303	Chlordane	Chlordane	Soil/ Sediment	8081/8082	$50.00
304	Ultra Pure Water		Liter		$35.00

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
310	Premium, 24 hour	x 2.00
311	Premium, 2-3 day	x 1.75
312	Premium, 4-7 day	x 1.50
313	Premium, 8-13 day	x 1.00

Task Cost Table - Incremental Sampling Method

Instructions:
All costs presented shall include disposal costs.
Costs are to be presented on a per sample basis.

Task #	Task Description	Matrix	Cost Per Sample
400	ISM Processing-1Kg (Dry, Disaggregate, #4 or #10 Sieve)	Soil/ Sediment	$75.00
401	ISM Processing - each additional Kg	Soil/ Sediment	$50.00
402	2-Dimensional Slabcake subsampling-each additional analyte fraction	Soil/ Sediment	$25.00
403	Sectorial (Rotary Riffle) Splitting – each additional analyte fraction	Soil/ Sediment	N/A
404	Particle size determination (additional sieving or wet sieving)	Soil/ Sediment	N/A
405	Dish and Puck Mill - each Kg	Soil/ Sediment	N/A
406	Ball Mill - each Kg	Soil/ Sediment	N/A
407	Mortar and Pestle - each Kg	Soil/ Sediment	N/A
408	3-gram Mercury prep	Soil/ Sediment	$30.00
409	10-gram Metals prep	Soil/ Sediment	$50.00
410	1L narrow mouth bottle with 300 mLs MeOH for 30 increments	Soil/ Sediment	$60.00
411	1L narrow mouth bottle with 500 mLs MeOH for 50 increments	Soil/ Sediment	$65.00
412	2 L narrow mouth bottle with 1000 mLs MeOH for 100 increments	Soil/ Sediment	$100.00
413	1 L narrow mouth bottle with 300 mLs MeOH for 30 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$120.00
414	1 L narrow mouth bottle with 500 mLs MeOH for 50 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$130.00
415	2 L narrow mouth bottle with 1000 mLs MeOH for 100 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$200.00
416	40ml vial with 10 mLs MeOH (1 vial per increment)	Soil/ Sediment	$10.00
417	40 mL vial with 10 mL MeOH (MS/MSD) (1 vial per increment)	Soil/ Sediment	$20.00

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
420	Premium, 24 hour	x 2.00
421	Premium, 2-3 day	x 1.75
422	Premium, 4-7 day	x 1.50
423	Premium, 8-13 day	x 1.00

Task Cost Table - Per- and Polyfluoroalkyl Substances

Instructions:

All costs presented shall include extraction and disposal costs.

Costs are to be presented on a per sample basis for the method, matrix, preparation, and target compound list (TCL) specified.

Per- and Polyfluoroalkyl Substances (PFAS) TCLs for Method 537.1, 537 Revision 1.1 are specified in each method.

The TCL for MPART 28 and 12 compound lists are attached.

When a method is not specified, the Contracted Laboratory shall indicate the method(s), as appropriate.

Task #	Task Description	Matrix	Method	Laboratory Technique	Cost Per Sample
450	PFAS 537.1 – 18 Compounds List	Aqueous: Drinking Water	537.1	Solid phase extraction with LC MS/MS	N/A
451	PFAS 537 Revision 1.1 – 14 Compound List	Aqueous: Drinking Water	537 Revision 1.1	Solid phase extraction with LC MS/MS	N/A
452	PFAS ASTM D7979 – 21 Compound List	Aqueous: water/sludge /influent/effluent/ wastewater	ASTM D7979	Methanol extraction with LC MS/MS	$250
453	PFAS MPART 28 Compound List	Aqueous: Groundwater/ Surface Water/ Wastewater/ Other		LC MS/MS with Isotope Dilution	$250
454	PFAS ASTM D7979 – 21 Compound List	Soil/ Sediment	ASTM D7968	Methanol extraction with LC MS/MS	$250.00
455	PFAS MPART 12 Compound List	Fish		LC MS/MS with Isotope Dilution	N/A
456	PFAS MPART 28 Compound List	Foam		LC MS/MS with Isotope Dilution	N/A
457	PFAS MPART 28 Compound List	Solid Plant Material		LC MS/MS with Isotope Dilution	N/A
458	Sample Preparation (grinding, sieving, homogenizing, etc.)	Solid Plant Material/ Fish			N/A
459	SPLP – Bottle Shake	Soil/ Sediment/ Biosolids/ Fish	1312	Preparation only	$35

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
500	Premium, 24 hour	x 5
501	Premium, 2-3 day	x 3
502	Premium, 4-7 day	x 1.5
503	Premium, 8-13 day	x 1

ARTICLE I
PROFESSIONAL SERVICES SCOPE OF WORK

Provide professional laboratory testing services, technical staff and support personnel for various assigned laboratory testing Projects on an as-needed basis as defined by the Department. This laboratory testing Contract will be used for an unspecified number of ISID projects conducted under The Natural Resources and Environmental Protection Act, 1994 P.A. 451, as amended.

The scope of work for each assigned project will be defined at the time the project is awarded by the State to the Professional firm. The professional services required for each of these assigned projects requested by the Department may include any or all of the services outlined in the Project Statement/Scope of Work.

The Professional firm's services shall be performed in strict accordance with this Contract and be in compliance with the Department's approved and attached Project Statement.

The total compensation to be paid to the Professional by the Department for all assigned ISID Projects under this Contract will not exceed t o million dollars ($2,000,000.00) unless, otherwise approved in writing by the Department.

This Contract does not warrant or imply to the Professional firm, entitlement to perform any specific percentage (%) amount of environmental work during the life of this three (3) year Contract.

This Contract will remain in effect for three (3) years from the date of this Contract award but may be unilaterally terminated by the State of Michigan at any time, for cause or its convenience, by written notification of the State, to the Professional. Furthermore, this Contract may be extended for one (1) additional year, at the sole option and discretion of the State upon the Department providing written notice to the Professional prior to the expiration of the original three (3) year Contract time period. Any such time extension shall be subject to the terms and conditions of this Contract, including, but not limited to, the existing cost per sample included in this Contract for the Professional, their Subcontractors/Consultants, and their employees or agents.

Please note that for this Professional Services Contract ISID Contract No., as noted on page 1, must be provided on all Project correspondence and documents. Also, you are not to provide any laboratory testing services or incur expenses until individual ISID Projects are assigned to this Contract (see Article II – Compensation and the Appendix 1 – Project/Program Statement).

The Professional shall provide, without exception, every professional, scientific, technical, and environmental discipline, staff and support personnel, along with all supplies, equipment and testing apparatus, and all other specialized personnel, services necessary to achieve the Project Scope of Work as described in the attached Project/Program Statement(s), and to perform such work for compensation fee(s) according to the professional laboratory testing services rendered and be within the Professional firm's not-to-exceed compensation fee(s) amount authorized in this Contract and Department approved Contract Change Orders. The Professional shall check and verify the accuracy of all Project Scope of Work furnished by the Department or any other Project related source. The assignment of, or continuation of any assigned Project work is conditional upon satisfactory performance for the Department. The Professional firm's response to the assigned Project Scope of Work shall begin no later than two (2) business days from the date of written notification of the Department's need for professional services. The Professional acknowledges that the Department is the first interpreter of the Professional firm's performance under this Contract.

The Professional shall refer to the State of Michigan, Department of Environment, Great Lakes and Energy operational memorandum to assist them in performing analytical laboratory testing services for a Project.

The Professional acknowledges by signing this Professional Services Contract having a clear understanding of the requested professional services required by the Department to provide it, and further agrees that the terms and conditions of this Professional Services Contract provide accurate professional fee(s) for the Professional to provide the requested Project scope of work requirements for each assigned project. No increase in fee to the Professional will be allowed unless there is a material change made to the Project as described in its Project/Program Statement and the change in scope to the Project/Program Statement is accepted and approved in writing, by the Project Director and the Professional.

Professional services shall not be performed, and no Project expenses shall be incurred by the Professional prior to the issuance of a written and signed Professional Services Contract and a Contract Order authorizing the Professional to start the Project work. Compensation for Department directed changes to the Project will be provided to the Professional by a Contract Modification and/or Contract Change Order signed by the Department and the Professional.

The Professional shall immediately inform the Department whenever it is indicated that the Professional's authorized not-to-exceed Budget for any of the assigned Projects may be exceeded. The Professional shall make recommendations to the Department for revisions to bring the Project Cost back to the Professional's original authorized Budget amount. Any revision to the Project must be accepted and approved by the Department in writing.

The professional services may also include participation in legislative presentations as directed by the legislature or the Department.

No substitution of any "Key Principal Personnel/Employee" essential for the successful completion of the Project and identified in the Professional's Organizational Chart will be allowed by the Professional for this Contract without the prior written consent from the Project Director. Before any "Key Principal Personnel/Employee" substitution takes place, the Professional shall submit a written request to the Project Director, and this substitution request shall include the following information: (1) A request in writing for a No Cost Contract Modification; (2) Detailed written justification for this substitution; (3) The Professional's qualifications of any proposed "Key Principal Personnel/Employee" replacement; and (4) A written statement from the Professional assuring the Department that the Project scope of work will not be adversely affected by this substitution. This request to modify their Professional Services Contract must be accepted and approved in writing by the Project Director and the Director of the Department.

The Department will designate an individual to serve as the Project Director for the Project scope of work who shall be fully acquainted with the Project/Program Statement and have the authority to render Project decisions and furnish information promptly. Except in connection with issues under the Article XII - Contract Claims and Disputes text, the Project Director will exercise general management and administration for the Professional's services in so far as they affect the interest of the State. The Professional shall indemnify, defend, and hold harmless the State against exposure to claims arising from delays, negligence, or delinquencies by the Professional for the professional services of this Contract.

The professional services of this Contract shall be performed in accordance with the Phase/Task service description in this article. The following Phase/Task service description outlined in this Contract represents the Department's standard of care method for describing the Professional firm's responsibilities for providing the laboratory testing services of this Contract, but by inclusion, or omission, do not limit or exclude any regular or normal professional services necessary to accomplish the Project Scope of Work as required by the governing environmental enforcing agency, in full compliance with all applicable safety and health regulations and be in accordance with the approved Project Budget and the best industries accepted requisites for occupational safety and health standards of professional laboratory testing practice. However, all of the services outlined in this Contract may or may not be applicable to the Project/Program Statement and will require the Professional to identify only the services that are applicable for the Project at hand. The Professional shall coordinate the interface of the services required for their Project Scope of Work and be responsible for identifying any additional Task services necessary to successfully complete their Project Scope of Work.

PHASE 600 – LABORATORY TESTING/ANALYSIS SERVICES

The Department will appoint a State Project Manager to monitor and coordinate the performance of laboratory testing services. Except where the Contract is assigned, the Professional is responsible to the Project Manager for the accuracy and timeliness of their services.

Provide all laboratory testing services necessary to analyze, evaluate, and report the results to meet the requirements of the Project/Program Statement for all samples collected by the Department and other agencies authorized to act on behalf of the Department within the contractual requirements of this Contract.

The laboratory testing/analysis services under this phase may include but not be limited to coordination, all laboratory testing services identified in the contract, review and evaluation of the test results, produce and provide copies of correspondence, memoranda, electronic files, records of telephone or other conversations and other communications and reporting, as required by the Department/Client/Agency requirements and as outlined in the Project/Program Statement.

The Professional shall be available to provide non-analytical testing services related to the reported results such as expert witness testimony.

The testing and analysis of samples from the Department and/or the State/Client Agency shall receive first priority in laboratory testing processing. Laboratory testing and results shall be produced within the Contract turnaround times specified in this Contract.

Hold, and legally dispose of all testing and analysis samples, and sample bottles and containers from sampling and testing. Where testing and analysis services are provided by others, evaluate and approve, or disapprove, testing and analysis reports within the Contract turnaround times specified in this Contract and provide copies thereof marked with the Professional firm's approval. Provide written reports and appropriate correspondence summarizing the findings of the testing and analysis samples.

ARTICLE II
COMPENSATION

In consideration of the performance of this Contract, the Department agrees to pay the Professional, as compensation for professional services, a price per analysis for all analytical services, on a not-to-exceed basis as specified herein, subject to subsequent modification mutually agreeable to the parties hereto; provided, however, the Professional may not incur costs, or bill the Department, for professional services in excess of the estimates established for this Project without the prior written agreement of the Department.

The attached proposal prepared by the Professional in response to the Request for Proposal, by the Owner, may describe methodology, services, schedule, and other aspects of the work to be performed under the Contract but does not supersede the Contract.

2.1 PER SAMPLE COST Compensation is approved and authorized by the Department on a per sample cost basis for laboratory services by Professional firm(s) identified and listed in this Contract to: (1) Test and analyze samples collected by their technical employees; and (2) The Professional firm's per test costs shall be recognized by the Department to include sample shipping and all consumables necessary to prepare and secure the respective sample(s) and to conduct the required analytical testing procedures thereon.

The Professional shall provide, but no additional monetary compensation shall be allowed, for the professional services necessary to respond to and resolve all claims arising wholly or in part from the Professional firm's errors or omissions or the Professional firm's performance which is inconsistent with the Contract.

2.2 PREMIUM TIME/OVERTIME: This Contract anticipates that no premium or overtime is required to achieve the Project's scope of work. No compensation will be allowed to the Professional for any premium or overtime cost incurred to achieve the Project schedule of this Contract, unless directing in writing by the Project Director.

All incidental postage, mail, or other shipping or delivery services, acquisition, bad debts, previous business losses, employment fees, depreciation, and operating costs for equipment, including computer systems used for desktop applications, and any specialized testing equipment are to be included. The per test cost shall include, without exception, secretarial, computer/typing/word processing, editing, and clerical services utilized in any way for the Project as well as other non-technical and/or overhead employees. The per sample cost shall also include all profit without regard to its form or distribution.

2.3 DIRECT COST REIMBURSEMENT ITEMS: The Professional's testing services, and authorized reimbursable expenses shall be treated as an authorized reimbursable expense item at a direct cost. Reimbursement of authorized expense items will be at the per sample unit costs. The Professional shall be responsible for the selection of the supplier of their testing services or materials, the coordination, accuracy, and application of their testing services, whether provided by their staff or provided by its Subcontractors/Consultants. No mark-up of the Subcontractors' costs will be allowed.

Unless authorized elsewhere in this Contract, direct cost reimbursement items shall be limited to the required laboratory testing, reproduction of documents for legislative presentation, artistic productions, mobilization of testing equipment, laboratory costs for testing samples, or other essential testing components of the Project.

Compensation for this Contract shall not exceed the amounts per Project Phase shown in the attached Contract Order unless authorized by a Department approved Contract Modification. It shall be the Professional's responsibility to carefully monitor their and its Subcontractors/Consultants firms Project costs, activities, and progress and to give the Project Director timely notification of any justifiable need to increase the authorized fee. The Professional may not proceed with professional services that have not been authorized by the Project Director and shall immediately notify the Project Director if such services have been requested or have become necessary.

ARTICLE III
PAYMENTS

Payment of the professional services fee shall be based on the Professional's performance of authorized professional service(s) performed prior to the date of each submitted payment request. Payment requests shall be submitted monthly to the Project Director on a payment request form (DTMB-440). Payment for each monthly submitted payment request shall be made within thirty (30) consecutive calendar days following the Department's approval of the payment request. Payment requests shall include signed certification by the Professional of the actual percentage of work completed as of the date of invoicing for each Phase and summarize the amounts authorized, earned, previously paid, and currently due for each Project Phase. Payment requests shall be supported by itemized records or documentation in such form and detail as the Department may require. Each of the Professional's Subcontractors/Consultants 's submitted payment request applications shall include similar information. This includes, but is not limited to:

a) Task Numbers for the professional services provided.
b) Itemized invoices from each of the Professional's Subcontractors/Consultants documenting that firm's professional services charge and the Project work related services provided.

ARTICLE IV
ACCOUNTING

The Professional shall keep current and accurate records of Project costs and expenses and all other Project related accounting document to support the Professional's monthly application for payment. Project records shall be kept on a generally recognized accounting basis. Such records shall be available to the Department for a period of three (3) years after the Department's final payment to the Professional. The State of Michigan reserves the right to conduct, or have conducted, an audit and inspection of these Project records at any time during the Project or following its completion.

ARTICLE V
INSURANCE

The Professional shall purchase, maintain and require such insurance that will provide protection from claims set forth below which may arise out of or result from the Professional firm's services under this Contract, whether such service is performed by the Professional or performed by any of the Professional firm's Subcontractors/Consultants or by anyone directly or indirectly employed by them, or by anyone for whose acts they may be liable. The following insurance policy limits described below are intended to be the minimum coverage acceptable by the State:

For the purpose of this Section, "State" includes its departments, divisions, agencies, offices, commissions, officers, employees, and agents.

(a) The Contractor must provide proof that it has obtained the minimum levels of insurance coverage indicated or required by law, whichever is greater. The insurance must protect the State from claims that may arise out of or result from or are alleged to arise out of or result from the Contractor's or a Subcontractor's performance, including any person directly or indirectly employed by the Contractor or a Subcontractor, or any person for whose acts the Contractor or a Subcontractor may be liable.

(b) The Contractor waives all rights against the State for the recovery of damages that are covered by the insurance policies the Contractor is required to maintain under this Section. The Contractor's failure to obtain and maintain the required insurance will not limit this waiver.

(c) All insurance coverage provided relative to this Contract is primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State.

(d) The State, in its sole discretion, may approve the use of a fully funded self-insurance program in place of any specified insurance identified in this Section.

(e) Unless the State approves, any insurer must have an A.M. Best rating of "A" or better and a financial size of VII or better, or if those ratings are not available, a comparable rating from an insurance rating agency approved by the State. All policies of insurance must be issued by companies that have been approved to do business in the State. To view the latest A.M. Best's Key Ratings Guide and the A.M. Best's Company Reports (which include the A.M. Best's Ratings) visit the A.M. Best Company internet web site at http://www.ambest.com.

(f) Where specific coverage limits are listed in this Section, they represent the minimum acceptable limits. If the Contractor's policy contains higher limits, the State is entitled to coverage to the extent of the higher limits.

(g) The Contractor must maintain all required insurance coverage throughout the term of this Contract and any extensions. However, in the case of claims-made Commercial General Liability policies, the Contractor must secure tail coverage for at least three (3) years following the termination of this Contract.

(h) The minimum limits of coverage specified are not intended and may not be construed; to limit any liability or indemnity of the Contractor to any indemnified party or other persons.

(i) The Contractor is responsible for the payment of all deductibles.

(j) If the Contractor fails to pay any premium for a required insurance policy, or if any insurer cancels or significantly reduces any required insurance without the State's approval, the State may, after giving the Contractor at least 30 days' notice, pay the premium or procure similar insurance coverage from another company or companies. The State may deduct any part of the cost from any payment due the Contractor or require the Contractor to pay that cost upon demand.

(k) In the event the State approves the representation of the State by the insurer's attorney, the attorney may be required to be designated as a Special Assistant Attorney General by the Michigan Attorney General.

(l) Workers' Compensation Insurance: The Contractor must provide Workers' Compensation coverage according to applicable laws governing work activities in the state of the Contractor's domicile. If the applicable coverage is provided by a self-insurer, the Contractor must provide proof of an approved self-insured authority by the jurisdiction of domicile. For employees working outside of the state of the Contractor's domicile, the Contractor must provide certificates of insurance proving mandated coverage levels for the jurisdictions where the employees' activities occur.

(m) Motor Vehicle Insurance: If a motor vehicle is used in relation to the Contractor's performance, the Contractor must have vehicle liability insurance on the motor vehicle for bodily injury and property damage as required by law.

(n) Commercial General Liability Insurance: For claims for damages because of bodily injury or death of any person, other than the Professional's employees, or damage to tangible property of others, including loss of use resulting therefrom, to the extent that such kinds of liability are not insured by other specific liability insurance and are ordinarily insurable under general liability insurance. The Contractor must list the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents as additional insureds on the Commercial General Liability certificate. The Contractor also agrees to provide evidence that insurance policies contain a waiver of subrogation by the insurance company.

(o) Except where the State has approved a subcontract with other insurance provisions, the Professional must require any Consultant/Subcontractor to purchase and maintain the insurance coverage required in this Article. Alternatively, the Contractor may include a Consultant/Subcontractor under the Professional's insurance on the coverage required in that Section. The failure of a Consultant/Subcontractor to comply with insurance requirements does not limit the Professional's liability or responsibility.

(p) If any of the required policies provide claims-made coverage, the Contractor must: (a) provide coverage with a retroactive date before the effective date of the contract or the beginning of Contract Activities; (b) maintain coverage and provide evidence of coverage for at least three (3) years after completion of the Contract Activities; and (c) if coverage is canceled or not renewed, and not replaced with another claims-made policy form with a retroactive date prior to the contract effective date, Contractor must purchase extended reporting coverage for a minimum of three (3) years after completion of work.

(q) Contractor must: (a) provide insurance certificates to the Contract Administrator, containing the (1) project file number; (2) the project title; and (3) description of the program, at Contract formation and within 20 calendar days of the expiration date of the applicable policies; (b) require that subcontractors maintain the required insurances contained in this Section; (c) notify the Contract Administrator within 5 business days if any insurance is cancelled; and (d) waive all rights against the State for damages covered by insurance. Failure to maintain the required insurance does not limit this waiver.

(r) Contractor must maintain the insurances identified below and is responsible for all deductibles. All required insurance must: (a) protect the State from claims that may arise out of, are alleged to arise out of, or result from Contractor's or a subcontractor's performance; (b) be primary and non-contributing to any comparable liability insurance (including self-insurance) carried by the State; and (c) be provided by a company with an A.M. Best rating of "A" or better, and a financial size of VII or better.

Required Limits	Additional Requirements
Commercial General Liability Insurance	
Minimal Limits: $1,000,000 Each Occurrence Limit $1,000,000 Personal & Advertising Injury Limit $2,000,000 General Aggregate Limit $2,000,000 Products/Completed Operations Deductible Maximum: $50,000 Each Occurrence	Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds using endorsement CG 20 10 11 85, or both CG 2010 07 04 and CG 2037 07 0.
Umbrella or Excess Liability Insurance	
Minimal Limits: $2,000,000 General Aggregate	Contractor must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds.

Automobile Liability Insurance	
Minimal Limits: $1,000,000 Per Occurrence	Contractor must have their policy: (1) endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds; and (2) include Hired and Non-Owned Automobile coverage.
Workers' Compensation Insurance	
Minimal Limits: Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
Employers Liability Insurance	
Minimal Limits: $500,000 Each Accident $500,000 Each Employee by Disease $500,000 Aggregate Disease.	
Environmental and Pollution Liability (Errors and Omissions)	
Minimal Limits: $1,000,000 Each Occurrence $2,000,000 Annual Aggregate	Contractor must have their policy: (1) be applicable to the work being performed, including completed operations equal to or exceeding statute of repose; (2) not have exclusions or limitations related to Transportation (upset overturn, spills during loading or unloading, Hazardous Materials Handling, and Non Owned disposal site liability; and (3) endorsed to add "the State of Michigan, its departments, division, agencies, offices, commissions, officers, employees, and agents" as additional insured.
Professional Liability (Errors and Omissions) Insurance	
Minimal limits: $1,000,000 Each Occurrence $2,000,000 Annual Aggregate Deductible Maximum: $50,000 Per Loss	The Professional firm's Errors and Omissions coverage shall include coverage for claims resulting from acts of forbearance that cause or exacerbate pollution and claims of bodily injury and property damage. This insurance is required of all Professional firms who conduct professional environmental services including, but not limited to, any of the Phase 100 – Study services: *Contractual Liability Insurance for claims for damages that may arise from the Professional's assumption of liability on behalf of the State under Article VI concerning indemnification for errors, omissions, or negligent acts in the course of the professional service or other provision within this Contract to the extent that such kinds of contractual liability are insurable in connection with and subject to limits of liability not less than for the general liability insurance and the professional liability insurance and set forth in subsections (c) and (d) above.*

This Section is not intended to and is not be construed in any manner as waiving, restricting or limiting the liability of either party for any obligations under this Contract (including any provisions hereof requiring Contractor to indemnify, defend and hold harmless the State).

The attached, Certificates of Insurance documents required for this Project shall be in force for this Project until the final payment by the State to the Professional is made and shall be written for not less than any limits of liability specified above. The Professional has the responsibility for having their Subcontractors/Consultants firms comply with these insurance requirements.

ARTICLE VI
INDEMNIFICATION

(a) To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from liability, including all claims and losses, and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties), accruing or resulting to any person, firm or corporation that may be injured or damaged by the Professional in the performance of this Contract and that are attributable to the negligence or tortious acts of the Professional or any of its Subcontractors/Consultants, or by anyone else for whose acts any of them may be liable.

(b) Employee Indemnification: In any and all claims against the State of Michigan, its departments, divisions, agencies, boards, sections, commissions, officers, employees and agents, by any employee of the Professional or any of its Subcontractors/Consultants, the indemnification obligation under this Contract shall not be limited in any way by the amount or type of damages, compensation or benefits payable by or for the Professional or any of its Subcontractors/Consultants under worker's disability compensation acts, disability benefit acts or other employee benefit acts. This indemnification clause is intended to be comprehensive. Any overlap in provisions, or the fact that greater specificity is provided as to some categories of risk, is not intended to limit the scope of indemnification under any other provisions.

(c) Patent/Copyright Infringement Indemnification: To the extent permitted by law, the Professional shall indemnify, defend and hold harmless the State from and against all losses, liabilities, damages (including taxes), and all related costs and expenses (including reasonable attorneys' fees and costs of investigation, litigation, settlement, judgments, interest and penalties) incurred in connection with any action or proceeding threatened or brought against the State to the extent that such action or proceeding is based on a claim that any piece of equipment, software, commodity or service supplied by the Professional or its Subcontractors/Consultants, or the operation of such equipment, software, commodity or service, or the use of reproduction of any documentation provided with such equipment, software, commodity or service infringes any United States patent, copyright, trademark or trade secret of any person or entity, which is enforceable under the laws of the United States.

In addition, should the equipment, software, commodity, or services, or its operation, become or in the State's or Professional's opinion be likely to become the subject of a claim of infringement, the Professional shall at the Professional's sole expense (i) procure for the State the right to continue using the equipment, software, commodity or service or, if such option is not reasonably available to the Professional, (ii) replace or modify to the State's satisfaction the same with equipment, software, commodity or service of equivalent function and performance so that it becomes non-infringing, or, if such option is not reasonably available to Professional, (iii) accept its return by the State with appropriate credits to the State against the Professional's charges and reimburse the State for any losses or costs incurred as a consequence of the State ceasing its use and returning it.

Notwithstanding the foregoing, the Professional shall have no obligation to indemnify or defend the State for, or to pay any costs, damages or attorneys' fees related to, any claim based upon (i) equipment developed based on written specifications of the State; or (ii) use of the equipment in a configuration other than implemented or approved in writing by the Professional, including, but not limited to, any modification of the equipment by the State; or (iii) the combination, operation, or use of the equipment with equipment or software not supplied by the Professional under this Contract.

ARTICLE VII
OWNERSHIP OF DOCUMENTS

All Project deliverables, including but not limited to: reports, Bidding Documents, Contract Documents, electronic documents and data, and other Project related documents, including the copyrights, prepared and furnished by the Professional shall become the property of the State of Michigan upon completion of the Project, completion and acceptance of the professional's work, or upon termination of the Contract. Project deliverables shall be delivered to the Department upon their request.
The Professional shall have no claim for further employment or additional compensation as a result of this Contract requirement.
The Professional may retain a copy of all Project documents for their files.

If the Professional is in default or breach of its obligations under this Contract, the State shall have full ownership rights of the Project deliverables, including Bidding Documents and Contract Documents, including all electronic data. If the Professional is in default or this Contract Agreement is terminated, the State shall not use the Contract Documents and deliverables of this Contract for completion of the Project by others without the involvement of other qualified Professionals who shall assume the professional obligations and liability for the Project work not completed by the Professional. To the fullest extent allowed by law, the State releases the Professional, the Professionals Subcontractors/Consultants and the agents and employees of any of them from and against legal claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of the State's use of the Contract Documents other than in accordance with this Contract Agreement.

All Contract deliverables listed may be published or issued for informational purposes without additional compensation to the Professional. The Professional may not use any of the Contract Documents and Contract deliverables for any purpose that may misrepresent the professional services they provided.

The Professional shall retain full rights to the Contract Documents and deliverables and the right to reuse component information contained in them in the normal course of the Professional's professional activities. Any other uses shall require written permission by the State.

The Contract deliverables, Contract Documents, or other documents produced under this Contract may be used by the Department, or others employed by the Department or State of Michigan, for reference in any completion, correction, remodeling, renovation, reconstruction, alteration, modification of or addition to the Project, without monetary compensation to the Professional.

The State of Michigan will not construct additional Projects or buildings based on the work of this Contract without notice to the Professional.

ARTICLE VIII
TERMINATION

The State may, by written notice to the Professional, terminate this Contract in whole or in part at any time, either for the State's convenience or because of the failure of the Professional to fulfill their Contract obligations. Upon receipt of such notice, the Professional shall:

a) Immediately discontinue all professional services affected (unless the notice directs otherwise), and

b) Deliver to the State all data, drawings, specifications, reports, estimates, summaries, and such other information and materials as may have been accumulated by the Professional in performing this Contract, whether completed or in process.

8.1 If the termination is for the convenience of the State, an equitable adjustment in the Contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed professional services.

8.2 If the termination is due to the failure of the Professional to fulfill their Contract obligations, the State may take over the work and prosecute the same to completion by Contract or otherwise. In such case, the Professional shall be liable to the State for any additional cost occasioned to the State thereby.

8.3 If, after notice of termination for failure to fulfill Contract obligations, it is determined that the Professional had not so failed, the termination shall be deemed to have been affected for the convenience of the State. In such event, adjustment in the Contract price shall be made as provided in Section 8.1 of this article.

8.4 The rights and remedies of the State provided in this article are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE IX
SUCCESSORS AND ASSIGNS

This Contract shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns; provided, however, that neither of the parties hereto shall assign this Contract without the prior written consent of the other.

ARTICLE X
GOVERNING LAW

This Contract shall be construed in accordance with the laws of the State of Michigan.

ARTICLE XI
NONDISCRIMINATION

In connection with the performance of the Project under this, the Professional agrees as follows:

a) The Professional will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, age, sex *(as defined in Executive Directive 2019-09)*, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. The Professional will provide equal employment opportunities to ensure that applicants are employed and that employees are treated during employment, without regard to their race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

b) The Professional will, in all solicitations or advertisements for employees placed by or on behalf of the Professional, state that all qualified applicants will receive equal employment opportunity consideration for employment without regard to race, color, religion, national origin, age, sex, height, weight, marital status, or a physical or mental disability that is unrelated to the individual's ability to perform the duties of the particular job or position.

c) The Professional or their collective bargaining representative will send to each labor union or representative of workers with which is held a collective bargaining agreement or other Contract or understanding, a notice advising the said labor union or workers' representative of the Professional's nondiscrimination commitments under this article.

d) The Professional will comply with the Elliot-Larsen Civil Rights Act, 1976 PA 453, as amended, MCL 37.2201 et seq; the Michigan Persons with Disabilities Civil Rights Act, 1976 PA 220, as amended, MCL 37.1101 et seq; Executive Directive 2019-09*;* and all published rules, regulations, directives and orders of the Michigan Civil Rights Commission which may be in effect on or before the date of award of this Contract.

e) The Professional will furnish and file nondiscrimination compliance reports within such time and upon such forms as provided by the Michigan Civil Rights Commission; said forms may also elicit information as to the practices, policies, program, and employment statistics of the Professional and of each of their Subcontractors/Consultant firms. The Professional will permit access to all books, records, and accounts by the Michigan Civil Rights Commission, and/or its agent, for purposes of investigation to ascertain nondiscrimination compliance with this Contract and with rules, regulations, and orders of the Michigan Civil Rights Commission relevant to Article 6, 1976 PA 453, as amended.

f) In the event that the Michigan Civil Rights Commission finds, after a hearing held pursuant to its rules, that the Professional has not complied with the contractual nondiscrimination obligations under this Contract, the Michigan Civil Rights Commission may, as part of its order based upon such findings, certify said findings to the State Administrative Board of the State of Michigan, which the State Administrative Board may order the cancellation of

the Contract found to have been violated, and/or declare the Professional ineligible for future Contracts with the State and its political and civil subdivisions, departments, and officers, and including the governing boards of institutions of higher education, until the Professional complies with said order of the Michigan Civil Rights Commission. Notice of said declaration of future ineligibility may be given to any or all of the persons with whom the Professional is declared ineligible to Contract as a contracting party in future Contracts. In any case before the Michigan Civil Rights Commission in which cancellation of an existing Contract is a possibility, the State shall be notified of such possible remedy and shall be given the option by the Michigan Civil Rights Commission to participate in such proceedings.

g) The Professional shall also comply with the nondiscrimination provisions of 1976 PA 220, as amended, concerning the civil rights of persons with physical or mental disabilities.

h) The Professional will include, or incorporate by reference, the nondiscrimination provisions of the foregoing paragraphs a) through g) in every subcontract or Contract Order unless exempted by the rules, regulations or orders of the Michigan Civil Rights Commission, and will provide in every subcontract or Contract Order that said nondiscrimination provisions will be binding upon each of the Professional's Subcontractors/Consultants or seller.

ARTICLE XII
CONTRACT CLAIMS AND DISPUTES

In any claim or dispute by the Professional which cannot be resolved by negotiation, the Professional shall submit the claim or dispute for an administrative decision by the Department of Technology, Management and Budget, Director of Design & Construction within thirty (30) consecutive calendar days of the end of the disputed negotiations, and any decision of the Director of Design & Construction may be appealed to the Michigan Court of Claims within one (1) year of the issuance of the Director's decision. The Professional agrees that the Department's appeal procedure to the Director of Design & Construction is a prerequisite to filing a suit in the Michigan Court of Claims.

ARTICLE XIII
DEFINITION OF TERMS

The capitalized defined terms utilized in this Contract have the following definitions:

BUDGET: Shall mean the maximum legislatively authorized Budget amount to be provided by the State of Michigan and available for a specific purpose or combination of purposes to accomplish the Project Scope of Work for this Contract.

CONTRACT CHANGE ORDER: A written order issued and signed by the State of Michigan and signed by the Professional which amends the Contract Documents for changes in the attached Appendix 1 – Project/Program Statement Scope of Work requirements or an adjustment in Contract price and/or Contract time, or both.

CONTRACT DOCUMENT: Shall mean the Scope of Work, the Professional's laboratory testing services, and all attachments as may be necessary to comprise a Contract for the Project Scope of Work requirements.

CONTRACT MODIFICATION: A written amendment to the Contract Scope of Work requirements signed by the Department and the Professional. The preparation of bulletins and Contract Change Orders resulting from changes in the attached Appendix 1 – Project/Program Statement Scope of Work requirements as approved by the Department, State Project Manager and the Department of Technology, Management and Budget, Design and Construction Division's, Project Director will be compensated to the Professional by way of the Contract Modification in accordance with the Article II, Compensation text of this Contract.
Any Contract Modification of this Contract must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the Department may require.
No Contract Modification may be entered into to compensate the Professional for correcting, or for responding to claims or litigation for the Professional's laboratory testing errors, omissions or neglect on the part of the Professional.

CONTRACT ORDER: A written order issued and signed by the State of Michigan authorizing a professional firm to: (1) Begin to incur Project expenses and proceed with the Project Scope of Work; and (2) Provide the professional services stipulated in the fully executed Contract scope of work for the not-to-exceed fee dollar ($) amount designated in the Phases of the Contract Order. Issuance of this document by the State of Michigan certifies that: (1) The State will enter into a Professional Services Contract with a professional firm for the professional services described in the Phases of this Contract; and that (2) The proper two (2) sets of Original Certificate of Insurance documents have been received and accepted by the State along with the signing of the Contract by the Director of the Department of Technology, Management and Budget.

DEPARTMENT: The term "Department" shall mean the State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees and agents; and for purposes of this Contract, its duly authorized representative shall be the Director of the Department of Technology, Management and Budget, or their designee. The Department will represent the State of Michigan in all matters pertaining to this Contract. The Department will administer and interpret the Contract on a day-to-day basis during the term of the Contract scope of work.

DIRECTOR: The Director of the Department of Technology, Management and Budget or their authorized State of Michigan representative.

KEY PRINCIPAL PERSONNEL/EMPLOYEE: Shall mean all personnel/employees who are essential for the successful completion of the Project Scope of Work for this Contract and whose professional laboratory testing credentials and experience were evaluated by the Department for the purpose of awarding an laboratory testing services Contract, including but not limited to quality assurance officers, laboratory managers, and analysts performing the laboratory testing services.

PHASE: A discretely distinguishable laboratory testing Phase step necessary to produce the Project's Scope of Work in the course of the Professional providing laboratory testing services.

PRIME PROFESSIONAL SERVICE LABORATORY CONTRACTOR/PROFESSIONAL: Shall mean an individual, firm, partnership, corporation, association, or other legal entity permitted by law and licensed, as amended, to practice laboratory testing services in the State of Michigan.

PROJECT: Shall mean any new Contract Scope of Work for laboratory testing services authorized by the Department.

PROJECT COST: Shall mean the total Project Cost approved by the Department for an authorized Project for laboratory testing services.

PROJECT DIRECTOR: Shall mean the professional licensed State of Michigan employee of the Department who is responsible for directing and supervising the Professional's laboratory testing Project Scope of Work during the life of this Contract.

PROJECT/PROGRAM STATEMENT: Shall mean the attached Appendix 1 - Project/Program Statement scope of laboratory testing work requirements prepared by the Department that defines the Project Scope of Work.

PROJECT SCOPE OF WORK: Shall mean a request for professional laboratory testing services, authorized by the Department, and any Project activities required of the Professional to fulfill their contractual laboratory testing services responsibilities under this Contract for that request.

PROJECT TEAM: Consisting of the Professional, a representative of the Department, the Project Director, the State/Client Agency, and others as considered appropriate by the Department.

STATE: Shall mean the State of Michigan in its governmental capacity, including its departments, agencies, boards, commissions, officers, employees and agents. Non-capitalized references to a state refer to a state other than the State of Michigan.

STATE/CLIENT AGENCY: Shall mean the Michigan Department of Environmental Quality.

STATE CONTRACT ADMINISTRATOR: Shall mean a laboratory scientist designated by the Department authorized by the State to administer and interpret the Contract on a day-to-day basis during the term of this Contract Scope of Work. However, administration of this Contract implies no authority to negotiate, change, modify, amend, or otherwise alter the terms, prices, conditions, and specifications of this Contract unless specified within the Contract. All other authority is retained by the Department.

STATE PROJECT MANAGER: Shall mean the State Project Manager and other personnel authorized by the Department to act in a State Project Manager's role, excluding responsibilities to authorize work and approve monetary funds for Projects.

SUBCONTRACTOR: Any individual, firm, or employee thereof, not a part of the Prime Professional's staff, but used by the Prime Professional and whose professional service cost is ultimately paid by the State of Michigan, either as a direct cost or reimbursement.

TASK: Shall mean a quantifiable component of the Professional's laboratory testing services required to achieve the Project's Scope of Work.

ARTICLE XIV
COMPLETE AGREEMENT/MODIFICATION

This Professional Services Contract constitutes the entire agreement as to the Project between the parties. Any Contract Modification of this Contract and the Project/Program Statement scope of work requirements must be in writing, signed by duly authorized representatives of the parties, and shall be in such format and detail as the State may require. No Contract Modification may be entered into to compensate the Professional for correcting, or for responding to claims or litigation for the Professional firm's errors, omissions or neglect on the part of the Professional.

APPENDIX I

PROJECT/PROGRAM STATEMENT
SCOPE OF WORK

DTMB-0427 (R 11/19)

PROJECT STATEMENT

STATE OF MICHIGAN
DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
State Facilities Administration
Design and Construction Division
3111 West St. Joseph Street
Lansing, Michigan 48909

FILE NUMBER	ACCOUNTING TEMPLATE	PROPOSAL DUE DATE
Various	Various	Thursday, January 9, 2020

CLIENT AGENCY
Department of Technology, Management and Budget/Department of Environment, Great Lakes, and Energy

PROJECT NAME AND LOCATION
2020 Laboratory Testing Indefinite Scope Indefinite Delivery Contract

PROJECT ADDRESS (if applicable)
NA

CLIENT AGENCY CONTACT	TELEPHONE NUMBER
Bridget Walsh	571-284-5107
DTMB - DCD PROJECT DIRECTOR	TELEPHONE NUMBER
Kristi Zakrzewski, P.E.	517-243-5669

WALK-THROUGH INSPECTION DATE, TIME, AND LOCATION:
There not be a walkthrough for this ISID request for proposal.

PROJECT DESCRIPTION/SERVICES REQUESTED

Professional Contracted Laboratory Services sought to assist the Michigan Department of Environment, Great Lakes, and Energy (EGLE) as detailed in the attached Program Statement. The Contracted Laboratory will be required to effectively conduct and/or coordinate the activities in accordance with the latest federal and state environmental regulations. The services required will be to provide professional laboratory testing services in situations when the services cannot be provided by the EGLE Environmental Laboratory. Most services will be required for the EGLE Remediation and Redevelopment Division under the applicable guidance and memorandums published by that division.

The professional contracted laboratory firm is required to refer to State and Federal statutes, procedures, guidelines, and administrative rules when providing the services or entering into contracts with subcontractors to provide services.

The State of Michigan reserves the right not to award the contract(s) or award the contract(s) to one or more firms.

A Professional submitting a proposal for this ISID RFP cannot be listed as a subcontracted service on any other proposals.

Please NOTE:

- Proposal responses MUST also be uploaded to SIGMA VSS. Please enter the total cost for all phases as bid amount.
- Please remember that individual attachments can be no larger than 6mb.
- If you experience issues or have questions regarding your electronic submission, you must contact the SIGMA Help Desk for assistance. They can be reached by telephone at 888.734.9749 or by email at sigma-procurement-helpdesk@michigan.gov or sigma-vendor@michigan.gov
- Vendors are reminded to keep our office apprised of SIGMA VSS issues and to include your SIGMA ticket number when communicating with our office. Emailed submissions will need prior DCD approval and will be handled on a case by case basis. Approved emailed submissions MUST be received prior to 2:00 p.m. deadline to be considered.

NIGP CODES
92685 and 92693

DESIRED SCHEDULE OF WORK
The EGLE RRD Project Managers will determine the schedule.

ACCEPTING RFP QUESTIONS UNTIL: 12/11/19, 5:00 pm

REFERENCE STANDARDS: This project will comply with all codes, standards, regulations, and workers' safety rules that are administered by federal agencies (EPA, OSHA, and DOT), state agencies (DCH, EGLE, DNR, and MIOSHA), and any other local regulations and standards that may apply.

This form is required to be a part of the professional service contract. (Authority: 1984 PA 431)
Attachment(s)

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
State Facilities Administration
Design and Construction Division

REQUEST FOR PROPOSAL ADDENDUM NO. 1

This form identifies an Addendum to a Request for Proposal for Professional Services, and incorporates interpretations or clarifications, modifications, and other information into the Request for Proposals. Addenda will be numbered by the Project Director and distributed through www.michigan.gov/SIGMAVSS as an attachment.

TO:	DATE ISSUED
ALL PROPOSERS	12/16/2019
PROJECT NAME 2020 Laboratory Testing Indefinite Scope Indefinite Delivery Contract	FILE NUMBER Various
PROJECT DIRECTOR Kristi Zakrzewski	PROPOSAL DUE DATE: 1/9/2020

ADDENDUM ITEMS:

1. Answers to questions received by 12/11/19, 5:00 PM. Three pages.

APPROVED BY:

Kristi S. Zakrzewski

DATE: 12/16/2019

December 16, 2019

To: All interested parties

Subject: Department of Technology, Management, and Budget/
Department of Environment, Great Lakes, and Energy
2020 Laboratory Testing Indefinite Scope Indefinite Delivery Contract
Request for Proposal
Addendum No. 1

Please acknowledge receipt of this Addendum in your proposal.

I. Questions

The following questions have been compiled to clarify answers to questions in portions of the RFP package:

Q1. How will proposed alternate/additional methods for PFAS analysis be evaluated and scored? Is it the 10% Special Factors portion of the Technical Evaluation?

A1. Yes

Q2. Would you please confirm that the Professional does not need to provide a proposal for all analyses in a specific Service Area?

A2. The Professional is not required to provide a cost for all analyses listed in the Task Cost Table.

Q3. If a Professional has provided support to EGLE as a subcontractor, is that information notable as prior experience?

A3. Each Professional will need to determine the most appropriate and applicable experiences to be included in their individual proposals. Article 2 of the Contracted Laboratory Questionnaire(s) requests specific information regarding current and past contracted laboratory services.

Q4. Section 16.9 - Reporting compounds routinely analyzed but not requested. Does this apply to PFAS analysis?

A4. Yes. There are four published methods for PFAS analysis (537.1, 537 rev 1.1, ASTM D7979, ASTM D7968) requested in the Task Cost Table. The Task for each of these methods includes the full list of analytes per each specific method.

Q5. Must the Professional possess a Michigan Based Business License at the time of proposal submission?

A5. No.

Q6. Subcontractor: If multiple laboratories in a network will be utilized, is bidder required to identify a lead laboratory and list other network labs as subcontractors, or does "subcontractor" only apply to separate legal entities supporting subcontracted testing?

A6. For proposals that include laboratory services to be provided from multiple laboratory locations that are the same company, it is not necessary to identify a lead laboratory. Subcontractor refers to additional laboratories that are not within the same company.

Q7. Certification: Since Michigan does not have a state accreditation program for PFAS in drinking water or certify for other testing on non-potable, soil or other solid matrices, is evidence of NELAC or state-specific accreditation considered sufficient to assert "certified" for methods being proposed?

A7. Certifications are specific to method and media and will not extend to methods or media other than specified in the certification/accreditation. NELAC, federal, state-specific, or any other nationally recognized accreditation body will be accepted.

Q8. Incremental Sampling Method Questionnaire – Does the questionnaire apply only to ISM sample processing, or does it also apply to analyses performed on processed samples?

A8. The questionnaire only applies to sample processing.

Q9. Task Cost Table: General question – Is it permissible to utilize alternative or updated methods – e.g., Method 624.1 in lieu of Method 624?

A9. Yes, for updated methods. For all tasks in the Task Cost Table with a specified method, costs shall be provided for the specified method, without substitution, alternation, or modification. When a method has not been specified, the Contracted Laboratory shall indicate the method(s), as appropriate. All other methods and costs should be provided in the response to Article 5: Special Factors of the Contracted Laboratory Questionnaire.

Q10. Task Cost Table: Task # 48 – Mercury in Air – Bidder proposes to utilize Method NIOSH 6009.

A10. See answer A9.

Q11. Task Cost Table: Task # 50 – Soil/Sed Fraction Prep – Please confirm that this cost/sample is for the fractionation only – and does not include the cost of metals analyses.

A11. Yes, fraction only.

Q12. Task Cost Table: Tasks # 299-301 – 1,4-Dioxane Method is not referenced. Is it permissible to offer multiple methods for analysis at different rates – e.g., 522, 8260SIM, and/or 8270SIM – or does the state have a preferred method?

A12. Yes. List the preferred method in the Task Cost Table. Please refer to answer A9 for all other methods.

Q13. Task Cost Table: Tasks # 310-313 – Turnaround Times – There could be economic benefit for the state to express Rush TATs as a specific number of business days vs a range of days. For example, a 2 BD TAT premium will be higher than a 3 BD premium. Given ranges, bidders will need to quote the higher of the premiums for both TATs. Is it acceptable to quote separate rush TAT premiums for 1 BD, 2 BD, 3 BD, 4 BD & 5 BD. Ranges are more appropriate for longer TATs (6-7 BD & 8-13 BD).

A13. No. Please provide costs for the turn around time listed in the Task Cost Table.

Q14. Task Cost Table: Task # 452 – PFAS ASTM D7979 – Aqueous matrices. Method ASTM D7979 is a performance based method. Bidder proposes to reference method ASTM D7979, Methanol extraction – using LC MS/MS with Isotope Dilution. Will this method modification be acceptable to the State?

A14. See answer A9.

Q15. Task Cost Table: Tasks # 453, 455-457 – PFAS MPART – Multiple matrices. Is the 537M method reference acceptable to the State, or would the State prefer that the laboratory SOP be reported as the reference method?

A15. See answer A9.

Q16. Task Cost Table: Task # 454 – PFAS ASTM D7979 – Soil/Sediment matrices. Bidder proposes to utilize method 537Mod – LC MS/MS with Isotope Dilution (or lab SOP, if the State prefers) as an alternative to Method ASTM D7968. Will this substitution be acceptable to the State?

A16. See answer A9.

APPENDIX II

PROFESSIONAL'S PROPOSAL

Fibertec
environmental
services

January 7, 2020

Ms. Anne Watros
Department of Technology, Management & Budget
State Facilities Administration
Design and Construction Division
3111 West St. Joseph Street
Lansing, MI 48917

Re: Minor State Capital Outlay Projects
Professional ISID Proposal
2020 Laboratory Testing ISID RFP

Fibertec, Inc. appreciates the opportunity to submit this proposal to the DTMB for Minor State Capital Outlay Projects for ISID Professional Laboratory Testing Services 2020. The scope of work outlined in this proposal is designed to provide the highest level of defensible data in a cost effective manner.

Section I General Information

Fibertec, Inc. understands the Program statement and states that we can and will provide a complete laboratory testing service based on the approved project/program statements as outlined in the Request for Proposals.

Fibertec, Inc. has completed the Professional Questionnaire for each service we would like to be considered for, with a minimum of three examples and references of successful projects performed in the last five years for each service. Fibertec, Inc. has submitted resumes for all services under one Appendix and has included a signed Certification of a Michigan Based Business and the Responsibility Certification forms. Fibertec, Inc. will assume responsibility for all professional services offered in our proposal, whether or not we possess them within our organization.

Section II Proposal Format – Part I - Technical

The following documents are attached to this package, as outlined in Part I – Technical:

1) This cover letter, outlining the general proposal.
2) Questionnaire 1 for Per- and Polyfluoroalkyl Substances.
    a. Additional Personnel.
    b. NELAC Certificate and Scope as outlined in the questionnaire.
    c. Performance Sample Studies as outlined in the questionnaire.
    d. Quality Assurance Manual outlining information for the QAPP.
    e. Laboratory Organizational Chart.
    f. Reference Projects and Contact Information.

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

Fibertec environmental services

3) Questionnaire 2 for Incremental Sampling Method.
    a. Additional Personnel.
    b. NELAC Certificate and Scope has been attached with Questionnaire 1.
    c. Quality Assurance Manual outlining information for the QAPP has been attached with Questionnaire 1.
    d. Laboratory Organizational Chart has been attached with Questionnaire 1.
    e. Reference Projects and Contact Information.
4) Questionnaire 3 for All Services Except PFAS and ISM.
    a. Additional Personnel.
    b. Special Factors.
    c. NELAC Certificate and Scope has been attached with Questionnaire 1.
    d. NVLAP Certificate and Scope.
    e. Performance Sample Studies for the last 3 years as outlined in the questionnaire.
    f. Quality Assurance Manual Outlining information for the QAPP has been attached with Questionnaire 1.
    g. Laboratory Organizational Chart for Laboratory has been attached with Questionnaire 1, Laboratory Organizational Chart for Industrial Hygiene attached.
    h. Reference Projects and Contact Information.
5) Appendix for Submitted Resumes.

Section III Proposal Format – Part II – Cost

The following documents are attached to this package, as outlined in Part II – Cost:

6) Task Cost Sheets for PFAS, ISM, and All Services Except PFAS and ISM.
7) Cost Sheet Attachment explaining the difference in methods referenced by Fibertec, Inc. and those stated by EGLE. Fibertec, Inc. is not subcontracting for this proposal. Some reporting limits may differ from EGLE lists.

This proposal also includes the following information:

8) A signed Certification of a Michigan Based Business and the Responsibility Certification forms.

It is with anticipation that the experience and capability described with a focus on customer service will continue to qualify Fibertec, Inc. as an EGLE over-flow laboratory. I appreciate the opportunity to present the Laboratory in such a capacity and welcome any questions/comments that might further expedite such qualification.

Sincerely,

Lori A. Near
Sales Representative

LAN

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

Contracted Laboratory Questionnaire

Department of Technology, Management and Budget
2020 Laboratory Testing Services Indefinite-Scope Indefinite-Delivery (ISID)

Per – and Polyfluoroalkyl Substances

INSTRUCTIONS: Firms shall complete the following information in the form provided. A separate sheet may be used if additional space is needed. The Article number(s) the additional information pertains must be included on the separate sheet. Firms are to ensure all questions are answered completely in the most concise way possible to streamline the review process.

ARTICLE 1: BUSINESS ORGANIZATION

1. Business Organization Full Name: Fibertec, Inc.

   Business Organization Street Address: 1914 Holloway Drive, Holt, MI 48842; Office Staff Number: 52 full and part time, all staff have Michigan residency.

   Business Organization Mailing Address: 1914 Holloway Drive, Holt, MI 48842

   Business Organization Telephone Number: 517-699-0345

   Business Organization E-Mail Address: lab@fibertec.us

   Business Organization Website Address: http://www.fibertec.us

   Business Organization Point of Contact: Stacy Kotecki
   Business Organization Point of Contact Email and Phone: skotecki@fibertec.us; 517-699-0345 ext. 2.
   SIGMA Vendor ID: CV0032040

   If applicable, state the branch office(s), partnering organization or other subordinate element(s) that will perform, or assist in performing, the work: Fibertec Cadillac – 8660 Mackinaw Trail, Cadillac, MI 49601; Office Staff Number: 1 full time; all staff have Michigan residency. Fibertec Brighton – 11766 E. Grand River Road, Brighton, MI 48116; Office Staff Number: 4 full time; Field Staff Number: 7 full time; all staff have Michigan residency. Fibertec IHS Lansing - 3125 Sovereign Drive, Suite B, Lansing, MI 48911; Office Staff Number: 4 full and part time; Field Staff Number: 2 full time; all staff have Michigan residency. Branch offices may be utilized in pick up and/or drop off of sample supplies and samples, with the final destination being the Holt laboratory. Fibertec, Inc. pays Michigan taxes and all work is expected to be done in Michigan.

1.2 Check the appropriate status:

☐ Individual firm ☐ Association ☐ Partnership ☒ Corporation, or ☐ Combination – Explain:
Click or tap here to enter text.

If you operate as a corporation, include the state in which you are incorporated and the date of incorporation: Michigan, 1987

Include a brief description of the Contracted Laboratory's history: Fibertec was established by Matt Frisch in 1987. Over the years it has become a specialized provider of a diverse range of quality environmental services complemented by our value added services and personal care. Fibertec currently employs seventy people at four locations. Our headquarters and analytical laboratory are located in Holt, Michigan. Our industrial hygiene operations are located in Lansing, Michigan. Our geoprobe and drilling operations are located in Brighton, Michigan. We also have a satellite laboratory in Cadillac servicing Northern Michigan. With these offices we provide our clients with one-stop shopping, offering a variety of services that improves the ease in which our clients investigate contaminated properties. We are widely regarded as one of the premier quality service providers to the environmental industry throughout Michigan and parts of the Midwestern United States. We have performed the drilling, sampling, and analysis of samples from thousands of environmentally impacted properties to determine the nature and extent of environmental contamination. The projects we've worked on range from private residential sites to Brownfield Sites.

1.3 Can the firm provide an emergency 24/7 contact telephone number and mobilize analytical staff during non-scheduled work hours (i.e., weekends, holidays, evenings) during an emergency situation?

Yes ☒ No ☐

1.4 The firm is currently accredited and certified: Yes ☒ No ☐

If yes, list accreditations and certifications. Insert copies of accrediations/certifications, showing minimally: accreditation/certification body/agency, date of accreditation/certification, expiration date, methods covered, and parameters covered.

1.5 List the firm's current capacity for analysis of the following:

Methods	Number of Instruments per Location	Approximate Samples per Day per Location	Number of Locations
Method 537.1, 537 Rev 1.1, ASTM D7979	1	30	1

ARTICLE 2: PRIOR EXPERIENCE

2.1 Indicate any previous and current contract dates for providing Contracted Laboratory services to the Department of Environment, Great Lakes and Energy (EGLE) that you believe best illustrates your firm's capabilities to provide Contracted Laboratory services.

Year of Contract	Starting Date	Expiration Date
2019	June 2019	March 2020
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

2.2 Performance Sample Studies

Copies of performance sample studies for water from the provider of the studies for the following;

Provide any analysis of Per- and Polyfluoroalkyl Substances using USEPA methods 537.1, 537 Rev 1.1 and ASTM D7979 for aqueous samples.

NOTE: Other documentation than that provided by the provider of the studies, or edited documentation will not be accepted.

2.3 Provide a copy of the laboratories Quality Assurance Project Plan (QAPP). Please note that individual file size may not exceed 6 MB. The QAPP may be divided into multiple files for submittal.

ARTICLE 3: PERSONNEL STAFFING

3.1 Include an organizational chart.

3.2 Please fill out the following information regarding the personnel your firm considers key to the successful completion of the study or project scope of work:

Key Personnel 1
Name: Daryl Strandbergh — Job Title: Analytical Laboratory Director
Years Experience: 30+ — College Degree(s): BS, MBA

Key Personnel 2
Name: Heather Smith — Job Title: Operations Manager
Years Experience:16 — College Degree(s): BS

Key Personnel 3
Name: Ken Mueller — Job Title: Quality Assurance Officer
Years Experience:30+ — College Degree(s): AS, BBA

Key Personnel 4

Name:Bethany Annett — Job Title: Senior Project Chemist, Group Leader Semivolatiles
Years Experience: 20 — College Degree(s): BS, MS

Key Personnel 5

Name:Terisa Talamantez — Job Title: Chemist
Years Experience: 15 — College Degree(s): Associates Degree

3.3 Does the Contracted Laboratory Project Manager (PM) have at least three (3) years' experience as a PM? Yes ☒ No ☐

3.4 Does the Contracted Laboratory PM have a minimum of ten (10) years' experience with similar projects? Yes ☒ No ☐

3.5 Resumes for Key Personnel provided? Yes ☒ No ☐

ARTICLE 4: CONSULTANTS / SUBCONTRACTORS

4.1 Specifically, identify any other laboratories/consultants/subcontractors you plan to use for any part of the scope of work (*NOTE: If any support must be provided by a laboratory/consultant/subcontractor, said laboratory/consultant/subcontractor must indicate their capability and willingness to carry out the work*):

Laboratory/Consultant/Subcontractor 1
Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/ZipClick or tap here to enter text.:
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 2
Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 3
Business Name:Click or tap here to enter text.
Address: Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

ARTICLE 5: SPECIAL FACTORS

5.1 Attach a list in table format of all other analyses not included in this Request for Proposal (RFP) with the following information: analysis description, method, matrix, preparation (if appropriate), and cost per sample.

5.2 Include a brief description of your firm's special qualifications such as awards, recognitions, innovations, etc.
Fibertec is one of the largest providers of environmental laboratory services in the state of Michigan and has serviced as an Overflow Laboratory since 2016. We have a staff of 70 people, including approximately 30 working directly in the laboratory, 3 directly with PFAS analysis. Our environmental laboratory has more equipment and experienced staff available to devote to projects than most laboratories in Michigan. We have worked on a large number and variety of projects, including a significant number of EPA Brownfield projects within the state. We are accredited by NELAP, including for analysis of TO-15 through the state of Texas. We are accredited by NVLAP for asbestos analysis. We work with a variety of environmental consulting firms, including a number of consultants currently under contract with EGLE. Geographically, our main laboratory in Holt is close to the state laboratory for faster reponse time for sample pick up. We have offices in Lansing, Cadillac, and Brighton as well, giving us one of the widest geographical reaches of all environmental laboratories in the state. We can provide pick up and drop offs from Traverse City to Grand Rapids to Monroe, Michigan. Much of our work on numerous Brownfield projects provide similar experience

to projects within the overflow. These projects must meet Operational memorandum 2 criteria. Fibertec also provides a number of specialized tests including: 1.. Analysis of sub slab vapor samples, utilizing summa canisters and bottle vacs via TO-15 as well as analysis of PNA, PCB, and mercury in sub slab air samples via NIOSH methodology. Fibertec has provided this service for over 12 years. 2. Low level mercury analysis via EPA 1631, as well as sampling via EPA method 1669. 3. Available cyanide analysis via EPA method OIA 1677. 4. Fibertec has provided incremental sampling processing, subsampling, and analysis for clients. 5. Fibertec has provided asbestos laboratory services for the past 30 years. We are also involved in analysis of unique matrices such as ambient air, indoor air, and stationary sources. We are involved with testing methane in groundwater and PCB wipes. Our LIMS allows us to provide result in a variety of EDD formats to better integrate with consultants' information systems. We offer extensive experience and capability with both routine and non-routine testing with a focus on customer service and turnaround time. We believe Fibertec is qualified to continue to support EGLE as an overflow laboratory.

Fibertec environmental services

Additional Personnel – Questionnaire 1

Key Personnel 6

Name: Dan Robey — Job Title: Chemist
Years Experience: 7 — College Degree (s): Associates, BS

Key Personnel 7

Name: Matthew Frisch — Job Title: Principal- in- Charge, President
Years Experience: 35 — College Degree (s): BS

Key Personnel 8

Name: Anthony Donnelly — Job Title: IT Officer, Laboratory
Years Experience: 27 — College Degree (s): BS

Key Personnel 9

Name: Stacy Kotecki — Job Title: Client Services Coordinator
Years Experience: 15 — College Degree (s): BS

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

Texas Commission on Environmental Quality

NELAP-Recognized Laboratory Accreditation is hereby awarded to

Fibertec Environmental Services

1914 Holloway Drive
Holt, MI 48842-9437

in accordance with Texas Water Code Chapter 5, Subchapter R, Title 30 Texas Administrative Code Chapter 25, and the National Environmental Laboratory Accreditation Program.

The laboratory's scope of accreditation includes the fields of accreditation that accompany this certificate. Continued accreditation depends upon successful ongoing participation in the program. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current location(s) and accreditation status for particular methods and analyses (www.tceq.texas.gov/goto/lab). Accreditation does not imply that a product, process, system or person is approved by the Texas Commission on Environmental Quality.

Certificate Number: T104704518-19-9
Effective Date: 5/2/2019
Expiration Date: 1/31/2020

Executive Director Texas Commission on Environmental Quality

Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation

Certificate: T104704518-19-9
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Issue Date: 5/2/2019

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Matrix: ***Air & Emissions***

Method EPA TO-15

Analyte	AB	Analyte ID	Method ID
1,1,1-Trichloroethane	TX	5160	10248803
1,1,2,2-Tetrachloroethane	TX	5110	10248803
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10248803
1,1,2-Trichloroethane	TX	5165	10248803
1,1-Dichloroethane	TX	4630	10248803
1,1-Dichloroethylene	TX	4640	10248803
1,2,4-Trichlorobenzene	TX	5155	10248803
1,2,4-Trimethylbenzene	TX	5210	10248803
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10248803
1,2-Dichlorobenzene	TX	4610	10248803
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10248803
1,2-Dichloropropane	TX	4655	10248803
1,3,5-Trimethylbenzene	TX	5215	10248803
1,3-Butadiene	TX	9318	10248803
1,3-Dichlorobenzene	TX	4615	10248803
1,4-Dichlorobenzene	TX	4620	10248803
1,4-Dioxane (1,4-Diethyleneoxide)	TX	4735	10248803
1-Propene (Propylene)	TX	4836	10248803
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10248803
4-Ethyltoluene	TX	4542	10248803
Benzene	TX	4375	10248803
Benzyl chloride	TX	5635	10248803
Bromodichloromethane	TX	4395	10248803
Bromoform	TX	4400	10248803
Carbon tetrachloride	TX	4455	10248803
Chlorobenzene	TX	4475	10248803
Chlorodibromomethane	TX	4575	10248803
Chloroethane (Ethyl chloride)	TX	4485	10248803

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Matrix: ***Air & Emissions***

Chloroform	TX	4505	10248803
cis-1,2-Dichloroethylene	TX	4645	10248803
cis-1,3-Dichloropropene	TX	4680	10248803
Cyclohexane	TX	4555	10248803
Dichlorodifluoromethane (Freon-12)	TX	4625	10248803
Ethylbenzene	TX	4765	10248803
Hexachlorobutadiene	TX	4835	10248803
m+p-xylene	TX	5240	10248803
Methyl bromide (Bromomethane)	TX	4950	10248803
Methyl chloride (Chloromethane)	TX	4960	10248803
Methyl isobutyl ketone (Hexone) (MIBK)	TX	4985	10248803
Methyl tert-butyl ether (MTBE)	TX	5000	10248803
Methylene chloride (Dichloromethane)	TX	4975	10248803
n-Heptane	TX	4825	10248803
n-Hexane	TX	4855	10248803
o-Xylene	TX	5250	10248803
Styrene	TX	5100	10248803
Tetrachloroethylene (Perchloroethylene)	TX	5115	10248803
Toluene	TX	5140	10248803
trans-1,2-Dichloroethylene	TX	4700	10248803
trans-1,3-Dichloropropylene	TX	4685	10248803
Trichloroethene (Trichloroethylene)	TX	5170	10248803
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10248803
Vinyl acetate	TX	5225	10248803
Vinyl chloride	TX	5235	10248803

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Matrix: ***Non-Potable Water***

Method EPA 1010

Analyte	AB	Analyte ID	Method ID
Ignitability	TX	1780	10234807

Method EPA 1311

Analyte	AB	Analyte ID	Method ID
TCLP	TX	849	10118806

Method EPA 1312

Analyte	AB	Analyte ID	Method ID
SPLP	TX	850	10119003

Method EPA 160.4

Analyte	AB	Analyte ID	Method ID
Residue-volatile	TX	1970	10010409

Method EPA 1631E

Analyte	AB	Analyte ID	Method ID
Mercury	TX	1095	10237204

Method EPA 1664

Analyte	AB	Analyte ID	Method ID
n-Hexane Extractable Material (HEM) (O&G)	TX	1803	10261617

Method EPA 200.8

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10014605
Antimony	TX	1005	10014605
Arsenic	TX	1010	10014605
Barium	TX	1015	10014605
Beryllium	TX	1020	10014605
Boron	TX	1025	10014605
Cadmium	TX	1030	10014605
Calcium	TX	1035	10014605
Chromium	TX	1040	10014605
Cobalt	TX	1050	10014605
Copper	TX	1055	10014605

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Matrix: ***Non-Potable Water***

Iron	TX	1070	10014605
Lead	TX	1075	10014605
Magnesium	TX	1085	10014605
Manganese	TX	1090	10014605
Molybdenum	TX	1100	10014605
Nickel	TX	1105	10014605
Potassium	TX	1125	10014605
Selenium	TX	1140	10014605
Silver	TX	1150	10014605
Sodium	TX	1155	10014605
Thallium	TX	1165	10014605
Tin	TX	1175	10014605
Titanium	TX	1180	10014605
Vanadium	TX	1185	10014605
Zinc	TX	1190	10014605

Method EPA 245.1

Analyte	**AB**	**Analyte ID**	**Method ID**
Mercury	TX	1095	10036609

Method EPA 300.0

Analyte	**AB**	**Analyte ID**	**Method ID**
Bromide	TX	1540	10053200
Chloride	TX	1575	10053200
Fluoride	TX	1730	10053200
Nitrate as N	TX	1810	10053200
Nitrate-nitrite	TX	1820	10053200
Nitrite as N	TX	1840	10053200
Orthophosphate as P	TX	1870	10053200
Sulfate	TX	2000	10053200

Method EPA 310.2

Analyte	**AB**	**Analyte ID**	**Method ID**
Alkalinity as CaCO3	TX	1505	10055206

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Matrix: ***Non-Potable Water***

Method EPA 420.1

Analyte	AB	Analyte ID	Method ID
Total phenolics	TX	1905	10079400

Method EPA 6020

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10156419
Antimony	TX	1005	10156419
Arsenic	TX	1010	10156419
Barium	TX	1015	10156419
Beryllium	TX	1020	10156419
Boron	TX	1025	10156419
Cadmium	TX	1030	10156419
Calcium	TX	1035	10156419
Chromium	TX	1040	10156419
Cobalt	TX	1050	10156419
Copper	TX	1055	10156419
Iron	TX	1070	10156419
Lead	TX	1075	10156419
Magnesium	TX	1085	10156419
Manganese	TX	1090	10156419
Molybdenum	TX	1100	10156419
Nickel	TX	1105	10156419
Potassium	TX	1125	10156419
Selenium	TX	1140	10156419
Silver	TX	1150	10156419
Sodium	TX	1155	10156419
Thallium	TX	1165	10156419
Tin	TX	1175	10156419
Vanadium	TX	1185	10156419
Zinc	TX	1190	10156419

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Matrix: ***Non-Potable Water***

Method EPA 608

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10103603
4,4'-DDE	TX	7360	10103603
4,4'-DDT	TX	7365	10103603
Aldrin	TX	7025	10103603
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10103603
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10103603
Chlordane (tech.)	TX	7250	10103603
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10103603
Dieldrin	TX	7470	10103603
Endosulfan I	TX	7510	10103603
Endosulfan II	TX	7515	10103603
Endosulfan sulfate	TX	7520	10103603
Endrin	TX	7540	10103603
Endrin aldehyde	TX	7530	10103603
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10103603
Heptachlor	TX	7685	10103603
Heptachlor epoxide	TX	7690	10103603
Toxaphene (Chlorinated camphene)	TX	8250	10103603

Method EPA 608.3

Analyte	AB	Analyte ID	Method ID
4,4'-DDD	TX	7355	10296625
4,4'-DDE	TX	7360	10296625
4,4'-DDT	TX	7365	10296625
Aldrin	TX	7025	10296625
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10296625
Aroclor-1016 (PCB-1016)	TX	8880	10296625
Aroclor-1221 (PCB-1221)	TX	8885	10296625
Aroclor-1232 (PCB-1232)	TX	8890	10296625
Aroclor-1242 (PCB-1242)	TX	8895	10296625

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Matrix: ***Non-Potable Water***

Aroclor-1248 (PCB-1248)	TX	8900	10296625
Aroclor-1254 (PCB-1254)	TX	8905	10296625
Aroclor-1260 (PCB-1260)	TX	8910	10296625
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10296625
Chlordane (tech.)	TX	7250	10296625
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10296625
Dieldrin	TX	7470	10296625
Endosulfan I	TX	7510	10296625
Endosulfan II	TX	7515	10296625
Endosulfan sulfate	TX	7520	10296625
Endrin	TX	7540	10296625
Endrin aldehyde	TX	7530	10296625
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10296625
Heptachlor	TX	7685	10296625
Heptachlor epoxide	TX	7690	10296625
Methoxychlor	TX	7810	10296625
Toxaphene (Chlorinated camphene)	TX	8250	10296625

Method EPA 624

Analyte	**AB**	**Analyte ID**	**Method ID**
1,1,1-Trichloroethane	TX	5160	10107207
1,1,2,2-Tetrachloroethane	TX	5110	10107207
1,1,2-Trichloroethane	TX	5165	10107207
1,1-Dichloroethane	TX	4630	10107207
1,1-Dichloroethylene	TX	4640	10107207
1,2-Dichlorobenzene	TX	4610	10107207
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10107207
1,2-Dichloropropane	TX	4655	10107207
1,3-Dichlorobenzene	TX	4615	10107207
1,4-Dichlorobenzene	TX	4620	10107207
2-Chloroethyl vinyl ether	TX	4500	10107207

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Matrix: ***Non-Potable Water***

Acrolein (Propenal)	TX	4325	10107207
Acrylonitrile	TX	4340	10107207
Benzene	TX	4375	10107207
Bromodichloromethane	TX	4395	10107207
Bromoform	TX	4400	10107207
Carbon tetrachloride	TX	4455	10107207
Chlorobenzene	TX	4475	10107207
Chlorodibromomethane	TX	4575	10107207
Chloroethane (Ethyl chloride)	TX	4485	10107207
Chloroform	TX	4505	10107207
cis-1,3-Dichloropropene	TX	4680	10107207
Ethylbenzene	TX	4765	10107207
Methyl bromide (Bromomethane)	TX	4950	10107207
Methyl chloride (Chloromethane)	TX	4960	10107207
Methylene chloride (Dichloromethane)	TX	4975	10107207
Tetrachloroethylene (Perchloroethylene)	TX	5115	10107207
Toluene	TX	5140	10107207
trans-1,2-Dichloroethylene	TX	4700	10107207
trans-1,3-Dichloropropylene	TX	4685	10107207
Trichloroethene (Trichloroethylene)	TX	5170	10107207
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10107207
Vinyl chloride	TX	5235	10107207

Method EPA 624.1

Analyte	**AB**	**Analyte ID**	**Method ID**
1,1,1-Trichloroethane	TX	5160	10298121
1,1,2,2-Tetrachloroethane	TX	5110	10298121
1,1,2-Trichloroethane	TX	5165	10298121
1,1-Dichloroethane	TX	4630	10298121
1,1-Dichloroethylene	TX	4640	10298121
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10298121

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Matrix: ***Non-Potable Water***

1,2-Dichlorobenzene	TX	4610	10298121
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10298121
1,2-Dichloropropane	TX	4655	10298121
1,3-Dichlorobenzene	TX	4615	10298121
1,4-Dichlorobenzene	TX	4620	10298121
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10298121
2-Chloroethyl vinyl ether	TX	4500	10298121
Acetone (2-Propanone)	TX	4315	10298121
Acrolein (Propenal)	TX	4325	10298121
Acrylonitrile	TX	4340	10298121
Benzene	TX	4375	10298121
Bromodichloromethane	TX	4395	10298121
Bromoform	TX	4400	10298121
Carbon tetrachloride	TX	4455	10298121
Chlorobenzene	TX	4475	10298121
Chlorodibromomethane	TX	4575	10298121
Chloroethane (Ethyl chloride)	TX	4485	10298121
Chloroform	TX	4505	10298121
cis-1,2-Dichloroethylene	TX	4645	10298121
cis-1,3-Dichloropropene	TX	4680	10298121
Ethylbenzene	TX	4765	10298121
m+p-xylene	TX	5240	10298121
Methyl bromide (Bromomethane)	TX	4950	10298121
Methyl chloride (Chloromethane)	TX	4960	10298121
Methyl tert-butyl ether (MTBE)	TX	5000	10298121
Methylene chloride (Dichloromethane)	TX	4975	10298121
Naphthalene	TX	5005	10298121
o-Xylene	TX	5250	10298121
Tetrachloroethylene (Perchloroethylene)	TX	5115	10298121
Toluene	TX	5140	10298121

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Matrix: ***Non-Potable Water***

Total trihalomethanes	TX	5205	10298121
trans-1,2-Dichloroethylene	TX	4700	10298121
trans-1,3-Dichloropropylene	TX	4685	10298121
Trichloroethene (Trichloroethylene)	TX	5170	10298121
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10298121
Vinyl chloride	TX	5235	10298121
Xylene (total)	TX	5260	10298121

Method EPA 625

Analyte	**AB**	**Analyte ID**	**Method ID**
1,2,4-Trichlorobenzene	TX	5155	10107401
2,4,6-Trichlorophenol	TX	6840	10107401
2,4-Dichlorophenol	TX	6000	10107401
2,4-Dimethylphenol	TX	6130	10107401
2,4-Dinitrophenol	TX	6175	10107401
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10107401
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10107401
2-Chloronaphthalene	TX	5795	10107401
2-Chlorophenol	TX	5800	10107401
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10107401
2-Nitrophenol	TX	6490	10107401
3,3'-Dichlorobenzidine	TX	5945	10107401
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10107401
4-Chloro-3-methylphenol	TX	5700	10107401
4-Chlorophenyl phenylether	TX	5825	10107401
4-Nitrophenol	TX	6500	10107401
Acenaphthene	TX	5500	10107401
Acenaphthylene	TX	5505	10107401
Anthracene	TX	5555	10107401
Benzidine	TX	5595	10107401
Benzo(a)anthracene	TX	5575	10107401

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Matrix: ***Non-Potable Water***

Benzo(a)pyrene	TX	5580	10107401
Benzo(b)fluoranthene	TX	5585	10107401
Benzo(g,h,i)perylene	TX	5590	10107401
Benzo(k)fluoranthene	TX	5600	10107401
bis(2-Chloroethoxy)methane	TX	5760	10107401
bis(2-Chloroethyl) ether	TX	5765	10107401
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10107401
Butyl benzyl phthalate	TX	5670	10107401
Chrysene	TX	5855	10107401
Dibenz(a,h) anthracene	TX	5895	10107401
Diethyl phthalate	TX	6070	10107401
Dimethyl phthalate	TX	6135	10107401
Di-n-butyl phthalate	TX	5925	10107401
Di-n-octyl phthalate	TX	6200	10107401
Fluoranthene	TX	6265	10107401
Fluorene	TX	6270	10107401
Hexachlorobenzene	TX	6275	10107401
Hexachlorobutadiene	TX	4835	10107401
Hexachlorocyclopentadiene	TX	6285	10107401
Hexachloroethane	TX	4840	10107401
Indeno(1,2,3-cd) pyrene	TX	6315	10107401
Isophorone	TX	6320	10107401
Naphthalene	TX	5005	10107401
Nitrobenzene	TX	5015	10107401
n-Nitrosodimethylamine	TX	6530	10107401
n-Nitrosodi-n-propylamine	TX	6545	10107401
n-Nitrosodiphenylamine	TX	6535	10107401
Pentachlorophenol	TX	6605	10107401
Phenanthrene	TX	6615	10107401
Phenol	TX	6625	10107401

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Expiration Date: 1/31/2020
Issue Date: 5/2/2019

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Matrix: ***Non-Potable Water***

Pyrene	TX	6665	10107401

Method EPA 625.1

Analyte	AB	Analyte ID	Method ID
1,2,4-Trichlorobenzene	TX	5155	10300024
1,2-Dichlorobenzene	TX	4610	10300024
1,2-Diphenylhydrazine	TX	6221	10300024
1,3-Dichlorobenzene	TX	4615	10300024
1,4-Dichlorobenzene	TX	4620	10300024
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10300024
2,4,5-Trichlorophenol	TX	6835	10300024
2,4,6-Trichlorophenol	TX	6840	10300024
2,4-Dichlorophenol	TX	6000	10300024
2,4-Dimethylphenol	TX	6130	10300024
2,4-Dinitrophenol	TX	6175	10300024
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10300024
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10300024
2-Chloronaphthalene	TX	5795	10300024
2-Chlorophenol	TX	5800	10300024
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10300024
2-Methylphenol (o-Cresol)	TX	6400	10300024
2-Nitrophenol	TX	6490	10300024
3,3'-Dichlorobenzidine	TX	5945	10300024
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10300024
4-Chloro-3-methylphenol	TX	5700	10300024
4-Chlorophenyl phenylether	TX	5825	10300024
4-Methylphenol (p-Cresol)	TX	6410	10300024
4-Nitrophenol	TX	6500	10300024
Acenaphthene	TX	5500	10300024
Acenaphthylene	TX	5505	10300024
Anthracene	TX	5555	10300024

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Matrix: ***Non-Potable Water***

Benzidine	TX	5595	10300024
Benzo(a)anthracene	TX	5575	10300024
Benzo(a)pyrene	TX	5580	10300024
Benzo(b)fluoranthene	TX	5585	10300024
Benzo(g,h,i)perylene	TX	5590	10300024
Benzo(k)fluoranthene	TX	5600	10300024
bis(2-Chloroethoxy)methane	TX	5760	10300024
bis(2-Chloroethyl) ether	TX	5765	10300024
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10300024
Butyl benzyl phthalate	TX	5670	10300024
Chrysene	TX	5855	10300024
Dibenz(a,h) anthracene	TX	5895	10300024
Diethyl phthalate	TX	6070	10300024
Dimethyl phthalate	TX	6135	10300024
Di-n-butyl phthalate	TX	5925	10300024
Di-n-octyl phthalate	TX	6200	10300024
Fluoranthene	TX	6265	10300024
Fluorene	TX	6270	10300024
Hexachlorobenzene	TX	6275	10300024
Hexachlorobutadiene	TX	4835	10300024
Hexachlorocyclopentadiene	TX	6285	10300024
Hexachloroethane	TX	4840	10300024
Indeno(1,2,3-cd) pyrene	TX	6315	10300024
Isophorone	TX	6320	10300024
Naphthalene	TX	5005	10300024
Nitrobenzene	TX	5015	10300024
n-Nitrosodimethylamine	TX	6530	10300024
n-Nitrosodi-n-propylamine	TX	6545	10300024
n-Nitrosodiphenylamine	TX	6535	10300024
Pentachlorophenol	TX	6605	10300024

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Matrix: ***Non-Potable Water***

Phenanthrene	TX	6615	10300024
Phenol	TX	6625	10300024
Pyrene	TX	6665	10300024
Pyridine	TX	5095	10300024

Method EPA 7196

Analyte	**AB**	**Analyte ID**	**Method ID**
Chromium (VI)	TX	1045	10162400

Method EPA 7470

Analyte	**AB**	**Analyte ID**	**Method ID**
Mercury	TX	1095	10165807

Method EPA 8015

Analyte	**AB**	**Analyte ID**	**Method ID**
Diesel range organics (DRO)	TX	9369	10173816
Ethanol	TX	4750	10173816
Ethylene glycol	TX	4785	10173816
Gasoline range organics (GRO)	TX	9408	10173816
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10173816
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10173816
Methanol	TX	4930	10173816
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10173816

Method EPA 8081

Analyte	**AB**	**Analyte ID**	**Method ID**
4,4'-DDD	TX	7355	10178811
4,4'-DDE	TX	7360	10178811
4,4'-DDT	TX	7365	10178811
Aldrin	TX	7025	10178811
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178811
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178811
Chlordane (tech.)	TX	7250	10178811
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178811
Dieldrin	TX	7470	10178811

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Matrix: ***Non-Potable Water***

Endosulfan I	TX	7510	10178811
Endosulfan II	TX	7515	10178811
Endosulfan sulfate	TX	7520	10178811
Endrin	TX	7540	10178811
Endrin aldehyde	TX	7530	10178811
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178811
Heptachlor	TX	7685	10178811
Heptachlor epoxide	TX	7690	10178811
Methoxychlor	TX	7810	10178811
Toxaphene (Chlorinated camphene)	TX	8250	10178811

Method EPA 8082

Analyte	**AB**	**Analyte ID**	**Method ID**
Aroclor-1016 (PCB-1016)	TX	8880	10179201
Aroclor-1221 (PCB-1221)	TX	8885	10179201
Aroclor-1232 (PCB-1232)	TX	8890	10179201
Aroclor-1242 (PCB-1242)	TX	8895	10179201
Aroclor-1248 (PCB-1248)	TX	8900	10179201
Aroclor-1254 (PCB-1254)	TX	8905	10179201
Aroclor-1260 (PCB-1260)	TX	8910	10179201

Method EPA 8260

Analyte	**AB**	**Analyte ID**	**Method ID**
1,1,1,2-Tetrachloroethane	TX	5105	10184802
1,1,1-Trichloroethane	TX	5160	10184802
1,1,2,2-Tetrachloroethane	TX	5110	10184802
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	TX	5195	10184802
1,1-Dichloroethane	TX	4630	10184802
1,1-Dichloroethylene	TX	4640	10184802
1,2,3-Trichlorobenzene	TX	5150	10184802
1,2,3-Trichloropropane	TX	5180	10184802
1,2,4-Trichlorobenzene	TX	5155	10184802
1,2,4-Trimethylbenzene	TX	5210	10184802

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Matrix: ***Non-Potable Water***

1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184802
1,2-Dichlorobenzene	TX	4610	10184802
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184802
1,2-Dichloropropane	TX	4655	10184802
1,3,5-Trimethylbenzene	TX	5215	10184802
1,3-Dichlorobenzene	TX	4615	10184802
1,3-Dichloropropane	TX	4660	10184802
1,4-Dichlorobenzene	TX	4620	10184802
2,2-Dichloropropane	TX	4665	10184802
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184802
2-Chlorotoluene	TX	4535	10184802
2-Hexanone (MBK)	TX	4860	10184802
4-Isopropyltoluene (p-Cymene)	TX	4915	10184802
4-Methyl-2-pentanone (MIBK)	TX	4995	10184802
Acetone (2-Propanone)	TX	4315	10184802
Benzene	TX	4375	10184802
Bromobenzene	TX	4385	10184802
Bromochloromethane	TX	4390	10184802
Bromodichloromethane	TX	4395	10184802
Bromoform	TX	4400	10184802
Carbon disulfide	TX	4450	10184802
Carbon tetrachloride	TX	4455	10184802
Chlorobenzene	TX	4475	10184802
Chlorodibromomethane	TX	4575	10184802
Chloroethane (Ethyl chloride)	TX	4485	10184802
Chloroform	TX	4505	10184802
cis-1,2-Dichloroethylene	TX	4645	10184802
cis-1,3-Dichloropropene	TX	4680	10184802
Dibromomethane (Methylene bromide)	TX	4595	10184802
Dichlorodifluoromethane (Freon-12)	TX	4625	10184802

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Matrix: ***Non-Potable Water***

Diethyl ether	TX	4725	10184802
Ethylbenzene	TX	4765	10184802
Isopropylbenzene (Cumene)	TX	4900	10184802
m+p-xylene	TX	5240	10184802
Methyl bromide (Bromomethane)	TX	4950	10184802
Methyl chloride (Chloromethane)	TX	4960	10184802
Methyl tert-butyl ether (MTBE)	TX	5000	10184802
Methylene chloride (Dichloromethane)	TX	4975	10184802
Naphthalene	TX	5005	10184802
n-Butylbenzene	TX	4435	10184802
n-Propylbenzene	TX	5090	10184802
o-Xylene	TX	5250	10184802
sec-Butylbenzene	TX	4440	10184802
Styrene	TX	5100	10184802
tert-Butyl alcohol	TX	4420	10184802
tert-Butylbenzene	TX	4445	10184802
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184802
Toluene	TX	5140	10184802
trans-1,2-Dichloroethylene	TX	4700	10184802
trans-1,3-Dichloropropylene	TX	4685	10184802
trans-1,4-Dichloro-2-butene	TX	4605	10184802
Trichloroethene (Trichloroethylene)	TX	5170	10184802
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184802
Vinyl acetate	TX	5225	10184802
Vinyl chloride	TX	5235	10184802

Method EPA 8270

Analyte	**AB**	**Analyte ID**	**Method ID**
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805
1,2-Diphenylhydrazine	TX	6220	10185805

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Matrix: ***Non-Potable Water***

1,3-Dichlorobenzene	TX	4615	10185805
1,4-Dichlorobenzene	TX	4620	10185805
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,6-Dichlorophenol	TX	6005	10185805
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3-Nitroaniline	TX	6465	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloro-3-methylphenol	TX	5700	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrophenol	TX	6500	10185805
Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805
Aniline	TX	5545	10185805

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Matrix: ***Non-Potable Water***

Anthracene	TX	5555	10185805
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzyl alcohol	TX	5630	10185805
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Chrysene	TX	5855	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185805
Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805
Isophorone	TX	6320	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805
n-Nitrosodimethylamine	TX	6530	10185805

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Matrix: ***Non-Potable Water***

n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
Pentachlorophenol	TX	6605	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805

Method EPA 9040

Analyte	**AB**	**Analyte ID**	**Method ID**
pH	TX	1900	10244403

Method EPA 9050

Analyte	**AB**	**Analyte ID**	**Method ID**
Conductivity	TX	1610	10198808

Method EPA 9056

Analyte	**AB**	**Analyte ID**	**Method ID**
Bromide	TX	1540	10199607
Chloride	TX	1575	10199607
Fluoride	TX	1730	10199607
Nitrate as N	TX	1810	10199607
Nitrate-nitrite	TX	1820	10199607
Nitrite as N	TX	1840	10199607
Orthophosphate as P	TX	1870	10199607
Sulfate	TX	2000	10199607

Method EPA 9060

Analyte	**AB**	**Analyte ID**	**Method ID**
Total Organic Carbon (TOC)	TX	2040	10244823

Method EPA 9065

Analyte	**AB**	**Analyte ID**	**Method ID**
Total phenolics	TX	1905	10200405

Method HACH 8000

Analyte	**AB**	**Analyte ID**	**Method ID**

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Matrix: ***Non-Potable Water***

Chemical oxygen demand (COD)	TX	1565	60003001
Method SM 2130 B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Turbidity	TX	2055	20048219
Method SM 2320 B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Alkalinity as CaCO3	TX	1505	20045607
Method SM 2340 B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Total hardness as CaCO3	TX	1755	20046600
Method SM 2510 B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Conductivity	TX	1610	20048606
Method SM 2540 B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Residue-total (total solids)	TX	1950	20049405
Method SM 2540 C			
Analyte	**AB**	**Analyte ID**	**Method ID**
Residue-filterable (TDS)	TX	1955	20050402
Method SM 2540 D			
Analyte	**AB**	**Analyte ID**	**Method ID**
Residue-nonfilterable (TSS)	TX	1960	20051201
Method SM 3500-Cr B			
Analyte	**AB**	**Analyte ID**	**Method ID**
Chromium (VI)	TX	1045	20066028
Method SM 4500-H+ B			
Analyte	**AB**	**Analyte ID**	**Method ID**
pH	TX	1900	20105219
Method SM 4500-NH3 D			
Analyte	**AB**	**Analyte ID**	**Method ID**
Ammonia as N	TX	1515	20109404

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Matrix: ***Non-Potable Water***

Method SM 4500-O G

Analyte	AB	Analyte ID	Method ID
Oxygen, dissolved	TX	1880	20121657

Method SM 4500-P E

Analyte	AB	Analyte ID	Method ID
Phosphorus	TX	1910	20124214

Method SM 5210 B

Analyte	AB	Analyte ID	Method ID
Biochemical oxygen demand (BOD)	TX	1530	20135200
Carbonaceous BOD, CBOD	TX	1555	20135200

Method SM 5310 B

Analyte	AB	Analyte ID	Method ID
Total Organic Carbon (TOC)	TX	2040	20137819

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Matrix: ***Solid & Chemical Materials***

Method EPA 1010

Analyte	AB	Analyte ID	Method ID
Ignitability	TX	1780	10234807

Method EPA 1311

Analyte	AB	Analyte ID	Method ID
TCLP	TX	849	10118806

Method EPA 1312

Analyte	AB	Analyte ID	Method ID
SPLP	TX	850	10119003

Method EPA 6020

Analyte	AB	Analyte ID	Method ID
Aluminum	TX	1000	10156419
Antimony	TX	1005	10156419
Arsenic	TX	1010	10156419
Barium	TX	1015	10156419
Beryllium	TX	1020	10156419
Cadmium	TX	1030	10156419
Calcium	TX	1035	10156419
Chromium	TX	1040	10156419
Cobalt	TX	1050	10156419
Copper	TX	1055	10156419
Iron	TX	1070	10156419
Lead	TX	1075	10156419
Magnesium	TX	1085	10156419
Manganese	TX	1090	10156419
Nickel	TX	1105	10156419
Potassium	TX	1125	10156419
Selenium	TX	1140	10156419
Silver	TX	1150	10156419
Sodium	TX	1155	10156419
Thallium	TX	1165	10156419

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Matrix: ***Solid & Chemical Materials***

Vanadium	TX	1185	10156419
Zinc	TX	1190	10156419

Method EPA 7196

Analyte	**AB**	**Analyte ID**	**Method ID**
Chromium (VI)	TX	1045	10162400

Method EPA 7470

Analyte	**AB**	**Analyte ID**	**Method ID**
Mercury	TX	1095	10165807

Method EPA 7471

Analyte	**AB**	**Analyte ID**	**Method ID**
Mercury	TX	1095	10166457

Method EPA 8015

Analyte	**AB**	**Analyte ID**	**Method ID**
Diesel range organics (DRO)	TX	9369	10173816
Ethanol	TX	4750	10173816
Ethylene glycol	TX	4785	10173816
Gasoline range organics (GRO)	TX	9408	10173816
Isobutyl alcohol (2-Methyl-1-propanol)	TX	4875	10173816
Isopropyl alcohol (2-Propanol, Isopropanol)	TX	4895	10173816
Methanol	TX	4930	10173816
n-Butyl alcohol (1-Butanol, n-Butanol)	TX	4425	10173816

Method EPA 8081

Analyte	**AB**	**Analyte ID**	**Method ID**
4,4'-DDD	TX	7355	10178811
4,4'-DDE	TX	7360	10178811
4,4'-DDT	TX	7365	10178811
Aldrin	TX	7025	10178811
alpha-BHC (alpha-Hexachlorocyclohexane)	TX	7110	10178811
beta-BHC (beta-Hexachlorocyclohexane)	TX	7115	10178811
Chlordane (tech.)	TX	7250	10178811
delta-BHC (delta-Hexachlorocyclohexane)	TX	7105	10178811

Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation

Certificate: T104704518-19-9

Fibertec Environmental Services
Expiration Date: 1/31/2020

1914 Holloway Drive
Holt, MI 48842-9437
Issue Date: 5/2/2019

These fields of accreditation supercede all previous fields. The Texas Commission on Environmental Quality urges customers to verify the laboratory's current accreditation status for particular methods and analyses.

Matrix: ***Solid & Chemical Materials***

Dieldrin	TX	7470	10178811
Endosulfan I	TX	7510	10178811
Endosulfan II	TX	7515	10178811
Endosulfan sulfate	TX	7520	10178811
Endrin	TX	7540	10178811
Endrin aldehyde	TX	7530	10178811
gamma-BHC (Lindane, gamma-Hexachlorocyclohexane)	TX	7120	10178811
Heptachlor	TX	7685	10178811
Heptachlor epoxide	TX	7690	10178811
Methoxychlor	TX	7810	10178811
Toxaphene (Chlorinated camphene)	TX	8250	10178811

Method EPA 8082

Analyte	**AB**	**Analyte ID**	**Method ID**
Aroclor-1016 (PCB-1016)	TX	8880	10179201
Aroclor-1221 (PCB-1221)	TX	8885	10179201
Aroclor-1232 (PCB-1232)	TX	8890	10179201
Aroclor-1242 (PCB-1242)	TX	8895	10179201
Aroclor-1248 (PCB-1248)	TX	8900	10179201
Aroclor-1254 (PCB-1254)	TX	8905	10179201
Aroclor-1260 (PCB-1260)	TX	8910	10179201

Method EPA 8260

Analyte	**AB**	**Analyte ID**	**Method ID**
1,1,1,2-Tetrachloroethane	TX	5105	10184802
1,1,1-Trichloroethane	TX	5160	10184802
1,1,2,2-Tetrachloroethane	TX	5110	10184802
1,1,2-Trichloroethane	TX	5165	10184802
1,1-Dichloroethane	TX	4630	10184802
1,1-Dichloroethylene	TX	4640	10184802
1,2,3-Trichlorobenzene	TX	5150	10184802
1,2,3-Trichloropropane	TX	5180	10184802
1,2,4-Trichlorobenzene	TX	5155	10184802

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Matrix: ***Solid & Chemical Materials***

1,2,4-Trimethylbenzene	TX	5210	10184802
1,2-Dibromoethane (EDB, Ethylene dibromide)	TX	4585	10184802
1,2-Dichlorobenzene	TX	4610	10184802
1,2-Dichloroethane (Ethylene dichloride)	TX	4635	10184802
1,2-Dichloropropane	TX	4655	10184802
1,3,5-Trimethylbenzene	TX	5215	10184802
1,3-Dichlorobenzene	TX	4615	10184802
1,3-Dichloropropane	TX	4660	10184802
1,4-Dichlorobenzene	TX	4620	10184802
2,2-Dichloropropane	TX	4665	10184802
2-Butanone (Methyl ethyl ketone, MEK)	TX	4410	10184802
2-Chlorotoluene	TX	4535	10184802
2-Hexanone (MBK)	TX	4860	10184802
4-Isopropyltoluene (p-Cymene)	TX	4915	10184802
4-Methyl-2-pentanone (MIBK)	TX	4995	10184802
Acetone (2-Propanone)	TX	4315	10184802
Benzene	TX	4375	10184802
Bromobenzene	TX	4385	10184802
Bromochloromethane	TX	4390	10184802
Bromodichloromethane	TX	4395	10184802
Bromoform	TX	4400	10184802
Carbon disulfide	TX	4450	10184802
Carbon tetrachloride	TX	4455	10184802
Chlorobenzene	TX	4475	10184802
Chlorodibromomethane	TX	4575	10184802
Chloroethane (Ethyl chloride)	TX	4485	10184802
Chloroform	TX	4505	10184802
cis-1,2-Dichloroethylene	TX	4645	10184802
cis-1,3-Dichloropropene	TX	4680	10184802
Dibromomethane (Methylene bromide)	TX	4595	10184802

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Fibertec Environmental Services
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Matrix: ***Solid & Chemical Materials***

Dichlorodifluoromethane (Freon-12)	TX	4625	10184802
Diethyl ether	TX	4725	10184802
Ethylbenzene	TX	4765	10184802
Isopropylbenzene (Cumene)	TX	4900	10184802
m+p-xylene	TX	5240	10184802
Methyl bromide (Bromomethane)	TX	4950	10184802
Methyl chloride (Chloromethane)	TX	4960	10184802
Methyl tert-butyl ether (MTBE)	TX	5000	10184802
Methylene chloride (Dichloromethane)	TX	4975	10184802
Naphthalene	TX	5005	10184802
n-Butylbenzene	TX	4435	10184802
n-Propylbenzene	TX	5090	10184802
o-Xylene	TX	5250	10184802
sec-Butylbenzene	TX	4440	10184802
Styrene	TX	5100	10184802
tert-Butyl alcohol	TX	4420	10184802
tert-Butylbenzene	TX	4445	10184802
Tetrachloroethylene (Perchloroethylene)	TX	5115	10184802
Toluene	TX	5140	10184802
trans-1,2-Dichloroethylene	TX	4700	10184802
trans-1,3-Dichloropropylene	TX	4685	10184802
trans-1,4-Dichloro-2-butene	TX	4605	10184802
Trichloroethene (Trichloroethylene)	TX	5170	10184802
Trichlorofluoromethane (Fluorotrichloromethane, Freon 11)	TX	5175	10184802
Vinyl acetate	TX	5225	10184802
Vinyl chloride	TX	5235	10184802

Method EPA 8270

Analyte	**AB**	**Analyte ID**	**Method ID**
1,2,4-Trichlorobenzene	TX	5155	10185805
1,2-Dichlorobenzene	TX	4610	10185805

Texas Commission on Environmental Quality

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Matrix: ***Solid & Chemical Materials***

1,2-Diphenylhydrazine	TX	6220	10185805
1,3-Dichlorobenzene	TX	4615	10185805
1,4-Dichlorobenzene	TX	4620	10185805
2,2'-Oxybis(1-chloropropane) (bis(2-Chloro-1-methylethyl)ether)	TX	4659	10185805
2,4,5-Trichlorophenol	TX	6835	10185805
2,4,6-Trichlorophenol	TX	6840	10185805
2,4-Dichlorophenol	TX	6000	10185805
2,4-Dimethylphenol	TX	6130	10185805
2,4-Dinitrophenol	TX	6175	10185805
2,4-Dinitrotoluene (2,4-DNT)	TX	6185	10185805
2,6-Dichlorophenol	TX	6005	10185805
2,6-Dinitrotoluene (2,6-DNT)	TX	6190	10185805
2-Chloronaphthalene	TX	5795	10185805
2-Chlorophenol	TX	5800	10185805
2-Methyl-4,6-dinitrophenol (4,6-Dinitro-2-methylphenol)	TX	6360	10185805
2-Methylnaphthalene	TX	6385	10185805
2-Methylphenol (o-Cresol)	TX	6400	10185805
2-Nitroaniline	TX	6460	10185805
2-Nitrophenol	TX	6490	10185805
3,3'-Dichlorobenzidine	TX	5945	10185805
3-Nitroaniline	TX	6465	10185805
4-Bromophenyl phenyl ether (BDE-3)	TX	5660	10185805
4-Chloro-3-methylphenol	TX	5700	10185805
4-Chloroaniline	TX	5745	10185805
4-Chlorophenyl phenylether	TX	5825	10185805
4-Methylphenol (p-Cresol)	TX	6410	10185805
4-Nitroaniline	TX	6470	10185805
4-Nitrophenol	TX	6500	10185805
Acenaphthene	TX	5500	10185805
Acenaphthylene	TX	5505	10185805

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Matrix: ***Solid & Chemical Materials***

Aniline	TX	5545	10185805
Anthracene	TX	5555	10185805
Benzidine	TX	5595	10185805
Benzo(a)anthracene	TX	5575	10185805
Benzo(a)pyrene	TX	5580	10185805
Benzo(b)fluoranthene	TX	5585	10185805
Benzo(g,h,i)perylene	TX	5590	10185805
Benzo(k)fluoranthene	TX	5600	10185805
Benzyl alcohol	TX	5630	10185805
bis(2-Chloroethoxy)methane	TX	5760	10185805
bis(2-Chloroethyl) ether	TX	5765	10185805
bis(2-Ethylhexyl) phthalate (Di(2-Ethylhexyl) phthalate, DEHP)	TX	6065	10185805
Butyl benzyl phthalate	TX	5670	10185805
Chrysene	TX	5855	10185805
Dibenz(a,h) anthracene	TX	5895	10185805
Dibenzofuran	TX	5905	10185805
Diethyl phthalate	TX	6070	10185805
Dimethyl phthalate	TX	6135	10185805
Di-n-butyl phthalate	TX	5925	10185805
Di-n-octyl phthalate	TX	6200	10185805
Fluoranthene	TX	6265	10185805
Fluorene	TX	6270	10185805
Hexachlorobenzene	TX	6275	10185805
Hexachlorobutadiene	TX	4835	10185805
Hexachlorocyclopentadiene	TX	6285	10185805
Hexachloroethane	TX	4840	10185805
Indeno(1,2,3-cd) pyrene	TX	6315	10185805
Isophorone	TX	6320	10185805
Naphthalene	TX	5005	10185805
Nitrobenzene	TX	5015	10185805

Texas Commission on Environmental Quality

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Fibertec Environmental Services

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Holt, MI 48842-9437

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Matrix: ***Solid & Chemical Materials***

n-Nitrosodimethylamine	TX	6530	10185805
n-Nitrosodi-n-propylamine	TX	6545	10185805
n-Nitrosodiphenylamine	TX	6535	10185805
Pentachlorophenol	TX	6605	10185805
Phenanthrene	TX	6615	10185805
Phenol	TX	6625	10185805
Pyrene	TX	6665	10185805
Pyridine	TX	5095	10185805

Method EPA 9040

Analyte	**AB**	**Analyte ID**	**Method ID**
Corrosivity	TX	1615	10244403
pH	TX	1900	10244403

Method EPA 9045

Analyte	**AB**	**Analyte ID**	**Method ID**
Corrosivity	TX	1615	10198455
pH	TX	1900	10198455

Method EPA 9056

Analyte	**AB**	**Analyte ID**	**Method ID**
Bromide	TX	1540	10199607
Chloride	TX	1575	10199607
Fluoride	TX	1730	10199607
Nitrate as N	TX	1810	10199607
Nitrite as N	TX	1840	10199607
Orthophosphate as P	TX	1870	10199607
Sulfate	TX	2000	10199607

Method EPA 9060

Analyte	**AB**	**Analyte ID**	**Method ID**
Total Organic Carbon (TOC)	TX	2040	10244823

Method EPA 9065

Analyte	**AB**	**Analyte ID**	**Method ID**
Total phenolics	TX	1905	10200405

Texas Commission on Environmental Quality

NELAP - Recognized Laboratory Fields of Accreditation

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Expiration Date:	**1/31/2020**
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Fibertec Environmental Services

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Holt, MI 48842-9437

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Matrix: ***Solid & Chemical Materials***

Method EPA 9095

Analyte	AB	Analyte ID	Method ID
Paint Filter Liquids Test	TX	10312	10245600

PFAS Water PT

Winter, 2019

Fibertec
Doug Holmes Lab Accreditation
1914 Holloway Drive
Holt MI 48842

Account # 3669

USEPA Lab ID
Study #
Study Type **Internal PT**

NPDES ID #
Open Date
Close Date

Part#**38294** Lot#**110918** PFOA - Water - PT - DOD 24 components Invoice#**175774** Units **ug/L**

NELAC #	Component	Method Code	Method Description	</>	Reported Value	AV or StudyMean	Assigned Value	Acceptance Limits Low	Acceptance Limits High	Performance Evaluation	Analysis Date
6915	PFBA (cas# 375-22-4)	30034505	ASTM D7979-17		0.150	0.169	.169	.101	.237	Acceptable	1/31/19
6914	PFPeA (cas# 2706-90-3)	30034505	ASTM D7979-17		0.145	0.154	.154	.092	.216	Acceptable	1/31/19
6913	PFHxA (cas# 307-24-4)	30034505	ASTM D7979-17		0.132	0.131	.131	.079	.183	Acceptable	1/31/19
6908	PFHpA (cas# 375-85-9)	30034505	ASTM D7979-17		0.0979	0.106	.106	.064	.148	Acceptable	1/31/19
6912	PFOA (cas# 335-67-1)	30034505	ASTM D7979-17		0.172	0.191	.191	.115	.267	Acceptable	1/31/19
6906	PFNA (cas# 375-95-1)	30034505	ASTM D7979-17		0.145	0.154	.154	.092	.216	Acceptable	1/31/19
6905	PFDA (cas# 335-76-2)	30034505	ASTM D7979-17		0.167	0.181	.181	.109	.253	Acceptable	1/31/19
6904	PFUnA (cas# 2058-94-8)	30034505	ASTM D7979-17		0.159	0.178	.178	.107	.249	Acceptable	1/31/19
6903	PFDoA (cas# 307-55-1)	30034505	ASTM D7979-17		0.0981	0.110	.11	.066	.154	Acceptable	1/31/19
9563	PFTrDA (cas# 72629-94-8)	30034505	ASTM D7979-17		0.109	0.120	.12	.072	.168	Acceptable	1/31/19
6902	PFTeDA (cas# 376-06-7)	30034505	ASTM D7979-17		0.134	0.148	.148	.089	.207	Acceptable	1/31/19
6917	FOSA (cas# 754-91-6)	30034505	ASTM D7979-17		0.147	0.176	.176	.106	.246	Acceptable	1/31/19
4847	N-MeFOSAA (cas# 2355-31-9)	30034505	ASTM D7979-17		0.0922	0.114	.114	.068	.16	Acceptable	1/31/19
4846	N-EtFOSAA (cas# 2991-50-6)	30034505	ASTM D7979-17		0.116	0.144	.144	.086	.202	Acceptable	1/31/19
6911	L-PFBS (cas# 375-73-5)	30034505	ASTM D7979-17		0.174	0.164	.164	.098	.23	Acceptable	1/31/19
9467	PFPeS	30034505	ASTM D7979-17		0.170	0.178	.178	.107	.249	Acceptable	1/31/19
n/a	L/br-PFHxS (L-cas# 3871-99-6)	30034505	ASTM D7979-17		0.162	0.148	.148	.089	.207	Acceptable	1/31/19
9470	L-PFHpS (cas# 375-92-8)	30034505	ASTM D7979-17		0.0891	0.107	.107	.064	.15	Acceptable	1/31/19
6909	L/br-PFOS (L-cas# 1763-23-1)	30034505	ASTM D7979-17		0.116	0.122	.122	.073	.171	Acceptable	1/31/19
n/a	L-PFNS (cas# 98789-57-2)	30034505	ASTM D7979-17		0.148	0.142	.142	.085	.199	Acceptable	1/31/19
n/a	L-PFDS (cas# 2806-15-7)	30034505	ASTM D7979-17		0.147	0.172	.172	.103	.241	Acceptable	1/31/19
9437	4:2 FTS	30034505	ASTM D7979-17		0.171	0.178	.178	.107	.249	Acceptable	1/31/19
6457	6:2 FTS (cas# 27619-97-2)	30034505	ASTM D7979-17		0.133	0.121	.121	.073	.169	Acceptable	1/31/19
6461	8:2 FTS (cas# 39108-34-4)	30034505	ASTM D7979-17		0.159	0.149	.149	.089	.209	Acceptable	1/31/19

PFAS Soil PT

Spring, 2019

:

Flbertec Account # 3669 USEPA Lab ID NPDES ID #

Study #
Study Type Internal PT
Open Date
Close Date

Part# 38422 Lot# 101717 PFOA - Soil- PT - DOD 24 components Invoice# 177772 Units ug/Kg

NELAC #	Component	Method Code	Method Description	</>	Reported Value	AV or StudyMean	Assigned Value	Acceptance Limits Low	Acceptance Limits High	Performance Evaluation	Analysis Date
6915	PFBA (cas# 375-22-4)	30034505	ASTM D7979-17		59.4	54.0	54.0	32.4	75.6	Pass	3/29/2019
6914	PFPeA (cas# 2706-90-3)	30034505	ASTM D7979-17		70.9	63.3	63.3	38.0	88.6	Pass	3/29/2019
6913	PFHxA (cas# 307-24-4)	30034505	ASTM D7979-17		51.1	48.0	48.0	28.8	67.2	Pass	3/29/2019
6908	PFHpA (cas# 375-85-9)	30034505	ASTM D7979-17		66.4	60.0	60.0	36.0	84.0	Pass	3/29/2019
6912	PFOA (cas# 33567-1)	30034505	ASTM D7979-17		48.9	43.3	43.3	26.0	60.6	Pass	3/29/2019
6906	PFNA (cas# 375-95- 1)	30034505	ASTM D7979-17		64.8	58.7	58.7	35.2	82.2	Pass	3/29/2019
6905	PFDA (cas# 335-76-2)	30034505	ASTM D7979-17		45.7	39.3	39.3	23.6	55.0	Pass	3/29/2019
6904	PFUnA (cas# 2058-94-8)	30034505	ASTM D7979-17		57.2	49.3	49.3	29.6	69.0	Pass	3/29/2019
6903	PFDoA (cas# 307-55-1)	30034505	ASTM D7979-17		64.0	54.7	54.7	32.8	76.6	Pass	3/29/2019
9563	PFTrDA (cas# 72629-94-8)	30034505	ASTM D7979-17		73.4	60.0	60.0	36.0	84.0	Pass	3/29/2019
n/a	PFTeDA (cas# 376-06-7)	30034505	ASTM D7979-17		101.0	54.0	54.0	32.4	75.6	Fail	3/29/2019
6917	FOSA (cas# 754-91-6)	30034505	ASTM D7979-17		46.9	46.0	46.0	27.6	64.4	Pass	3/29/2019
4847	N-MeFOSAA (cas# 2355-31-9)	30034505	ASTM D7979-17		69.2	63.3	63.3	38.0	88.6	Pass	3/29/2019
4846	N-EtFOSAA (cas# 2991-50-6)	30034505	ASTM D7979-17		55.7	54.0	54.0	32.4	75.6	Pass	3/29/2019
6911	L-PFBS (cas# 375-73-5)	30034505	ASTM D7979-17		48.2	40.1	40.1	24.1	56.1	Pass	3/29/2019
9467	L-PFPeS	30034505	ASTM D7979-17		53.4	48.2	48.2	28.9	67.5	Pass	3/29/2019
n/a	br-PFHxS (cas# 3871-99-6)	30034505	ASTM D7979-17		44.7	40.0	40.0	24.0	56.0	Pass	3/29/2019
9470	L-PFHpS (cas# 375-92-8)	30034505	ASTM D7979-17		66.7	54.6	54.6	32.8	76.4	Pass	3/29/2019
6909	br-PFOS (cas# 1763-23-1)	30034505	ASTM D7979-17		66.8	56.9	56.9	34.1	79.7	Pass	3/29/2019
n/a	L-PFNS (cas# 98789-57-2)	30034505	ASTM D7979-17		56.6	54.4	54.4	32.6	76.2	Pass	3/29/2019
n/a	L-PFDS (cas# 2806-15-7)	30034505	ASTM D7979-17		67.1	63.0	63.0	37.8	88.2	Pass	3/29/2019
9437	4:2 FTS	30034505	ASTM D7979-17		43.1	39.2	39.2	23.5	54.9	Pass	3/29/2019
6457	6:2 FTS (cas# 27619-97-2)	30034505	ASTM D7979-17		53.0	44.2	44.2	26.5	61.9	Pass	3/29/2019
6461	8:2 FTS (cas# 39108-34-4)	30034505	ASTM D7979-17		65.0	52.4	52.4	31.4	73.4	Pass	3/29/2019

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[This Form: *Performance Evaluation Report Form, Rev:S,* Date Issued:I 116201O] [This Report: *3669 WP 021 1 79.pdf,* Page 1 of 1 Printed: 2/11/2019,1 2:05:26 PM] Samples were prepared and scored according to the principles outlined in the "The TNI Standard EL-V3-2009" and the current Fields of Proficiency Testing Tables, FoPTs.

All components are formulated and verified under Absolutes' NELAC scope (ANAB Accreditation ISO 17025, 17034,17043 (Cert.# AP-1 543) , Guide 34-35) as shown in blue font.

This report may be used in whole or in part by the participant. All results are confidential but limited to accreditation body or other participant requests!

Quality Assurance Manual
Revision 9.0
(Effective March 19, 2018)



Fibertec, Inc.
1914 Holloway Drive
Holt, MI 48842
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This manual has been reviewed and approved by the President, Laboratory Director and Quality Assurance Officer Fibertec Environmental Services, Inc. as indicated below.

Matthew H. Frisch - *President* — Date: 3/1/2018

Daryl P. Strandbergh - *Laboratory Director* — Date: 3-1-2018

Kenneth R. Mueller - *Quality Assurance Officer* — Date: 3/1/18

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1 Introduction

1.1 Fibertec, Inc. (hereafter designated as “Fibertec”) was established in 1987 and is incorporated in the state of Michigan. Fibertec is a specialized provider of high quality environmental laboratory services.

1.2 Purpose and Scope

1.2.1 The purpose of this Manual (hereafter designated “QAM”) is to outline the quality management system (QMS) for the laboratory. This manual defines or references policies such as procedures and documentation that assure Fibertec consistently meets the Client’s needs and complies with regulatory authorities. This manual also serves to provide employee guidance in maintaining a state of Continuous Improvement (CI) relating to the QMS.

1.2.2 This manual incorporates quality guidelines in accordance with the NELAC Institute (TNI/NELAP) 2009 Laboratory Standard through Texas state laboratory accreditation. Other references have been incorporated as appropriate.

1.2.3 The use of terms “must” and “shall” are intended to communicate a mandatory requirement. Terms “may” and “should” are intended to communicate a strong recommendation. Any ambiguity introduced by poor wording will be superseded by the appropriate reference source. Refer to Appendix B for a complete glossary of terms and acronyms.

1.2.4 All Fibertec employees are subject to QAM policies. Understanding and compliance with this manual is required by all Fibertec personnel to achieve, maintain and document that the Client’s needs are met in accordance with the laboratory’s accreditation.

1.2.5 This manual is the property of Fibertec, Inc. and is a controlled document. Updating and editing is performed only in accordance with Fibertec Management’s Quality Policy, and requires the written consent of the President of Fibertec.

1.3 Scope of Testing

1.3.1 The Scope of Testing this manual has jurisdiction over includes all preparative tests and analyses listed in the Fibertec Fee Schedule.

1.3.2 NELAP accredited tests and analytes can be found on the NELAP Certificate of Accreditation. This certificate can be viewed and downloaded at www.fibertec.us and is also available by request. The NELAP Certificate of Accreditation is updated annually.

2 Organization and Responsibilities

2.1 Corporate Structure

2.1.1 The laboratory is structured for direct employee communication with all levels of staff supervision. The flow of administrative and quality control information is graphically presented in Appendix F, the laboratory organizational chart. This diagram illustrates the corporate philosophy giving the Quality Assurance (QA) department independence in fulfilling its function and the means to communicate quality issues effectively.

2.1.1.1 The organizational structure facilitates a high level of multi-directional communication and information flow.

2.1.1.2 Information regarding the QMS may be submitted where needed in an open-door policy.

2.1.1.3 Quality directives can be transmitted with minimum disruption to the laboratory operation while providing the means for Continuous Improvement (CI) of the QMS.

2.2 Roles, Responsibilities and Authorities

2.2.1 A written job description for each laboratory position is located in the QA Department. The Quality Assurance Officer (QAO) and Lead Technical Director (TD) job descriptions are attached (Appendix C).

2.2.2 Responsibilities within the organizational structure for the Laboratory Director are as follows:

2.2.2.1 Directs the daily operation of the laboratory while developing and improving technical operations. The Director oversees the investigation of new equipment, method development, and directs technical advancements of the laboratory.

2.2.2.2 Uses the QMS to improve data quality, productivity, staff development, and safety.

2.2.2.3 Has profit / loss accountability – works with the Facility Owner to develop a laboratory budget. The Director is directly involved in business development/sales activities.

2.2.2.4 Supervises laboratory personnel, hires new employees, and determines that the laboratory has sufficient and qualified personnel.

2.2.3 Responsibilities within the organizational structure for the Quality Assurance Officer (QAO) are as follows:

2.2.3.1 Developments, implements and maintains the QMS as necessary. This includes review of Standard Operating Procedures (SOP).

2.2.3.2 Maintains the NELAP certificate of accreditation.

2.2.3.3 Monitors method and quality control (QC) requirements using statistical control charting, internal audits and data review.

2.2.3.4 Provides guidance, and quality and ethics training. Has the authority to stop work as a result of poor data quality.

2.2.4 Responsibilities within the organizational structure for the Client Services/Laboratory Operations Coordinator are as follows:

2.2.4.1 Supervision of the Client Services department, sample log-in staff, bottle preparation staff, laboratory couriers.

2.2.4.2 Responsible for meeting project due dates, preparing and reviewing quotations, project initiation and management, client satisfaction management, and supervision and training of staff.

2.2.4.3 Strives for improvement in the on-time delivery of laboratory projects.

2.2.5 Responsibilities within the organizational structure for the Technical Staff are as follows:

2.2.5.1 Technical staff members are classified into chemist or technician levels dependent on job type, education and years of experience.

2.2.5.2 Qualified candidates can be eligible for Group Leader (GL) status.

2.2.6 Laboratory management (any director, officer, manager, supervisor or group leader) has an obligation to:

2.2.6.1 Create and maintain a uniform and controlled pattern for performing routine tasks within the organization, based on standard operating procedures.

2.2.6.2 Generate legally defensible, scientifically sound laboratory data of documented quality.

2.2.6.3 To build quality into the workplace ensuring services contributing to successful relationships with the client, employees, and vendors.

2.2.6.4 Develop, deliver, and maintain, excellence in all operational areas. To provide a service that consistently meets or exceeds the client's expectations.

2.2.6.5 Support quality by underwriting the substantial cost of the quality commitment even though such expenses do not result in increased productivity or a tangible product.

2.2.6.6 Maintain a work environment in which all employees are free from commercial pressures in the performance of their duties. To maintain a work environment in which all employees are free from internal organization or external client related pressures that may influence the quality of their work.

2.2.6.7 Educate all employees in fraud prevention and their ethical responsibilities associated with analytical and data reporting activities.

2.2.6.8 Ensure that client confidentiality and information are strictly protected.

2.2.6.9 Implement on-going improvement in every area of laboratory activity. To create and maintain a Quality Environment with an all-encompassing determination to meet the needs and quality objectives of the client.

2.2.6.10 Commit and adhere to the requirements specified in the 2009 NELAC TNI Standard.

2.2.6.11 Included with such commitments is an annual review process where the management of Fibertec, Inc. performs a comprehensive review of the QMS. This review monitors the effectiveness of the QMS and provides feedback for on-going improvement. Policy changes made as a result of the annual management review will be reflected in the QA Manual.

2.2.7 All persons (with full support of Management) have an obligation to:

2.2.7.1 Recognize Management's commitment to good professional practice and to the highest possible quality in service to the client.

2.2.7.2 Recognize Management's commitment with regard to the standard of client service expected.

2.2.7.3 Become familiar with Management's commitment to quality and to implement the laboratory's quality policies in every assigned task.

2.2.7.4 Complete each assigned task in a professional and ethical manner.

3 Quality Management System (QMS)

3.1 Mission Statement – In the increasingly competitive business of environmental laboratory services, the primary tenet of continued success is to efficiently provide results of the necessary quality. Fibertec agrees with this tenet, considers analytical quality assurance (QA) and quality control (QC) to be of prime importance, and has incorporated it as the central pillar of efforts to remain on the leading edge of the environmental laboratory field. Such requirements are also in agreement with the needs and agendas of other organizations, such as the Environmental Protection Agency (EPA), governmental and industrial clients, and various state and local regulatory agencies. Quality assurance and quality control (QA/QC) functions absorb nearly fifty percent of the available effort involved in routine analysis, and continue to evolve and grow in importance. A documented level of quality is absolutely essential for two reasons:

3.1.1 Analytical data of documentable certainty is obtained only with the concurrent use of extensive QA/QC to regulate and monitor the many variables that can potentially introduce error into a chemical analysis.

3.1.2 The Client makes crucial business decisions based on data supplied by the laboratory. Data not properly supported by QA/QC can be questionable at best and can lead to a faulty or erroneous decision. In the overall analytical effort, the additional time spent for QA/QC is time necessarily spent.

3.2 Quality Policy – Fibertec, Inc. is fully committed to using scientifically valid analyses that meet the client's requirements and the requirements of the Texas Commission on Environmental Quality (TCEQ) and the 2009 TNI NELAC Standard. Commitment to these standards provides for optimal laboratory efficiency, safety, integrity and quality. The overall quality objective of Fibertec, Inc. is to consistently report to the client usable data of known accuracy and precision representing the sample provided. Accuracy and precision are defined as follows:

3.2.1 Accuracy – The degree of agreement between an observed value and an accepted reference value. Accuracy includes a combination of random error (precision) and systematic error (bias) due to sampling and analytical operations; Accuracy is established using data quality indicators (refer to Section 25) and is normally expressed as percent recovery (%R) in absolute or relative terms.

3.2.2 Precision – The degree to which a set of observations or measurements of the same property, obtained under similar conditions, conform to each other. Precision is established using data quality indicators and is normally expressed as standard deviation, variance or range in absolute or relative terms.

3.3 Ethics Policy – Fibertec, Inc. has a zero tolerance approach to unethical behavior. Employee training in ethics includes reporting results honestly and completely to avoid compromising data integrity. No employee may perform any activity exceeding the limits of personal and/or professional integrity or instruct any other employee to do so. Integrity and ethical concerns may be discussed or communicated (openly or anonymously) with Management, up to and including the President of Fibertec without repercussion.

3.4 Safety Policy – Safety is an integral aspect of the QMS. As such, the laboratory maintains compliance with 29 CFR 1910.1450 (Occupational Exposure to Hazardous Chemicals in Laboratories). Compliance includes established safety procedures, training, mandatory use of personal protective equipment and a continuing effort to identify and minimize hazards in the laboratory. Refer to the Fibertec Chemical Hygiene Plan (CHP) on the laboratory intranet database (OpenKM). Refer to Appendix E for an example of OpenKM.

3.5 Waste Minimization Policy – Fibertec, Inc. makes every effort to reduce municipal and hazardous waste. Alternate or reduced chemical usage is practiced if the method allows. Laboratory waste is recycled when possible.

3.6 Policy Review – The principles and policies outlined in this document are reviewed as part of the annual management review (refer to Section 16). Changes to any policy affecting the QMS are communicated to all employees through documented training.

3.7 Documentation – Quality Management System documents include the following:

3.7.1 Quality Assurance Manual (QAM) – The manual of policies, procedures, authorities and performance measures of the QMS. The Quality Assurance Officer (QAO) is responsible for ensuring the QAM is maintained as a current and enforceable document.

3.7.2 Administrative Procedures – In addition to the QAM, Standard Operating Procedures (SOP) document more specific QMS details as applicable. The QAO is responsible for ensuring these procedures are maintained as current and enforceable documents.

3.7.3 Laboratory Procedures – Each department (Volatiles, semi-Volatiles, Metals and Wet Chemistry) maintains a document describes in sufficient detail each step needed to perform a laboratory analysis or process. These documents are typically based on approved methods and describe the analysis as conducted by the laboratory, including criteria for quality control (QC). Laboratory Group Leaders and Analysts are responsible for ensuring these procedures accurately reflect current practices.

3.7.4 Records – Any information (written or electronic) that is required for the sample history and associated data to be readily understood must be retained as a record. All employees are responsible for producing and retaining accurate and complete records (refer to Section 14).

3.7.5 Order of Precedence – Any test method, client, regulatory agency or accrediting agency requiring additional controls or more stringent criteria than that established by the QMS must take precedence unless otherwise specified.

4 Document Control

4.1 Policy – All documentation that forms part of the QMS are subject to strict control regarding their creation, revision, approval, use and distribution. This applies to documents generated internally and to those received from outside sources. Obsolete documents that are retained for either legal or knowledge preservation purposes are marked as "obsolete" with the date archived.

4.2 A QMS document is any document, directive, form, external standard, external method, agency regulation, table, chart, notice, plan or memorandum used or referenced to conduct sample analysis. Such documents must be maintained as distinct versions and controlled electronically or as hard copy. Each new version or revision must be associated with an effective date. Previous versions or revisions must be associated with an obsoleted date.

4.3 Most documents are maintained and controlled by a free-form database (OpenKM) to ensure that the latest version is always available for use. Any document directly associated with sample analysis is archived as part of the sample record.

4.4 Document Approval, Issue and Review

4.4.1 If a Standard Operating Procedure (SOP) needs a minor or immediate change, the SOP may be revised via a Note to File (NTF), using form Q-503 (Appendix D). The NTF must indicate the SOP, revision, section to change and any change required. The NTF is reviewed, approved and controlled in the same manner as an SOP and uploaded to the free-form database (OpenKM) as an addendum to the current SOP revision.

4.4.1.1 If an SOP needs a minor change, it may be temporarily revised via a Note to File (NTF), forwarded to the Technical Director and the Quality Assurance Officer for review and approval.

4.4.1.2 The original signed copy of the NTF is given to the QAO. The QAO sends a copy to the Information Technology (IT) Department for addition to the Laboratory Information Management System (LIMS) Master List and the OpenKM database.

4.4.1.3 The original signed copy is filed in the QAO office with the original signed copy of the SOP.

4.4.2 An analytical SOP is reviewed at least every two years if no changes have occurred in the procedure and if no note to file has been written.

4.4.3 If changes have been made in the procedure, the SOP must be updated within a year of the last effective date.

4.4.4 A summary of SOP effective dates are recorded in LIMS.

4.4.5 Documents that do not describe a procedure such as forms for recording information do not require periodic updating unless a change is made that affects how the form is used.

4.4.6 Obsolete documents must be promptly removed from all points of use, and marked and dated as obsolete.

4.5 Examples of external documentation include regulations, analytical methods, Quality Assurance Project Plans (QAPP), and client-required minimum standards. These documents are maintained and distributed by the QAO as necessary or are maintained on OpenKM. Specific instrument manuals, instructions, and requirements are controlled by the individual laboratory and referenced in the appropriate SOP.

4.6 Electronic Signatures, Attestations and Authorship for Laboratory Documents

4.6.1 Approvals, attestations and authorship on or associated with any electronic document generated by the laboratory must be uniquely traceable to the person approving the document and must be an electronic signature such that if the electronic document is changed or altered, the signature is nullified.

4.6.2 Electronic signatures must be used in LIMS for approval of data records prior to generating the report. Such approvals must be made by direct action of the approver and must be associated with the unique log-in name and password.

4.6.3 Automated approval of any electronic record associated with data analysis is prohibited.

4.6.4 The unique approval action associated with authorization of an electronic record may not be used by another person.

4.7 Requesting and/or Initiating a Standard Operating Procedure (SOP)

4.7.1 The format for writing an analytical SOP is as follows:

4.7.1.1 Title Page – Contains the title, SOP indexing number, revision number, approval signatures, date of implementation, and the date of retire.

4.7.1.2 Section 1 (*Scope and Application*) – Contains a description of matrices, target analytes, analytical range, applicable methods and the laboratory of use.

4.7.1.3 Section 2 (*Summary of Procedure*) – Contains a brief summary of the procedure.

4.7.1.4 Section 3 (*Deviations from Method*) – Contains changes made by the laboratory to a published method due to differences in instrumentation, technology or analytical technique.

4.7.1.5 Section 4 (*Definitions*) – Contains a list of terminology and acronyms specific to the procedure.

4.7.1.6 Section 5 (*Interferences*) – Contains known interferences to the procedure

4.7.1.7 Section 6 (*Safety*) – Contains a list of required personal protective equipment (PPE) and specific warnings related to the procedure.

4.7.1.8 Section 7 (*Equipment and Supplies*) – Lists instruments, glassware and disposable supplies.

4.7.1.9 Section 8 (*Reagents and Standards*) – Lists purchase or preparation instructions, expiration dates, and storage conditions of standards and reagents needed for the procedure.

4.7.1.10 Section 9 (*Sample Collection, Preservation, Shipment, and Storage*) – Contains temperature, chemical preservative, container requirements, and hold time for sample receipt and handling.

4.7.1.11 Section 10 (*Quality Control*) – Contains batch quality control, spiked samples and blanks, preparation instructions and concentrations for control of the procedure.

4.7.1.12 Section 11 (*Demonstrations of Performance*) – Explains how to demonstrate acceptable initial and ongoing precision and accuracy.

4.7.1.13 Section 12 (*Limits of Detection*) – References the SOP for determining the MDL and LOQ if required, and lists any requirements specific to the procedure.

4.7.1.14 Section 13 (*Calibration and Standardization*) – Describes the calibration and calibration verification, and any required instrument performance checks. The description includes the frequency, number of calibration points, units, acceptance limits, and how to prepare working standards.

4.7.1.15 Section 14 (*Procedure*) – Describes the step-by-step preparation and/or analysis, including how dilutions are made in enough detail to perform the procedure after training.

4.7.1.16 Section 15 (*Data Analysis and Calculations*) – Describes the final result calculation, including dilution factors, preparation factors, the use of percent solids and calibration algorithms.

4.7.1.17 Section 16 (Method Performance, Data Review, and Acceptance Criteria) – Describes quality control acceptance criteria, corrective actions, and any contingency for handling out of control data, up to including re-run, instrument maintenance and qualifying reported data.

4.7.1.18 Section 17 (*Pollution Prevention and Waste Management*) – Describes how to dispose of unused samples, standard and reagents. Includes any waste minimization techniques and references the Fibertec Chemical Hygiene Plan (CHP).

4.7.1.19 Section 18 (*References*) – Lists the referenced method or methods the procedure is taken from by which results may be reported.

4.7.1.20 Section 19 (*Changes from the Last Revision*) – Lists any significant changes that have been made to the procedure.

4.7.1.21 Section 20 (*Tables*) – Lists any table, diagram or flow chart appended to the SOP.

4.7.1.22 Section 21 (*Worksheets*) – Lists any form or worksheet appended to the SOP that contains a part of the procedural record.

4.7.2 The format for writing an administrative SOP is as follows:

4.7.2.1 Title Page – Contains the title, SOP indexing number, revision number, approval signatures, date of implementation, and the date of retire.

4.7.2.2 Section 1 (*Summary of Procedure*) – Contains a brief summary of the procedure.

4.7.2.3 Section 2 (*Definitions*) – Contains a list of terminology and acronyms specific to the procedure.

4.7.2.4 Section 3 (*Procedure*) – Describes the step-by-step outlines in enough detail to perform the procedure after training.

4.7.2.5 Section 4 (*References*) – Lists the referenced method or methods the procedure is taken from.

4.7.2.6 Section 5 (*Worksheets*) – Lists any form or worksheet appended to the SOP which includes a part of the procedural record.

4.7.3 New and/or revised SOPs are approved before use and attested to having been read/understood by all analysts performing the SOP. Signed attestations are maintained by the QA department as a part of the QMS record of compliance.

4.7.4 Forms, bench sheets and logbooks are generated as follows:

4.7.4.1 Any employee may request a new or revised form by informing their Group Leader (GL) or Supervisor.

4.7.4.2 The GL/Supervisor creates or revises the form as appropriate and submits it to the IT Department.

4.7.4.3 When complete, the GL/Supervisor dates and initials the form indicating approval and submits it to the QAO.

4.7.4.4 The QAO reviews the form and when approved, the QAO informs the IT department the form is approved for use.

4.7.4.5 The IT department assigns a new form number (or revision), uploads to OpenKM, transfers the previous revision to the obsolete folder in OpenKM and informs the laboratory of the upload.

4.7.4.6 If the form is used to generate a logbook, the generated logbook is assigned a unique book number with a start date, replacing any previous logbook.

4.7.4.7 Archived logbooks are given an end date.

5 Review of Requests (from a client), Tenders (offers of work to a client) and Contracts (with a client)

5.1 Client requests for any new sample analysis must be documented and understood so the laboratory can determine whether it has the capability to perform the work intended. This determination must be made prior to accepting samples. Assurances of capability must first be confirmed by the laboratory prior to offering a service to a client. Contracts, including QAPPs, are reviewed against the laboratory's capability prior to signing. Contracts may only be signed by a Management-approved representative of the laboratory.

5.2 Prior to project acceptance and sample receipt, the following must be verified by the Technical Director:

5.2.1 Obtain the method by which results will be reported and confirm it to be appropriate to the client's request.

5.2.2 Confirm equipment, facilities and personnel are available and appropriate to perform the work.

5.2.3 If regulatory compliance indicates the need for laboratory certification, confirm the applicable certification is available prior to accepting the work. If analysis is to be subcontracted to another laboratory, inform the client prior to subcontracting.

5.2.4 Confirm whether the laboratory can schedule analysis within sample hold times and client requirements.

5.2.5 Determine the sample container, sample volume, and preservative requirements.

5.3 Project review for acceptance is made at the initial inquiry stage or prior to granting a contract for on-going routine work, and prior to any change in the client's requirements.

5.4 The client is informed of any contractual or change from the initial agreement after the project has begun. Discuss any changes that might be necessary and document in writing.

5.5 A record of the review and approval process is maintained. The record includes client requirements, dates and communications between the client and laboratory with respect to the work.

6 Subcontracting of Analyses

6.1 Notify and obtain written approval from the client prior to subcontracting work. When subcontracting is required, the client is fully informed prior to the work being performed. A previously approved and competent laboratory is used when work is subcontracted. All subcontracted work remains the responsibility of Fibertec, Inc. unless the client or regulatory authority specifies the subcontractor.

6.2 The laboratory subcontracts work because of workload or because of the lack of capability. When accredited results are required, the subcontract laboratory must be appropriately accredited for the work being subcontracted. A list of approved subcontract laboratories is maintained by Client Services.

6.3 Subcontracting is performed in accordance with the following:

6.3.1 A record of the subcontracting is kept in the client project file.

6.3.2 If a client requests a subcontractor that is not pre-approved, the subcontractor is contacted to verify their capability, certifications and sample receipt policy.

6.3.3 When samples arrive for subcontracting, they must be forwarded to the subcontract laboratory only after being logged into LIMS. However, results are reported by submitting a copy of the original subcontractor report to the client.

7 Purchasing Services and Supplies

7.1 Purchased equipment and consumable materials inspected, calibrated or otherwise verified as acceptable for the intended analysis. The laboratory maintains a list of approved suppliers and the products or services for which they are approved on LIMS. Whenever possible, a supplier certified to a recognized quality standard is chosen.

7.2 Services and supplies are reviewed/approved by the Laboratory Supervisor, Group Leader and/or by the Technical Director prior to purchasing. When materials are received, the packing list is checked to ensure that the material received is the material ordered. Supplies arriving at the laboratory are inspected and/or tested. Records of testing and certificates of analysis are maintained by the QA department for easy retrieval.

7.3 Performance Testing (PT) Samples are purchased in accordance with the following criteria:

7.3.1 The approved supplier of PT samples is NSI Lab Solutions. This supplier is NELAC approved.

7.3.2 PT samples are scheduled by the QAO to complete a non-potable water and soil sample in the spring and again in the fall. PT samples are logged into the LIMS then distributed, analyzed and reported in the same manner as client samples (Section 23.0).

7.4 Certificates of Analysis (CoA), Safety Data Sheets (SDS) and any other accompanying paperwork received from a vender are forwarded to the QA department for scanning into the records directory of the laboratory intranet. The QA Assistant (QAA) logs all received materials into LIMS which assigns a tracking number to each container. The logged information is as follows:

7.4.1 Reagent name

7.4.2 Manufacturer

7.4.3 Lot number

7.4.4 Catalog number

7.4.5 Expiration date

7.4.6 Date received

7.4.7 Department using the material

7.4.8 Quantity

7.5 A sticker with the LIMS tracking number is placed on the container. The material is then taken to the point of use and stored as necessary.

7.6 If a material is found to be unacceptable after testing and/or inspection, the material is segregated and properly disposed of. Material may be deemed unacceptable for a variety of reasons, including incorrect purity or grade, poor quality/performance, damage during transport or inappropriateness to the analysis. A vendor may be deemed unacceptable for a variety of reasons including price, a change in certification, shipment problems or poor test results.

7.7 Calibration Services

7.7.1 The calibration services supplier for calibrating balances, weights, thermometers and other secondary laboratory equipment is certified to ISO/IEC 17025:2005.

7.7.2 Calibration certificates are kept on record in the QA Department.

7.8 Analytical Equipment Services

7.8.1 Approved service providers for laboratory instrument repair and maintenance are employees of the manufacturer or third-party providers trained and certified by the manufacturer.

7.8.2 After being serviced, equipment is recalibrated and checked as appropriate prior to sample processing.

7.9 Argon and Nitrogen bulk gases, and gas cylinders are ordered as needed. The bulk gas supplier is Airgas. Certificates of Analysis (CoA) are kept on record by the QA department.

8 Service to the Client

8.1 It is Fibertec's policy that a client's needs and concerns be integrated into every step of the analytical process. Concerns regarding ambiguity, technical matters, delays or deviations from established procedure are communicated to the client before proceeding with the work. Then, as work proceeds, the laboratory coordinates with the client as necessary with general advice, information about technical matters, opinions and interpretations to enhance the client's understanding of the analytical process and resultant data.

8.2 Client Confidentiality is important and information requested by a third party is not released without written approval from the client. Strict confidentiality is maintained in the handling of client information. This includes verbal and written communications, interim data and the final report. All client information is confidential. Archived laboratory records are stored with limited and controlled access. Any details of a client's operation that have necessarily been revealed to the laboratory for testing purposes is considered proprietary.

8.3 Clients are encouraged to provide positive and/or negative feedback by using the survey located at the Fibertec website (www.fibertec.us), by contacting the Client Services Department or by contacting a Sales Person. The online survey questions are listed in Appendix G.

9 Complaints against the Laboratory

9.1 All client complaints are documented and investigated. Every effort is made to resolve the issue. Complaints are reviewed and documented in accordance with Fibertec SOP G-332. Investigations must be complete and objective. Findings must be resolved in as timely a manner as possible.

9.2 Complaints are usually received by telephone, fax or email, by Client Services (CS) department and are logged into the Project Complaint Log (G-423). If corrective action is required Form Q-500 is completed. Information regarding the corrective action is recorded in detail.

9.3 The Laboratory Director and/or Quality Assurance Officer must be notified of complaints that require corrective action, as well as any investigation or sample re-analysis of suspect data. However, the client services group may explain any misunderstandings the client might have about a report. If that resolves the issue, no further action is needed other than to document the communication.

9.4 If an investigation shows no problems relating to reported analytical data, the client is contacted with that information before proceeding further. If the client remains unsatisfied, further research might be required up to and including sample re-analysis and/or sending to another laboratory for confirmation of the result.

9.5 If the investigation indicates a problem or problems that require corrective action, the problem will be documented and resolved in a manner that satisfies the client as well as the laboratory. The investigation will include a review of QMS compliance. If corrective action is necessary, refer to Section 12, documenting all actions and communications leading to resolution and closure of the complaint. When resolved, Form Q-500 will be completed, signed and dated by the Laboratory Director and Area Supervisor. Any contributing documentation is attached to the completed form.

9.6 Communication is maintained with the client throughout the resolution process. The Client Services Supervisor, Laboratory Director and/or the Quality Assurance Officer are responsible for maintaining such communication. Such communication shall in no manner compromise the integrity of the client and/or the Laboratory.

9.7 The Client Services Project Complaint Log (G-423) is reviewed at least weekly by the Laboratory Director and/or the Quality Assurance Officer.

9.8 Resolutions are evaluated for effectiveness in correcting the problem when corrective action has been taken that requires follow-up.

9.9 The record of complaints is summarized for review as part of the annual management review.

10 Nonconforming Work

10.1 The laboratory follows SOPs and established client requests. When the client request deviates from an SOP, the request and subsequent deviation is recorded. When work does not otherwise conform to the SOP, documentation up to and including narration of the report and investigation of the nonconformance is performed. Departures from the SOP or a client request outside the scope of the SOP are documented prior to the work proceeding by completing Form Q-515 (Appendix I). Client approval for a departure from the SOP is required in most cases.

10.2 The need for an SOP departure might be due to a client request, sample issue or other extenuating circumstance. For example, a client might request analysis of non-standard matrix. If it is determined that the laboratory has the capability to perform such an analysis, the procedure used is recorded on Form Q-515 that includes the following information:

10.2.1 Staff involved in the analysis

10.2.2 Date

10.2.3 The associated SOP with revision

10.2.4 The affected project(s) and sample(s).

10.2.5 Client name

10.2.6 Reason for SOP departure

10.2.7 Detailed description of the SOP departure

10.2.8 Managerial Approvals

10.2.9 Client's written approval

10.3 Only technically justifiable departures are approved. Once approved, the laboratory proceeds with the analysis and the completed departure form is stored with the project record.

11 Continuous Improvement (CI)

11.1 Management's policy is to maintain a commitment to effectively use internal (Section 15) and external audits as tools for continuously improving the level of service Fibertec provides. Continuous improvement of the QMS is demonstrated by maintaining the QAM up to date and by proactively using internal and external audits.

11.2 Laboratory audits conducted by regulating agencies, client organizations or conducted internally are perceived as a learning experience with an opportunity to hear suggestions from knowledgeable persons on how operations can be improved. Consequently, laboratory staff is to be open and cooperative with auditors.

11.3 Once received, a written summary of audit findings is thoroughly evaluated, addressed and documented in a timely manner with follow-up as to the effectiveness of corrective actions taken. Such an evaluation includes the following:

11.3.1 Review of the precision assessed by matrix spike/matrix spike duplicates (MS/MSD), laboratory replicates (sample duplicates) and/or laboratory control sample/laboratory control sample duplicates (LCS/LCD) using the relative percent difference (RPD) calculation and established QC criteria. Refer to Section 25 for further details.

11.3.2 Review of the sensitivity and accuracy assessed by demonstrations of capability, detection and quantitation limit studies, method blanks (MB), second-source initial calibration verifications (ICV), and continuing calibration verifications (CCV). Refer to Section 25 for further details.

11.3.3 Review of QC control limits, control charting, raw data, and review of techniques and procedures.

11.4 Continuous Improvement (CI) is furthered by external and internal training through seminars, journals and publications to maintain a current knowledge of trends associated with the environmental field and sample analysis.

12 Corrective Actions

12.1 Every effort is made to produce practices and results conforming to established criteria. However, in the event of an out-of-control occurrence, the laboratory recognizes a problem exists and corrective action must be taken in accordance with the QMS. The corrective action form is used to document a corrective action (Appendix H).

12.2 Recognition of a problem and the potential need for corrective action can include any of the following:

12.2.1 There is an unusual change in the method detection limit (MDL) and/or sensitivity of analysis.

12.2.2 QC indicates an anomalous trend or is outside an acceptance limit.

12.2.3 A performance testing (PT) sample is missed.

12.2.4 An internal or external audit indicates a finding related to a policy and/or procedure.

12.2.5 A Client expresses concern about data and/or data quality.

12.2.6 Routine data review indicates an anomalous result.

12.3 In response to a problem, the corrective action taken can include, but may not be limited to the following:

12.3.1 If the problem is associated with a sample result, consult with the analyst to re-analyze the sample and evaluate results based on the original analysis. If re-analysis of the prepared sample does not indicate the source of the problem, begin tracing the analysis back from the result to raw data, to calculations, to the instrument calibration, to standards preparation and to any other documentation associated with the analysis. Then, determine the root cause and course of action to take in resolving the problem.

12.3.2 If the problem is associated with a procedure and/or policy finding, begin by consulting with the Group Leader (GL) associated with the procedure to describe and document the issue. From there, involve other personnel as necessary with review of references and/or regulations, if available. Then, determine the root cause and course of action to take in resolving the problem. Corrective action will include a procedure change that more closely matches the reference/regulation to resolve the problem.

12.4 The effectiveness of any corrective action taken to resolve a problem is addressed by the QAO to minimize recurrence of the problem by a follow-up review of the resolution at some later time. If corrective action resolves the problem conclusively, such follow-up might not be required. However, when no immediate conclusion to the problem is immediately evident, the effectiveness of corrective action is reviewed and documented on a time scale relevant to the action taken.

13 Preventive Actions

13.1 In addition to retroactive corrective action it is Management's policy to encourage preventive action. This approach with regard to the QMS is with the intent to proactively minimize the need for corrective action. Preventive actions are recognized as an important tool in implementing a Continuous Improvement (CI) program as an integral part of the QMS. The corrective action form may also be used to investigate and document preventive action (Appendix H) in the same manner as corrective action. Consequently, preventive actions may be taken as a result of the following:

13.1.1 Changes to an existing policy and/or procedure without an associated failure of analytical performance or other non-conformance.

13.1.2 Changes to an existing policy and/or procedure as the result of chronic borderline performance, an equipment change/modernization or as the result of a referenced method update.

13.1.3 Changes to an existing policy and/or procedure as the result internal or external improvement suggestions.

13.2 QC charting is an integral part of determining the need for preventing an out-of-control analysis. When a control chart indicates by trending or by other anomalous data relative to borderline results, preventive action may be initiated rather than waiting until the control limit is exceeded.

13.3 A preventive action flowchart is attached in Appendix J which outlines how to effectively implement corrective and/or preventive action.

14 Control of Records

14.1 Documentation is maintained at Fibertec that sufficiently allows the complete historical creation of all work performed by the laboratory. Such documentation includes but is not limited to the control, use and archiving of the following:

14.1.1 Access logbooks to archived records, analytical data collection logbooks, standard and reagent logbooks

14.1.2 Training Records

14.1.3 Analytical worksheets, laboratory bench sheets, support equipment calibration check bench sheets

14.1.4 Client project folders and all information contained within, batch QC folders and all information contained within

14.1.5 Equipment maintenance logs and other electronic files

14.1.6 Any other informational form and/or sheet that details a procedure and/or policy

14.2 This documentation includes but is not limited to a complete record of laboratory activities. Such records include the following information and any other information necessary to sufficiently allow the complete historical creation of work performed by the laboratory:

14.2.1 A written description or reference to the specific method, including all computational steps used for data reduction, all manual calculations and verifications, all sample preparation including cleanup, separation, incubation, identification (ID) codes, volumes, weights, instrument printouts, meter readings, reagents, standards and dilutions, statistical calculations, reviews, confirmations, interpretations, assessments and reporting conventions, test results, method performance criteria including all expected quality control requirements

14.2.2 The sample ID, dates and times of preparation and/or analysis (the time of analysis if the holding time is seventy-two (72) hours or less or when time-critical steps are a part of the analysis), standard and reagent origins, receipt dates, preparation data and use, lots, expiration dates, and unique internal identifications

14.2.3 The instrument identification (ID) and operating conditions/parameters (or reference to such data), the analyst's initials/signature and/or unique electronic identification (ID), calibration criteria, frequency and acceptance criteria, records of demonstrations of capability (IDOC) for each analyst and other training records, QC protocols and assessments, a record of names, initials and signatures for all individuals responsible for signing or initialing any laboratory record

14.2.4 Electronic data security, software documentation and verification, software and hardware audits, backups, and records of any changes to automated data entries

14.3 QMS records are maintained in addition to the above that include internal and external audits with findings and corrective actions taken. Also, proficiency testing (PT) results, annual management reviews and any other investigation related to the Quality Management System.

14.4 Archived records are kept for at least 5 years. An access log is kept for retrieval of archived data and maintained by the Client Services Department.

14.5 In the case of electronic records, corrections must be made by the "audit" function in the LIMS. The IT Officer is responsible for ensuring that data entered into the LIMS is not editable without using this "audit" function. When the audit function is used, the LIMS records the original data, the new data entered, the date, time and initials of the person making the correction. The employee enters the reason in the comments section.

14.6 All handwritten records must be recorded legibly, in permanent ink (black or blue). Handwritten corrections made to any hardcopy record is dated and initialed by the person making the correction. The correction is made with a single line through the transcription error with the correct information written next to the lined-out error. For corrections other than obvious transcription errors, a short explanation is included as part of the correction.

15 Internal Audits

15.1 Annual internal audits are scheduled and conducted that include all aspects of the QMS. These audits are scheduled and conducted by the QAO or a trained and qualified designee in accordance with Fibertec SOP G-310. Training to conduct an internal audit includes reading and understanding SOP G-310 and the QAM. Additionally, a background in sample analysis and a familiarity with the NELAC TNI regulations is required.

15.2 When an audit is performed, an audit report is generated by the auditor using the format in Fibertec Form Q-504. The audit report is then presented to management for review and signing. Once signed, corrective/preventive action reports (Form Q-500) are generated for any findings on the report. Corrective/Preventive actions are initiated based on the audit findings and are addressed as needed, and in accordance with Fibertec SOP G-311.

15.3 When audit findings cast doubt on the correctness or validity of test results reported, the laboratory will notify clients of the situation. A record of the client notification is maintained as part of the corrective action record.

15.4 Audit findings are closed upon completion of an effective corrective or preventive action. Records related to the audit, including checklists, deficiency reports, corrective action responses, are submitted to and maintained by the QAO.

15.5 An internal audit is complete when all findings have been addressed and documented. The following are target dates for internal audits.

Group to be Audited	Target Quarter	Audit Topics
Quality Assurance Office	1st Quarter	Quality Management System
		Management Reviews
		Corrective Actions
		Preventive Actions
		Methods and Procedure Review
		Essential Quality Control Procedures/QAM
		Client Complaints
Client Services	1st Quarter	Document Control
		Requests, Tenders & Contracts
		Subcontracting
		Records Control
		Reporting
		Corrective Actions
		Client Complaints

Group to be Audited	Target Quarter	Audit Topics
Login	1st Quarter	Sample Handling
		Corrective Actions
Purchasing	1st Quarter	Procedure Review
Volatiles Department	2nd Quarter	Methods and Procedure Review
		Traceability of Results
		Training
		Corrective Actions
		MDL Status
Semi-Volatiles Analysis Department	2nd Quarter	Methods and Procedure Review
		Traceability of Results
		Training
		Corrective Actions
		MDL Status
Organic Extractions Department	3rd Quarter	Methods and Procedure Review
		Traceability of Results
		Training
		Corrective Actions
		MDL Status
Metals Prep and Analysis Departments	3rd Quarter	Methods and Procedure Review
		Traceability of Results
		Training
		Corrective Actions
		MDL Status
Wet Chemistry Department	4th Quarter	Methods and Procedure Review
		Traceability of Results
		Training
		Corrective Actions
		MDL Status
Facility and Safety Review	4th Quarter	Methods and Procedure Review

16 Annual Management Review

16.1 As part of Fibertec's commitment to the QMS, a comprehensive review is performed at least annually by laboratory management with the intent to monitor effectiveness of the system and to provide feedback for on-going improvement. The following areas are taken into account when performing such a review:

16.1.1 Internal and external audits

16.1.2 Existing policies and procedures

16.1.3 Corrective and preventative action reports

16.1.4 PT study performance results

16.1.5 Changes in current and future business opportunities

16.1.6 Client feedback and complaints

16.1.7 The effectiveness of previous QMS improvements

16.1.8 Personnel resources and training

16.2 The Laboratory Director as designated by the Owner, in coordination with Group Leaders and the QAO, performs and documents the review. Policy changes made as a result of the review are reflected in the QAM update.

16.3 Throughout the year, the QAO coordinates policy changes and training as needed.

17 Code of Ethics for Data Integrity

17.1 A comprehensive code of ethics is maintained by Fibertec with a policy of zero tolerance toward any attempt to compromise Company's integrity. This policy is reinforced in Fibertec SOP G-313, which is reviewed annually, and includes a signed agreement kept on record between Management and each employee (Form Q-516).

17.2 Laboratory management provides an open-door policy for private discussion of data integrity issues. A suggestion box is also located in the breakroom if confidential reporting is desired. The main reason for the suggestion box is to assure confidentiality and a receptive environment in which all employees may report items of ethical concern.

17.3 Data integrity training is provided as a formal part of new employee orientation and is repeated annually for all current employees. Employees are required to understand that any ethical infraction shall result in a detailed investigation that could lead to very serious consequences, including immediate termination, debarment or civil/criminal prosecution. Initial data integrity training and the annual refresher training records include signing Form Q-516 and a signature attendance sheet.

17.4 The following is expressly prohibited and is a violation of the company policy and/or ethics:

17.4.1 Fabrication, falsification, or misrepresentation of data such as creating analysis data that was not performed (dry lab) or creating information for a sample that was not collected.

17.4.2 Using external analysts, equipment, and/or laboratories to perform analyses when not allowed by contract.

17.4.3 Improper clock setting (time traveling) or improper date/time recording. Resetting the internal clock on an instrument to make it appear that a sample was analyzed within holding time when in fact it was not. Changing the actual time or recording a false time to make it appear that holding times were met, or changing the times for sample collection, extractions, or other steps to make it appear that holding times were met. Any other unwarranted sample manipulation, software, or analytical conditions.

17.4.4 Dilution of samples due to high concentration, sample matrix (color, turbidity) or other analytical interference without a corresponding increase in the reporting limit.

17.4.5 Improper manipulation of Gas Chromatography/Mass Spectrometry (GC/MS) tuning data to produce an ion abundance that appears to meet specific QC criteria. Changing instrument conditions for sample analysis from the conditions used for standard analysis (such as changing EM voltage).

17.4.6 Unwarranted manipulation of computer software (e.g., forcing calibration or QC data to meet criteria, removing computer operational codes such as the "M" flag, inappropriately subtracting background, or improperly manipulating the chromatographic baseline).

17.4.7 Representing spiked samples as being digested or extracted when digestion/extraction was not performed. Substituting previously generated runs for a non-compliant calibration or QC run to make it appear an acceptable run was performed. Failing to prepare or analyze method blanks and the laboratory control sample (LCS) in the same manner that samples are prepared or analyzed.

17.4.8 Tampering with QC samples and results, over or under spiking the QC sample, or adding surrogates after sample extraction. Performing multiple calibrations or QC runs (continuing calibration verifications (CCVs), LCSs, matrix spikes, duplicates, and blanks) until one meets criteria, rather than taking needed corrective action, and not documenting or retaining data for unacceptable data. Deleting or failing to record non-compliant QC data to conceal the fact that calibration or other QC analyses were noncompliant.

17.4.9 Discarding mid-level points in the initial calibration to meet calibration criteria. Discarding points from a Limit of Detection (LOD) study to force the calculated LOD to be lower than the actual value.

17.4.10 Using an initial calibration that does not correspond to the actual run sequence to make continuing calibration data look acceptable when in fact it was not.

17.4.11 Performing improper manual integrations, including peak shaving, peak enhancing or baseline manipulation to meet QC criteria or to avoid corrective action (refer to Fibertec SOP G-220).

18 Personnel and Training

18.1 An important aspect of maintaining the ethics policy is adequate training for the operation of equipment, the performance of analytical and preparatory procedures, the evaluation of results, the signing of test reports, and the interpretation of results. Consequently, training is an essential part of staff development. All personnel are expected to be familiar with the laboratory's training procedure and are expected to conscientiously implement all associated policies and procedures. Personnel files contain training documentation related to the development of each employee. Included are in-house training, external training certificates, safety training, ethics training, and other materials specific to the analyst. The quality assurance department maintains the training record.

18.2 A Job Description is available for each laboratory position and clearly defines minimum qualifications and responsibilities of each position. Job descriptions are as follows:

18.2.1 Billing Accounts Receivable-EDD Clerk

18.2.2 Client Services Representative

18.2.3 Environmental Laboratory Analyst

18.2.4 Environmental Laboratory Assistant

18.2.5 Quality Assurance Officer (QAO)

18.2.6 Sample Custodian

18.2.7 Environmental Laboratory Group Leader

18.2.8 Environmental Laboratory Supervisor

18.2.9 Environmental Laboratory Technician

18.2.10 IT Systems Administrator

18.2.11 Laboratory Director/Lead Technical Director

18.2.11.1 If the Laboratory Director/Lead Technical Director is absent for a period of time exceeding fifteen (15) consecutive calendar days another full-time technical Person meeting the qualifications of the position will be appointed to temporarily perform that function. If this absence exceeds thirty-five (35) consecutive calendar days, the state of Texas (TCEQ) will be notified in writing of the absence.

18.3 A candidate may only be considered for a position if meeting all minimum qualifications.

18.3.1 The Laboratory/Technical Director has overall responsibility to see that employees are trained and sufficiently competent to safely and properly perform their duties.

18.3.2 The Human Resources (HR) Manager is responsible for employee orientation.

18.3.3 The Compliance Officer is responsible for training on safety and waste handling.

18.3.4 The Quality Assurance Officer (QAO) is responsible for training on general QMS (including ethics and data integrity) policies and procedures.

18.3.5 Group Leaders and/or Supervisors are responsible for ensuring proper training on analytical, preparatory and other departmentally specific procedures (actual training may be done by a Group Leader or other experienced person).

18.3.6 All employees are responsible for ensuring that, before performing a task, they have read the associated SOP, understand the task and understand what is expected of them.

18.3.7 Employees are responsible for asking questions when they do not understand.

18.3.8 Employees are obligated to inform management when they feel they are being instructed to do something they feel is scientifically incorrect, compromises data integrity or is not in compliance with the QMS.

18.4 Training of new employees includes orientation to the Quality Management System. For general company employees, orientation includes the following standard operating procedures (SOP) as a minimum part of their training:

18.4.1 Fibertec Quality Assurance Manual (QAM)

18.4.2 Fibertec SOP G-301, Record Keeping System and Design

18.4.3 Fibertec SOP G-308, Control of Documents

18.4.4 Fibertec SOP G-311, Corrective and Preventive Action

18.4.5 Fibertec SOP G-380, Employee Training

18.4.6 Fibertec SOP G-313, Code of Ethics for Data Integrity

18.5 For employees hired to work in the laboratory, orientation includes the following standard operating procedures (SOP) as an initial part of their training:

18.5.1 Fibertec Chemical Hygiene Plan (CHP)

18.5.2 Fibertec Emergency Action Plan (EAP)

18.5.3 Fibertec SOP G-364, Data Review and Validation

18.5.4 Fibertec SOP G-350, Equipment Control

18.5.5 Fibertec SOP G-315, Exceptional Departure from Standard Practice

18.5.6 Fibertec SOP G-325, Treatment of Proficiency Evaluation Samples

18.5.7 Fibertec SOP G-300, Method Validation & Standard Operating Procedures

18.5.8 Fibertec SOP G-200, Detection, Quantitation and Reporting Limits

18.5.9 Fibertec SOP G-399, Glassware Washing

18.5.10 Fibertec SOP G-322, Spill Clean Up

18.5.11 Fibertec SOP G-351, Handling of Reagents, Standards and Solvents

18.5.12 Fibertec SOP G-102, Evaluation of Weights and Balances

18.5.13 Fibertec SOP G-103, Evaluation of Volumetric Devices

18.5.14 Fibertec SOP G-185, Waste Handling

18.5.15 Fibertec SOP G-215, Evaluation of Thermometers and Temperature Controlling Devices

18.6 Employees-in-training are assigned the appropriate supervision while performing client sample analysis. Training includes a signed attestation by the new employee of having read and understood the associated Standard Operating Procedure (SOP) and all associated reference methods with client sample analysis. The effectiveness of training for client sample analysis includes the unsupervised preparation and/or analysis of an initial demonstration of capability (IDOC) for each analysis. The IDOC must be performed successfully and approved by the QAO in LIMS prior to unsupervised client sample preparation and/or analysis. The IDOC is performed in accordance with the following unless specified otherwise by the method and/or the SOP:

18.6.1 The analyte(s) are diluted in a volume of clean matrix sufficient to prepare four (4) aliquots at the concentration specified by the SOP or if unspecified, to a concentration of one (1) to four (4) times the Limit of Quantitation (LOQ).

18.6.2 Using all results, calculate the mean recovery in reporting units and the standard deviation (in the same units) for each parameter of interest. When it is not possible to determine mean and standard deviations, assess performance against established and documented acceptance criteria. Where acceptance criteria are not amenable to training evaluations, a statistical comparison between a trainee's results with an experienced analyst is performed and evaluated. Submit all IDOC attempts to the QAO for processing and evaluation.

18.6.3 If all parameters meet acceptance criteria and the study is approved, analysis of actual samples may begin. If any parameter does not meet acceptance criteria, performance of the demonstration of capability study is unacceptable for that parameter. When one or more parameters fail at least one acceptance criterion, locate and correct the source of the problem and repeat the test for at least the unacceptable parameter(s). Repeated failure, confirms a general problem with the measurement system. If this occurs, locate and correct the source of the problem then repeat the test for all parameters of interest.

18.6.4 An IDOC study is performed for any analyte added to an accredited procedure.

18.7 A continuing demonstration of capability (CDOC) is required annually based on a repeat of the IDOC study or based on a review of QC generated by the analyst in accordance with one or more of the following.

18.7.1 Acceptable analysis of a blind sample (single blind to the analyst).

18.7.2 At least four (4) consecutive laboratory control samples associated with routine sample analysis with acceptable levels of precision and accuracy as determined by LCS acceptance limits. These must be tabulated annually or be readily retrievable for each method for each analyst.

18.8 Additional training is provided as needed based on demonstration of capability study reviews.

19 Accommodations and Ambient Laboratory Conditions

19.1 The Fibertec facility is maintained with the intent of providing the ambient environment required by the referenced method and SOP. The laboratory operates in a 16,500 square foot facility, located in Holt, Michigan. Ambient conditions such as humidity, temperature, and air handling are professionally maintained. Refer to Figure 1 (below) for a building schematic.

19.2 The laboratory is furnished with all items of sampling, measurement and test equipment required for the correct performance of test and analysis. A list of laboratory equipment is attached (Appendix K).

19.3 Personnel performing calibrations must be alert for any condition that renders a piece of equipment inoperable or unfit for use. For example, thermometers must be inspected before use to ensure that the liquid column is not separated and the thermometer remains accurate. If an equipment malfunction is noted during calibration, the equipment is tagged and removed from service. The equipment is held out of service until repairs and successful recalibration occurs. Equipment maintenance is recorded in LIMS where records for each piece of equipment removal from service, repairs, and date and authorization for return to service are maintained.

19.4 Work areas are segregated as follows to minimize cross-contamination.

19.4.1 Administrative offices

19.4.2 Volatiles Laboratory

19.4.3 Semi-Volatiles Analysis Laboratory

19.4.4 Sample Preparation Laboratory (Semi-Volatiles, Metals and Wet Chemistry)

19.4.5 Trace Metals Analysis, ZHE Extraction and TO-15 Canister Cleaning

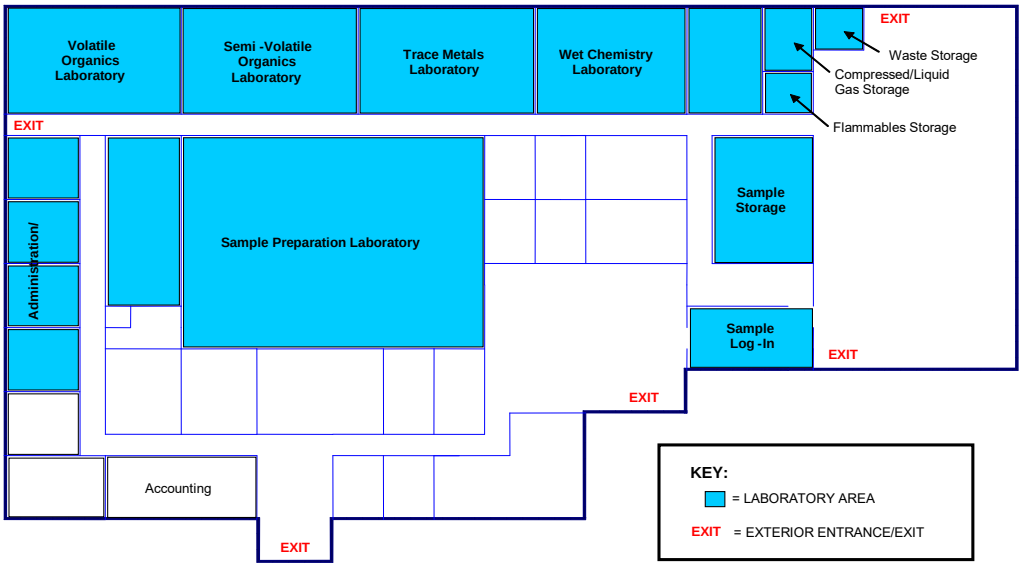
19.4.6 Wet Chemistry Analysis Laboratory

19.4.7 Sample Receipt and Log-in

19.4.8 Warehouse Storage

19.5 Laboratory entrances remain locked during normal business hours and require key-card access except for entrances. However, unlocked entrances are monitored during business hours and lock automatically after business hours. Visitors are required to sign in and are accompanied by a staff member while in the Facility.

19.6 Figure 1. Building Schematic



20 Method Selection and Validation

20.1 The Laboratory operates based on established and written Standard Operating Procedures (SOP). These procedures are used for sampling, sample preparation and sample analysis to meet the Client's needs, and are intended to describe how the laboratory performs a referenced method, which are chosen as appropriate to the intended use of reported data. Most methods referenced are promulgated from Environmental Protection Agency (EPA) regulations and are the latest published version unless otherwise specified.

20.2 A list of Standard Operating Procedures is attached in Appendix M. Other SOPs may be written as needed. The SOP format used is listed in Section 4. A list of matrices commonly analyzed and described in an SOP is attached in Appendix N.

20.3 An SOP lists the equipment used. The record includes a detailed description of instrumentation with associated information in the LIMS maintenance log and operating manuals. Instrumentation will be equivalent to that required by the method but may not be from the same manufacturer.

20.4 A method detection limit (MDL) study is performed on each instrument although the laboratory MDL for the procedure can be based on more than one instrument. An instrument detection limit (IDL) must be performed on each instrument if required by the referenced method. An initial demonstration of capability (IDOC) is not specifically required for each instrument since the equipment used is maintained as part of the analyst training record.

20.5 Deviations/modifications from the referenced method are not approved except when documented, technically justified, authorized by Management and accepted by the client. Approved deviations are listed in the SOP with a technical explanation and references to any supporting data. Some examples of why a method might require modification are as follows:

20.5.1 Advances in analytical technique and/or instrumentation, or other equipment.

20.5.2 Alternate reagents or chemicals that do not change the chemistry of the analysis.

20.5.3 Optimization of instrument settings and/or configurations that give equivalent or better performance than method-prescribed instructions.

20.5.3.1 Such flexibility does NOT extend to any method-defined parameter where the analytical result is wholly dependent on the process used to make the measurement. Examples of such are the TCLP and SPLP leachate methods, hexane extractable materials (HEM) and Biochemical Oxygen Demand (BOD).

20.6 Deviations (departures and non-standard techniques) from the SOP may be approved if an unusual matrix is encountered that does not conform to the SOP or a sample contains a large amount of an interfering substance. Such deviations will be made in coordination with the client and are documented on Fibertec Form Q-515 in accordance with SOP G-315, and in recognition of the need for a departure from the SOP due to a client request, sample issue or other extenuating circumstance. In such a case, Form Q-515 is completed with a detailed description of the SOP departure, and submitted to the Laboratory Director and QAO for review and approval. When approved, Form Q-515 becomes a part of the project and analysis record. Reported results are narrated as necessary.

20.7 Any analysis requested by the Client that the Laboratory is capable of performing, that does not have a referenced method and established SOP, will include a complete step-by-step description of how the analysis was performed in the analysis record. However, it will be clear on the report that no such analysis is in any manner certified or useable for compliance purposes. Analyses the Laboratory is not capable of performing will be subcontracted.

20.8 Calculations, software and other electronic equipment associated with an SOP enable collection, storage, transfer and transmission of data electronically. These are approved and maintained in accordance with Fibertec SOP I-300. Spreadsheet and LIMS calculations are verified to be accurate based on a comparison between the electronic result and a manual calculation. If results are deemed to be equivalent, approval is given. A record of the evaluation and approval is maintained as documentation, and the algorithm is password-protected and stored securely (on OpenKM or in LIMS) to prevent accidental alterations.

20.9 An estimate of uncertainty is calculated and reported when requested. Analytical uncertainty is estimated based on QC data (Section 25.0) such as the last 20 LCS data points. When available, uncertainty can be expanded to include specific data from instrument calibration standards, calibration verifications, laboratory control samples, matrix spikes, sample replicates and sample collection duplicates. Estimates on uncertainty can be used to calculate confidence limits for a particular result. Such confidence limits can be used to indicate that the final result was reported to an appropriate number of significant figures.

21 Equipment and Calibration

21.1 Laboratory equipment is calibrated prior to use and at regularly scheduled intervals in accordance with the referenced method and SOP. New equipment purchases are approved in accordance with relevant test specifications. Purchasing is described in Fibertec SOP G-304.

21.2 Upon receipt, each piece of equipment is issued an identification number, which is affixed to the device and recorded in LIMS, where an equipment inventory is maintained. The identification number locates the manufacturer’s name, model or other type identification, and serial number, specifications, storage or use location, calibration, maintenance, and repair in the System.

21.3 Instructions on the use and maintenance of equipment are available in the SOP and/or instrument operating manual. Maintenance is recorded in the maintenance log. To the extent possible, equipment is safeguarded from adjustments which could invalidate the test and/or calibration. This is done in various ways such as training, password control, data backups, and limited access to the laboratory. The operation of laboratory equipment is limited to qualified laboratory personnel. Equipment that is no longer in operation must be removed from service and clearly marked. Equipment that goes outside the direct control of the laboratory must be checked and shown to be satisfactory prior to returning to service.

21.4 Support equipment includes but is not limited to balances, thermometers, ovens, freezers, incubators, disposable volumetric pipets, mechanical pipettes, and type B glassware. Balances, flowmeters, and thermometers are labeled with the date of calibration and calibration certificates are scanned to QA records when available. Support equipment is checked in accordance with Fibertec SOP G-350 using a NIST traceable reference. Disposable support equipment is checked by lot.

21.5 Preparatory equipment includes but is not limited to sonicators, microwave extraction ovens and tumblers used for waste leaching. Preparatory equipment verification and maintenance instructions are outlined in the appropriate preparatory SOP. Verification and maintenance is performed at the frequency required by the referenced method or by the manufacturer's instructions. The use of preparatory equipment is included in Demonstration of Capability (IDOC/CDOC) studies.

21.6 Analytical equipment includes but is not limited to gas chromatographs with various detectors, spectrophotometers, spectrometers and meters. General requirements for calibration and verification are outlined below. Specific calibration and verification requirements including frequency, number of calibration standards, concentrations, calculations, and acceptance criteria are based on method requirements and are found in the analytical SOP. All records are retained to permit reconstruction of analytical equipment calibration and verification, including analysis date, method referenced, instrument/system identification, analyte(s) tested, standards used, analyst identification, concentrations and responses, equations used to reduce instrumental responses to concentration and information to explicitly connect verification data to the calibration.

21.7 Calibration is performed prior to sample analysis when a new instrument is installed.

21.7.1 Calibration is also performed when calibration checks are outside an established acceptance limit, at a specific frequency or when modifications or repairs are made which alters the calibration, linearity, or sensitivity.

21.7.2 If the number of calibration points is not specifically defined, the minimum number used is three (3), not including the calibration blank, unless a blank required. The difference between the highest calibration point and the lowest is defined as the calibration range. The lowest calibration standard (the reporting limit) is at or above the Limit of Quantitation (LOQ) which is deemed to be the minimum reporting limit (RL). Any instrument response above the highest calibration point is diluted into the calibration range.

21.7.3 Sample results are calculated from the latest initial calibration response and not from the continuing calibration verification (CCV).

21.8 If calibration results are outside established acceptance criteria, corrective actions are performed and documented prior to sample analysis. For multi-analyte calibrations, if sample data are not being reported for an analyte that is outside criteria, the calibration may be used for analytes within criteria. However, corrective action is taken as soon as practicable and prior to sample analysis for the out of control analytes. Corrective action can include the removal or reanalysis of individual calibration points in accordance with the following:

21.8.1 It is expressly prohibited to remove calibration points from within a calibration range. If the problem appears to be associated with a single calibration point, that one standard may be remade and repeated if technically justifiable. However, replacement of the point must be within the time frame established in the SOP, prior to sample analysis, and results for all analytes in the replacement (if it is a multi-analyte standard) must be used.

21.8.2 Analyzing additional standards at other concentrations then selectively choosing only runs that meet the calibration acceptance criteria is expressly prohibited.

21.8.3 Adjusting the calibration range (removing a point from the highest or lowest end of the calibration range) is allowed provided the minimum number of standards remains and the reason for the removal is based on varying analyte sensitivity in a multi-component calibration. If a standard is removed from the lower end (due to lack of sensitivity), the reporting limit is raised to the concentration corresponding to the lowest concentration in the adjusted calibration range.

21.9 Initial Calibration Verification (ICV) is performed after the initial calibration and prior to sample analysis. Calibration verification standards may or may not go through the preparatory process, depending on the method requirement. The ICV standard is obtained and prepared from a second source.

21.10 Instrument calibration verification is performed by running a Continuing Calibration Verification (CCV) as follows:

21.10.1 At the beginning and end of each analytical batch (except, if an internal standard is used, only one verification needs to be performed at the beginning of the analytical batch)

21.10.2 Whenever it is expected that the analytical system might be out of calibration or might not meet the verification acceptance criteria

21.10.3 If the time period for calibration or the most previous calibration verification has expired

21.10.4 For analytical systems that contain a calibration verification requirement

21.11 When required, a Continuing Calibration Blank (CCB) is run immediately after each ICV and every CCV to demonstrate the lack of instrument contamination and/or carryover. If calibration verification results are outside established acceptance criteria, and confirmed by a second non-acceptable run, corrective action is taken and documented. After corrective action, the verification is repeated by running two acceptable consecutive CCVs or a new initial instrument calibration. Samples associated with a calibration outlier are reanalyzed after the problem is corrected. If reanalysis is not possible, reported data is appropriately qualified with the following exceptions.

21.11.1 When acceptance criteria for a CCV and ONLY a CCV (not an ICV or LCS) are exceeded high and associated samples contain analytes below the reporting limit, those sample results may be reported as fully useable without re-analysis.

21.11.2 When acceptance criteria for a CCV and ONLY a CCV (not an ICV or LCS) are exceeded low, sample results may be reported as fully useable without re-analysis if the sample result exceeds a maximum regulatory limit or other decision level.

21.12 Calibration standards are purchased as certified solutions.

22 Measurement Traceability of Reagents, Standards and Solvents

22.1 All chemicals and reagents are purchased of equal or greater purity than those specified in the referenced method. When not specified in the method, the desired purity is reagent grade or better. All purchased materials (chemicals, reagents, standards and solvents) are given a unique laboratory identification (ID) number upon receipt and recorded in LIMS. This ID is traceable to the chemical name, quality grade, vendor or supplier name, catalog number, lot number, receipt date, expiration date, and storage location. The ID, receipt date, and expiration date are recorded directly on the material's container and recorded with any accompanying certificate of analysis (CoA) which is reviewed and retained in QA records. A CoA is required for all reagents, chemicals and standards.

22.1.1 Reagent chemicals are purchased from companies that are accredited to a nationally recognized standard (such as ISO 9001).

22.1.2 Concentrated acids used in the Metals Laboratory are trace metals grade or better.

22.1.3 Organic solvents are pesticides grade or better. Methanol is purge and trap grade for volatiles analysis.

22.2 Preparation of intermediate and/or working solutions is described in the SOP. These preparations are assigned a unique laboratory identification number, traceable to the laboratory identification number(s) and amount(s) of the material(s) used to make it, final volume, date of preparation, expiration date and the preparer's initials. The ID is affixed to the storage container along with the date prepared and expiration date. All materials used in an analysis are recorded with the appropriate batch data.

22.3 Laboratory reagent water is used for blanks, QC and as a diluent. The main deionizing system utilizes a carbon pre-filter and two cation/anion exchange mixed bed filter tanks. It is then filtered through a 0.2 µm particulate filter. The Volatiles and Wet Chemistry laboratory contain additional filtration systems to further polish the water for their specific use. Water quality must meet all requirements in the referenced method. Monitoring through the analysis of method blanks, through resistivity monitoring lights on the resin tanks, and by conductivity checks is recorded as documentation of the Laboratory's water quality.

22.4 Chemical materials are stored in accordance with storage conditions and shelf life specified in the SOP. Chemical storage is segregated from client samples and extracts/digestates. No chemical reagent or standard may be used after the manufacturer's expiration date unless documented for extending the expiration date in accordance with Fibertec SOP G-225 and approved by the QAO. If no expiration date is given by the manufacturer for a chemical or reagent, the expiration date is deemed to be 5 years from the date of receipt. Any chemical, reagent, standard or solution that has in some way degraded is disposed of and replaced, even if prior to the given expiration date. Only the minimum quantity of a chemical needed to last for a year is purchased when possible.

22.5 Chemicals are disposed of in accordance with the Fibertec Chemical Hygiene Plan (CHP), Fibertec SOP G-185, and in accordance with federal, state and local laws. Laboratory waste is assigned to one of several categories, each of which requires special handling:

22.5.1 Aqueous samples determined to be non-hazardous by previous analysis and found to be above the "disposal limit" are disposed of as non-hazardous process wastewater.

22.5.2 Inert solid waste samples determined to be non-hazardous by composited Toxicity Characteristic Leaching Procedure (TCLP) analysis may be placed in the municipal dumpster for disposal.

22.5.3 Materials determined to be hazardous waste, are collected and disposed of through a commercial hazardous waste handler.

22.6 The laboratory reference thermometer used to calibrate thermometers and mass standards used to calibrate balances are re-calibrated annually by an accredited calibration company. These are only used by the QA department.

23 Proficiency Testing

23.1 Performance Testing (PT) studies are analyzed to maintain laboratory accreditation and to monitor laboratory performance. A PT sample is analyzed for each accredited analyte if one is available. These samples are prepared, handled and analyzed in the same way as client samples. It is permitted to analyze the same PT sample by multiple methods so long as the test methods are in the same matrix. The laboratory may analyze and report the PT sample by one test method and an acceptable performance score for that test method will be acceptable for all test methods that use that same technology within that field of accreditation. When reporting an analytical result for more than one test method using the same technology, an unacceptable score for either method will result in an unacceptable score for all accredited test methods.

23.2 The Laboratory participates in two (2) non-potable water (WP) and two (2) soil (SM) studies per year through NSI Lab Solutions.

23.3 Once received, a PT study goes through every step of the laboratory process, including sample login, preparatory and analytical procedures and data review, including specific instructions from the PT Provider. A client report is then generated for reporting to the PT Provider through the NSI website. The Provider is also instructed to send a copy of the results to the Texas TCEQ as the Laboratory's primary accrediting agency.

23.4 PT samples are analyzed using the same calibration, QC, and minimum reporting limit criteria as a client sample. For multiple-point calibrations, the following rules apply:

23.4.1 A result for any PT sample at a concentration above or equal to the lowest calibration standard is reported as the resultant value.

23.4.2 A result for any PT sample at a concentration less than the lowest calibration standard shall be reported as less than the value of the lowest calibration standard.

23.5 Sharing PT samples and/or PT data with other than the PT Provider is not permitted. Attempting to obtain the assigned value of any PT sample prior to the closing date is not permitted. Acceptable results are determined only by the PT Provider.

23.6 Two PT study results with acceptable recoveries of the past three attempts must be maintained for accreditation. In the event of an unacceptable result, corrective action is performed sufficient to find and correct the cause of the unacceptable result. A remedial PT sample is then ordered and analyzed to confirm the corrective action and re-establish a history of 2 consecutive acceptable results. The remedial PT sample is analyzed no sooner than 15 days from the analysis date of the original PT sample.

23.7 All PT reports are maintained as part of the QMS record for a period of at least 5 years.

24 Sample Collection and Handling

24.1 Samples must be collected, transported and handled by the laboratory in a manner that is safe, maintains a chain of custody (http://www.fibertec.us/resources.html), preserves sample integrity and that meets applicable shipping regulations.

24.2 Most aqueous samples and all solid samples are collected by the client or their designated sampling agency. However, Fibertec personnel may perform manual or composite sample in accordance with the following Fibertec SOPs G-112, G-525 and G-526 when requested to do so. The latter two (2) documents are available on the Fibertec website at http://www.fibertec.us/resources.html and upon request. These documents are included in all sample container shipments.

24.3 The Sample Receipt and Acceptance Policy is documented in Fibertec Form G-514 which is posted in the Sample Receiving Area and on the Fibertec website.

24.3.1 Samples are inspected upon receipt at the laboratory in accordance with Fibertec SOP G-312.

24.3.2 The chain of custody (COC) is signed upon receipt at the laboratory by signature, date and time. The COC is also used if a sample is subcontracted or if internal COC is required by the Client.

24.3.3 All sample containers are given a unique LIMS identifier at receipt and/or sub-sampling preparation.

24.3.4 When required, samples are stored at 0 - 6° C in the walk-in cooler before and after analysis. However, volatiles analysis samples are stored in the volatiles laboratory refrigerator, which is monitored for contamination in accordance with Fibertec SOP V-113.

24.3.5 Limited access is given to the storage area. Hazardous and/or highly contaminated samples are segregated from other samples. Extracts and digestates of samples are stored according to the appropriate SOP.

24.4 Samples are kept in cold storage for at least 30 days then are moved to the warehouse for an additional 60 days unless the client has arranged for extended storage or return of the sample(s). Air samples are only kept for 2 weeks.

24.5 Acutely hazardous, highly contaminated, toxic and organic waste samples are returned to the client when possible. If not possible, such samples are isolated and disposed of through a licensed hazardous waste disposal company in accordance with Fibertec SOP G-185.

24.6 Internal COC is recorded upon request by the Client. However, such a request must be made prior to the sampling event.

25 Quality Control

25.1 Quality Control (QC) is the QMS tool that assesses the quality of analytical results through the use of quality control samples. Such samples are included in every step of the preparation and analysis of Client samples, and in the same manner as a Client sample. Every effort is made to generate a laboratory result directly associated with acceptable QC. When this is not possible, the result is appropriately qualified with an explanation as to the qualification. Acceptance limits for QC are derived from method specifications and/or from statistical evaluation of QC results over time.

25.2 Method Blanks (MB) and Laboratory Control Samples (LCS) are prepared and analyzed at a minimum of one per preparation batch unless otherwise specified in the reference method and SOP. These QC samples are defined in Appendix B.

25.2.1 The MB is used to monitor contamination and/or interferences to the analysis. Corrective action is taken, documented and recorded when the MB indicates contamination and/or other interferences to the analysis above the minimum reporting limit. Affected samples are re-processed when possible.

25.2.2 The LCS is used to monitor the entire procedure. When the LCS is unacceptable, the entire analytical system is considered to be out of control. Corrective action is then taken, documented and verified by re-processing affected samples with an acceptable LCS sample when possible.

25.3 Matrix spikes (MS) are used in connection with each sample matrix and are chosen randomly from the preparation batch. These QC samples are used to evaluate the effect of the sample matrix on performance of the analysis, and like the LCS are spiked at the beginning of the preparation procedure. Matrix interference to the analysis is reported when matrix spikes are out of control in conjunction to an acceptable LCS. Matrix spiking is performed at the frequency specified in the reference method and/or when specifically requested by the client. If no sample in the preparation batch has sufficient sample for matrix spiking, when matrix spiking is required, the batch is narrated that there was insufficient sample for matrix QC.

25.4 When required by the reference method and SOP, surrogates are spiked into all sample preparations, QC sample preparations and into all calibration standards. Surrogate recovery is used to monitor individual sample preparations. The surrogate(s) listed in the SOP are used. Surrogate acceptance limits are calculated and updated statistically. However, if acceptance limits are specified in the reference method, those limits may be used as maximum control limits. Surrogate recovery is evaluated against LCS surrogates to determine whether matrix interference is a factor with an unacceptable surrogate recovery.

25.5 Matrix Spike Duplicates (MSD) are defined in Appendix B, and prepared in conjunction with the matrix spike to assess homogeneity of the sample matrix, and when homogenous, to assess preparation/analysis precision. For analyses not amenable to matrix spiking, a sample duplicate is included in the preparation batch if a quantifiable concentration of analyte is expected and when there is some question regarding sample homogeneity. In the absence of a matrix spiked sample, an LCS duplicate (LCD) is prepared.

25.6 Field QC is implemented as specified by the reference method and SOP. QC samples originating from field sampling may be received by the laboratory as any other client sample and prepared/analyzed in the same manner as a client sample.

25.7 Acceptance criteria for QC samples is generated based on historical data and compared to specified maxima in the reference method when available. If historically derived acceptance limits exceed reference method maxima, that maximum is used and the procedure optimized to adequate accuracy and/or precision. Historical data for generating acceptance criteria is compiled separately, based on combined parameters of method, technology and matrix. For example, acceptance criteria for pesticides in soil by ultrasonic nebulization are generated separately from pesticides in soil by microwave extraction. Acceptance criteria generated from historical data is evaluated statistically, based on traditional control charting. For example, the standard deviation of 20 - 30 most recent data points (or data sets) is calculated and multiplied by 3. Then, the value is subtracted/added from the average (weighted average for data sets) to obtain a lower control limit (LCL) and upper control limit (UCL).

25.8 When batch data must be reported with quality that does not achieve full compliance to established laboratory criteria due to unavoidable circumstances, all affected sample reports will include narration that fully explains the compliance deviation, including any expected bias to the sample result. In such a case, affected results will be qualified as estimated. When quality control assessing one sample's homogeneity and/or matrix does not achieve full compliance to established quality criteria, the sample report must include narration that fully explains the compliance deviation unique to that sample's matrix, including any expected bias to the sample result. Other samples might or might not need narration, if of a similar but unassessed (unspiked) matrix.

25.9 Control Charts are generated for graphic presentation of data when needed with emphasis on trend analysis. Statistical limits can be generated based on QC data with emphasis on variables such as; QC type, instrument, analyte, matrix, and preparation technique then evaluated against existing QC acceptance limits which are maintained in LIMS. Refer to Appendix L for an example control chart.

26 Data Reduction

26.1 Most experimental data accumulated in the laboratory, whether analog or digital, is compiled by the use of instrumental software using some form of signal detection specific to the analyte. Or, when sample response is based on a direct visual observation by the analyst, such data is accumulated and recorded manually, with other relevant information. Compiled data is then compared to known concentration responses and converted to a concentration value. Such comparisons are performed using mathematical functions that may or may not be an algorithm associated with the instrument's software, or may be contained in an extraneous spreadsheet developed for that purpose, or may be built into the laboratory management system (LIMS). The following mathematical functions are typically used:

26.1.1 Average Calibration Factor (CF_{avg}) or Response Factor (RF_{avg}) uses an averaged concentration factor relating analyte response to concentration, and is based on multiple known concentration levels that when plotted, pass through the origin. The Relative Standard Deviation (RSD) of the CF_{avg} or RF_{avg} must be within the established acceptance limit for the function to be approved for data reduction. A data plot of concentration vs response should always be evaluated to verify the assumption that analyte response is zero at zero analyte concentration prior to using CF_{avg} or RF_{avg}. If a data plot indicates the function does not pass through the origin, then the data plot itself can be used for calibration by means of a regression curve.

26.1.2 Linear Regression uses a data plot based on the method of least squares to calculate a line equation through the data plot of the form y = mx + b. However, since some instrument manufacturers use comparative algorithms, verification of an instrument's data reduction software is documented as accurate, based on the method of least squares. The goodness of fit or correlation coefficient (r) must be greater than 0.99, using a minimum of 5 standards for linear regression, not including the origin (unless otherwise specified), and with one standard at the Reporting Limit (RL). The use of linear regression is not used as a rationale for reporting results below the lowest concentration calibration point or for avoiding corrective action when a normally acceptable CF_{avg} or RF_{avg} is out of control.

26.1.3 Most detector responses are directly proportional to the analyte concentration. However, some are not and some form of non-linear regression may be used when analyte response is characteristically non-linear. Such non-linear equations may not be used to compensate for routine QC failure, detector saturation or the lack of instrument maintenance. The non-linear equation may not exceed that of a third-order polynomial of the form $y = ax^3 + bx^2 + cx + d$. For acceptable data reduction, the calibration points must be continuous, differentiable and monotonic throughout the calibration range. Non-linear calibrations may not be forced through the origin and require a minimum of seven (7) calibration points for a third-order curve, six (6) points for quadratic and five (5) points for linear unless otherwise specified by the reference method. The goodness of fit or coefficient of determination (r^2) for a non-linear regression must be greater than 0.99 to be acceptable for data reduction.

26.2 Chromatographic software used to automatically compile detector responses to analyte concentration will sometimes fail to integrate a response peak correctly. In these cases, a manual integration is performed to accurately compile data. Most manual integrations performed by the laboratory are uploaded and recorded in LIMS for easy retrieval and review, and are performed in accordance with Fibertec SOP G-220. If not automatically uploaded to the LIMS, the original integrated data is printed and saved before the peak is manually integrated. Manual integration is never used for the sole purpose of passing quality control or calibration criteria and all manual integrations receive a peer review prior to acceptance.

26.3 Raw data is compiled in LIMS and final calculations to the result are performed, including rounding to the appropriate number of significant figures. The LIMS performs this automatically.

27 Data Review

27.1 Data packages are reviewed twice before generating the client report to ensure accuracy of the sample handling, analysis, transcription, data reduction and reporting process. The first review is by the Analyst where data is reviewed for accuracy and completeness by filling in a Data and/or Calibration Review Checklist in accordance with Fibertec SOP G-364. The checklist is then signed and dated by the Analyst and included in the data package. Data reviews include the following:

27.1.1 Are batch control documents present and properly filled in with initial and final volumes or masses, units, appropriate dilution and preparation factors, and initials and dates of preparatory personnel?

27.1.2 Does the calibration have acceptable relative standard deviations, correlation coefficients, coefficients of determination, and any other criterion for acceptance? Are calibration check samples acceptable? Is QC acceptable?

27.1.3 Does data "make sense" (is a brine specific gravity greater than 1; is total alkalinity greater than or equal to other types of alkalinity)?

27.1.4 Are mass spectral ions at the correct ratios for identification? Does mass spectral data meet tune criteria? Are chromatographic peaks at the proper retention time? Are carryover and other interferences addressed? Are manual integrations properly performed?

27.1.5 Does any data change follow Fibertec SOP G-301? Are data historically traceable through reagents, standards, equipment identifications, initials or signatures, dates for all manual data input? Are SOP departures documented?

27.1.6 Were PT samples prepared and analyzed in accordance with SOP G-325?

27.1.7 Are acceptance criteria specific to the sample met (such as surrogates and internal standards)? Are manual calculations re-checked?

27.1.8 Is the checklist checked off, signed and dated by the reviewer, and included in the data package?

27.1.9 A list of data review checklists on OpenKM is as follows:

27.1.9.1 Mercury Review Data Checklist (M-504)

27.1.9.2 Low Level Mercury Data Review Checklist (M-505)

27.1.9.3 Semi-Volatiles Calibration Review Checklist GC/FID (S-598)

27.1.9.4 Semi-Volatiles Calibration Review Checklist GC/ECD (S-5041)

27.1.9.5 Semi-Volatiles Calibration Review Checklist GC/MS (S-599)

27.1.9.6 Semi-Volatiles Data Review Checklist 8015 (S-562)

27.1.9.7 Semi-Volatiles Data Review Checklist BNA I PNA (S-559)

27.1.9.8 Semi-Volatiles Data Review Checklist Herbicides/EDB (S-560)

27.1.9.9 Semi-Volatiles Data Review Checklist PCB/Pesticides (S-5035)

27.1.9.10 Trace Metals Data Review Checklist ICP-MS (T-504)

27.1.9.11 Volatiles Calibration Review Checklist (V-528)

27.1.9.12 Volatiles Calibration Review Checklist T0-15 (V-529)

27.1.9.13 Volatiles Data Review Checklist (V-514)

27.1.9.14 Volatiles MDL I LOQ Prep Checklist (V-536)

27.1.9.15 Volatiles T0-15 Prep Checklist (V-537)

27.1.9.16 Volatiles Data Review Checklist T0-15 (V-519)

27.1.9.17 Wet Chemistry Data Review Inorganic Anions Checklist (W-552)

27.2 A second review of the data package is performed and documented by a peer of the analyst. The Peer must be equally qualified to review the data package and completes the same Data and/or Calibration Review Checklist. A data package is not submitted to Client Services for reporting data until both data reviews are completed and acceptable.

27.3 Once received, the Client Services reviews the data package for completeness, looking for typographical errors or any other discrepancy while generating the client report. Client Services then electronically approves and generates the report, emails it to the client and archives the data package to laboratory records.

28 Reporting Results

28.1 Laboratory Reports submitted to the Client must include all information requested by the client and all information necessary for interpretation of the report. Four (4) distinct levels of information that can be included with the report are outlined below. The minimum level (Level 1) of information reported is as follows:

28.1.1 Fibertec name, logo, and address w/contact information

28.1.2 Unique project number, page number and total number of pages on each page

28.1.3 Indication if the report is a preliminary, supplemental or amended document

28.1.4 Client name, address, project name, sample identification numbers and descriptions

28.1.5 Analysis results with reporting limits, units and any data qualifiers

28.1.6 Date of receipt, date and time of collection, date of analysis, date and time of sample preparation (if hold time ≤ 72 hours)

28.1.7 Identification of preparatory and analytical methods referenced

28.1.8 Reference to the sample collection method, if applicable

28.1.9 Deviations from, additions to or exclusions from the SOP, including information on relevant test conditions and noncompliance with SOP requirements, where applicable

28.1.10 The Laboratory Director's (or Designee's) signature accepting responsibility for the report

28.1.11 A statement to the effect that results relate only to the sample received

28.1.12 Laboratory reports of any sub-contracted work

28.1.13 Additional narrative and/or customization of the report format when required.

28.2 A Level 2 report includes a level 1 report with the following additions:

28.2.1 A chart cross-referencing client sample identifications with the Fibertec identification number

28.2.2 A summary of data qualifications

28.2.3 A summary of batch QC results

28.3 A Level 3 report includes a level 2 report with the following additions:

28.3.1 A case narrative

28.3.2 Calibrations and calibration verifications

28.3.3 Matrix QC results

28.4 A Level 4 report includes a level 3 report with the following additions:

28.4.1 A copy of preparatory logbook pages, bench sheets and instrument hardcopy

28.4.2 All standard and reagent preparation records

28.4.3 Any other documentation and/or measurement contributing to the final result

28.5 All reports are submitted to the Client electronically by fax or email in accordance with Fibertec SOP G-307 unless otherwise requested by the client. The original signed document is maintained for a period of not less than 5 years.

28.6 No amended report may be submitted to the Client without prior communication with the Client. An amended report must be clearly marked as such and may not over-write and/or delete any originally submitted information in laboratory records. The original report and the amended report must both be retained, including the QA investigation. No result submitted to the Client may be replaced without technical justification.

29 Changes from the Previous Revision of this Document

29.1 Removed the step by step instructions for water sampling (Sections 24.2.1 through 24.2.3.)

29.2 Updated the requirements for the Quality Assurance Officer position.

29.3 Minor editorial revisions.

29.4 Reformatted the document.

30 References

30.1 TNI Standard 2009 - *Management and Technical Requirements for Laboratories Performing Environmental* Analysis, EL-V1-2009, Volume 1, 2009, The NELAC Institute, Weatherford, TX, USA

30.2 Title 30, *Environmental Quality*, Part 1, *Texas Commission on Environmental Quality (TCEQ)*, Chapter 25, Environmental Testing Laboratory Accreditation and Certification

Appendix A
Calculations

Percent Recovery (%R)

$$\%R = \left(\frac{a}{b}\right) \times 100$$

a = Measured value
b = Expected value

Percent Recovery (%R) of Matrix Spike

$$\%R = \left(\frac{a-c}{b}\right) \times 100$$

a = Measured value of spiked sample
b = Expected value
c = Experimentally derived value of unspiked (parent) sample

Mean ($\bar{x}$)

$$\bar{x} = \frac{\sum x}{n}$$

= Value
= Number of values

Spreadsheet function = average(x_1, x_2, …x_n)

Relative Percent Difference (RPD)

$$RPD = \left(\frac{|V_1 - V_2|}{(V_1 + V_2) \div 2}\right) \times 100$$

= First Value
= Second Value

Spreadsheet function = 200*((abs(V1-V2))/(V1+V2))

Appendix A - Continued
Calculations

Standard Deviation (s)

$$s = \sqrt{\frac{\sum (x - \bar{x})^2}{n-1}}$$

x = Value
$\bar{x}$ = Mean of Values
n = Number of Values

Spreadsheet function = stdev(x_1,x_2, …x_n)

Relative Standard Deviation (RSD)

$$RSD = \frac{s}{\bar{x}}$$

s = standard deviation
$\bar{x}$ = mean of values

Method Detection Limit ($_S$)

The MDL_S is determined by multiplying the appropriate two-sided 99% t-statistic by the standard deviation obtained from analyses of matrix spike containing the analyte (s) of interest.

$MDL_S = S \times t$

s = standard deviation
t = t-statistic from table above

Method Detection Limit (MDL_B)

The MDL_B is determined by multiplying the appropriate two-sided 99% t-statistic (3.143) by the standard deviation obtained from the analyses of seven matrix blanks.

$MDL_B = S \times t$

s = standard deviation
t = t-statistic from table above

Appendix A - Continued
Calculations

Upper and lower control limits (LCL/UCL)

$$LCL = \bar{x} - 3s$$
$$UCL = \bar{x} + 3s$$

$\bar{x}$ = mean of data points
s = standard deviation from the mean

Calibration Factor (CF)

$$CF = A / C$$

A = detector response (usually peak height or peak area) of the analyte in a calibration standard

C = true concentration of the analyte in the calibration standard

Response Factor (RF) or Relative Response Factor (RRF)

$$RForRRF = \frac{A_s \times C_{is}}{A_{is} \times C_s}$$

A_s = detector response (usually peak area or height) of the analyte in the sample

A_{is} = detector response (usually peak area or height) of the internal standard

C_s = Concentration of the analyte in the sample aliquot introduced into the instrument

C_{is} = Concentration of the internal standard in the sample aliquot introduced into the instrument

Slope – Intercept Equation

$$y = mx + b$$

Slope (m)

$$m = \frac{n\sum(xy) - \left(\sum x\right)(y)}{n\sum x^2 - (x)^2}$$

Spreadsheet function = linest(known_y's,known_x's)

y-Intercept (b)

$$b = \bar{y} - m\bar{x}$$

Spreadsheet function = linest(known_y's,known_x's)

y = detector response of the analyte in the sample (or A_s/A_{is} if internal standard used)

m = slope of the calibration curve

x = concentration of analyte in the sample aliquot introduced into instrument (or C_s/C_{is} if internal standard used)

b = y-intercept of the calibration curve

Appendix A - Continued
Calculations

Correlation Coefficient (r)

$$r = \frac{n \times \sum (X \times Y) - \left(\sum X \times \sum Y\right)}{\left(\sqrt{n \sum X^2 - \left(\sum X\right)^2}\right)\left(\sqrt{n \sum Y^2 - \left(\sum Y\right)^2}\right)}$$

x = Value on the x axis of a calibration curve
y = Value on the y axis of a calibration curve
n = Number of data pairs

Spreadsheet function = correl($array_1$, $array_2$)

Coefficient of Determination (r^2)

Spreadsheet function = linest($array_1$, $array_2$)

Preparation factor (PF)

$$PF = V_e / M_s$$

V_e = Final extract/digestate/distillate volume
M_s = Amount (mass or volume) of sample extracted/digested/distilled

Dilution factor (DF)

$$DF = V_f / V_i$$

V_f = Dilution volume
V_i = Sample/extract/digestate/distillate volume diluted

Appendix B
Glossary of Terms and Acronyms

Acceptance Criteria or Acceptance Limits - Specified limits placed on characteristics of an item, process, quality control indicator, or service.

Accreditation or Certification - The process by which an agency or organization evaluates and recognizes a laboratory as meeting certain predetermined qualifications or standards.

Accredited or Certified Laboratory - a laboratory that has been issued a certificate of accreditation by an accrediting agency.

Accrediting Agency or Accrediting Body - A private, municipal, state, or federal agency having the responsibility and accountability to grant accreditation to the Laboratory.

Accuracy - The degree of agreement between an observed or measured value and an accepted reference value (or true value). Accuracy includes a combination of random error (precision) and systematic error (bias) components; used as a data quality indicator.

Analyst - The designated individual who performs the “hands-on” analytical methods and associated techniques and who is the Person responsible for applying required laboratory practices and other pertinent quality controls to meet the required level of quality.

Analyte - the chemical element, compound, or physical property for which a laboratory is testing.

Analytical standard - a solution of analyte(s) of known quantity and identity in an appropriate solvent or matrix.

Analytical Uncertainty - a subset of Measurement Uncertainty that includes all laboratory activities performed as part of the analysis.

Audit - A systematic and independent examination of facilities, equipment, personnel, training, procedures, record-keeping, data validation, data management, and reporting aspects of a system to determine whether QA/QC and technical activities are being conducted as planned and whether these activities will effectively achieve quality objectives.

Batch - Environmental samples that are prepared and/or analyzed together with the same process and personnel, using the same lot(s) of reagents. A preparation batch is composed of one (1) to twenty (20) environmental samples of the same quality systems matrix, meeting the above mentioned criteria and with a maximum time between the start of processing of the first and last sample in the batch to be twenty-four (24) hours. An analytical batch is composed of prepared environmental samples (extracts, digestates or concentrates) which are analyzed together as a group. An

analytical batch can include prepared samples originating from various quality system matrices and can exceed twenty (20) samples.

Bench sheets and general forms - Unbound forms used to record data and observations.

Bias - The systematic or persistent distortion of a sample result, which causes error in one direction (i.e., the sample measurement is different from the sample's expected value).

Blank - A sample used to monitor contamination during sampling, transport, storage, preparation, or analysis.

Brine - A saltwater solution brought to the surface as a consequence of the exploration for and extraction of oil and natural gas. Brine is naturally occurring nonpotable water laden principally with dissolved sodium, calcium, magnesium, and chloride. Found in the pore space within sedimentary formations, brine will normally be fossil water that was entrapped at the time of the rocks' deposition.

Blind sample - a sample with a composition known to the submitter that is used to test the laboratory's proficiency. Single blind implies that the analyst knows the identity of the sample but not its composition. Double blind implies that the analyst or technician does not know the identity or composition of the sample.

Calibration - A set of operations that establish, under specified conditions, the relationship between the response of an instrument or piece of equipment to the specified analyte concentration or parameter value.

Calibration Blank - an aliquot of a matrix that is free of analytes of interest, containing the same reagents, solvents, or acids contained in the calibration standards. The calibration blank is used to correlate the response of the instrument to zero concentration of an analyte of interest or a zero value of a parameter.

Calibration Curve - The mathematical relationship between the known values, such as concentrations, of a series of calibration standards and their instrument response in the form of a plotted graph through which a best fit line has been drawn.

Calibration Standard - a solution of analyte(s) of specified concentration, or a matrix of a specified parameter value used for calibration of an instrument or piece of equipment.

Certificate of Accreditation - a document issued by an accrediting agency to a laboratory that has met the criteria and conditions for accreditation as set forth by the agency.

Certified Reference Material (CRM) - A chemical standard or reference material, accompanied by a certificate, having a value, measurement uncertainty, and stated metrological traceability chain to a national metrology institute.

Appendix B - Continued

Glossary of Terms and Acronyms

Chain of Custody Form - Record that documents the possession of samples from the time of collection to receipt in the laboratory. This record generally includes: the number and types of containers; the mode of collection; the collector; time of collection; preservation; and requested analyses.

Chemical Standard or Reference Material - Material or substance one or more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials.

Client samples – samples, excluding any laboratory generated quality control samples for which analytical results will be reported to the client. Also referred to as environmental samples.

Continuing Calibration Verification (CCV) - a check of the suitability of the calibration of an instrument or piece of equipment through the analysis of an analytical standard. Results are compared to the expected value and acceptance criteria to determine if the instrument requires repair, cleaning and / or re-calibration. Verification is performed at test method specified intervals.

Control Chart - a graphical plot of data points used to determine acceptance limits, demonstrate statistical control, and monitor trends in a measurement process. The charts typically have a vertical scale plotted in percent recovery of the analytical results, a horizontal scale in units of time or sequence. The charts contain horizontal lines indicating the data set mean, and a set value(s) of standard deviations from the mean (upper and lower). Acceptance limits are typically set at three standard deviations from the mean, warning limits at two standard deviations from the mean and marginal exceedance values at four standard deviations from the mean.

Corrective action - an action taken by the laboratory to correct and eliminate causes of an existing nonconformance and to prevent recurrence of the nonconformance.

Correlation Coefficient (r) – a value used to determine the strength of the linear association between two variables. The value of the r ranges from -1 to 1, the closer to 1 or -1 the value is, the stronger the linear relationship. The positive value indicates that as one variable increases, the other increases as well. The negative value indicates as one variable increases the other decreases.

Data Reduction - The process of transforming experimentally derived data, by arithmetic or statistical calculation, calibration curves, and / or concentration factors, into a single numerical result.

Appendix B – Continued
Glossary of Terms and Acronyms

Demonstration of Capability (DOC) - A procedure to establish the ability of an analyst, instrument, or process to generate analytical results of acceptable bias and precision.

Dilution factor - calculated when a portion of the sample, extract, digestate, etc. is diluted with solvent before analysis. The dilution factor is the final amount of solvent divided by the initial amount of sample, extract, digestate, etc. Raw concentrations are multiplied by the dilution factor.

Documents - Standard operating procedures (SOPs), forms, the Quality Assurance Manual, documents of external origin (e.g., standards, methods, regulations and other reference material), policy statements, tables, charts, notices, plans and memorandum effecting quality. Documents may be in electronic format or hard copy.

External Document - any document that is used for reference and effects quality, but is not generated by Fibertec. These include methods, standards, etc. Some external documents that are used for general knowledge may not be controlled.

Controlled Document - a document that is identified with a title, revision level, effective date, page numbering, total number of pages and a unique identification number. Controlled documents are reviewed and approved for use and are kept in a specified, tracked location. Obsolete copies are replaced when the document is updated.

Uncontrolled Document - any document that does not fit the definition of "controlled".

Obsolete Document - any document that has been superseded by an updated version, or a document that covers an activity which is no longer performed at Fibertec.

Document Numbering System

G - General Applications or Administration
M - Mercury
T - Trace Metals
S - Semi-Volatile
V -Volatile
W - Wet Chemistry
Q - Quality Assurance

100 series - preparative activities

200 series - analytical activities
300 series - general group activities
400 series - spreadsheets
500 series - forms
600 series - reports (lab reports, qc reports, etc.)
700 series - miscellaneous (charts, figures, training videos, etc.)

Duplicate - two or more equal aliquots taken from the same sample container and analyzed independently for the same constituent.

Elution Pattern - a series of chromatographic peaks used to identify multi-component analytes such as PCB Aroclors, petroleum products, toxaphene and chlordane. The series of peaks used to identify a multi-component analyte have characteristic sizes, shapes and retention times.

Gas Chromatography (GC) – the process of separating analytes by vaporizing a sample or sample extract and sending it through a column by way of a gas carrier. The compounds being analyzed interact with the column, which contains a stationary phase. This causes each compound to elute and be detected at a different time, known as the retention time of the compound. The retention times are compared to the retention times of known analytes.

Holding Time or Hold Time - The maximum time that can elapse between sample collection and sample preparation or analysis. Can also refer to the maximum time that can elapse between sample preparation and sample analysis.

Initial calibration verification (ICV) - analysis of an analytical standard to determine the success of calibration of an instrument before sample analysis is initiated. The standard is made from a source of analytes that is different than that used to make the calibration standards – either from a different manufacturer or a different lot number from the same manufacturer.

Inorganic Analytes - all parameters or analytes not included in organic analytes. Laboratories involved in the testing of inorganic analytes and parameters are the Wet Chemistry and Metals Laboratories.

Instrument Blank - a sample made of an aliquot of solvent that is the same matrix as the sample or sample extract in an analytical batch and is known to be free of the analytes of interest. It is used to assess the analytical batch for possible contamination during the analytical steps.

Internal Standard - A standard containing a compound of known amount, that is not a desired target analyte, added to a sample or extract. It is used as a reference for quantitation of target analytes based on their relative instrument responses.

Laboratory Control Duplicate (LCD) - a second LCS prepared and analyzed to evaluate precision.

Appendix B - Continued

Glossary of Terms and Acronyms

Laboratory Control Sample (LCS) - a sample of a matrix similar to client samples, free from the analyte of interest, spiked with known amounts of analyte or a material containing known and verified amounts of analytes, taken through all sample preparation and analytical steps of the procedure. It is used to evaluate the accuracy of all or a portion of the measurement process.

Laboratory logbooks - Controlled forms used to record data and observations. They are bound, paginated and volume controlled to prevent easy removal of data. They may be for recording sample data, instrument or support equipment information or standards and reagent information.

Legal Chain of Custody Protocols - Procedures employed to record the possession of samples from the time of sampling through the retention time specified by the client or program. These procedures are performed at the request of the client and include the use of a Chain of Custody Form that documents the collection, transport, and receipt of samples by the laboratory. In addition, these protocols document all handling of samples within the laboratory.

Limit of Detection (LOD) - A laboratory's determination of the minimum amount of an analyte in a given matrix that the laboratory's analytical and preparatory processes can reliably determine exists at a concentration greater than zero. This is the limit of analyte that the laboratory can determine is not zero, but not necessarily reliably quantitate in that matrix.

Limit of Quantitation (LOQ) - The minimum level, concentration, or quantity of a target analyte that can be reported with a specified degree of confidence that the concentration is reasonably accurate.

Linear Calibration Range or **Linear Dynamic Range** - the range of concentrations over which the analytical system exhibits a linear relationship between the amount of analyte introduced into the instrument and the instrument's response.

Matrix or Quality Management System Matrix - The type of sample in terms of the phase (solid, liquid, gas). These are further distinguished (subclassified) based on other factors such as point of origin (wastewater, ground water, etc.).

Matrix Duplicate - A second aliquot of sample prepared in the laboratory and analyzed to obtain a measure of precision.

Matrix spike (MS) - an aliquot of a sample, for which an independent test result of target analyte concentration is available, spiked with known concentrations of analytes, and subjected to the entire preparatory and analytical process in order to determine the effect of the specific matrix on the accuracy of the test method.

Matrix spike duplicate (MSD) - a second matrix spike that is prepared and analyzed in order to determine the effect of matrix on the precision of the test method.

Appendix B - Continued

Glossary of Terms and Acronyms

Method blank (MB) - a clean (analyte free) sample matrix which is prepared and analyzed simultaneously with and under the same conditions as client samples, used to ensure that an appreciable amount of analyte is not contributed by the preparatory and analytical processes.

Method detection limit (MDL) - the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in a blank matrix. It is determined from analysis of replicates of a blank matrix fortified with the analyte.

Method or Test Method - a documented analytical and / or preparatory procedure in accordance with which the client, regulatory body, or accrediting agency require a sample to be prepared and analyzed. These are usually published by the EPA or other nationally recognized authority (such as ASTM, Standard Methods, etc.), but may be client requested.

National Environmental Laboratory Accreditation Program (NELAP) - the laboratory certification program within TNI employed by state accrediting authorities to accredit environmental laboratories.

National Institute of Standards and Technology (NIST) - A federal agency of the United States Department of Commerce's Technology Administration that is designed as the United States national metrology institute (NMI). Formerly the National Bureau of Standards.

Neat – undiluted, typically assayed to be at least 98% pure.

Non-Chemical Reference Standard - A standard that is certified NIST traceable and used for the calibration of other working non-chemical measurement standards or support equipment.

Nonconformance - a failure of a laboratory to meet a requirement of an accrediting agency, regulatory body, client, or its own quality management system.

OpenKM - a file management database that allows employees access to all controlled documents and requires each employee to log in using their individual identification and unique password.

Organics - all analytes determined by gas chromatography. Laboratories involved in the testing of organic analytes are the Volatiles, Semivolatiles and Semivolatiles Preparatory Laboratories.

Parameter – an analyte, compound of interest, or characteristic (such as pH) of a sample.

Appendix B - Continued

Glossary of Terms and Acronyms

Performance Based Measurement System (PBMS) – The intent by EPA is to prescribe performance needs for a particular analysis rather than a specific method. Such intent is to allow the use of improvements in technology and alternative methods to be used in regulatory analyses. Such an approach does not apply to the analysis of method-defined parameters, that is, parameters for which the method defines the property (e.g. Toxicity Characteristic Leaching Procedure, five-day Biochemical Oxygen Demand, and airborne and stationary source particulate matter) or for situations where it would be impractical or cost prohibitive to define the property except by using a reference method (e.g., where a stable reference standard cannot be prepared). This flexibility does NOT in any way allow for changes to a method without technical justification (improved technology, glassware, reagents) nor does it allow for altering QC requirements of the referenced method. Any method modification must be for the purpose of improving data quality and must be approved by quality assurance.

Precision - The degree to which a set of observations or measurements of the same property, obtained under similar conditions, mutually agree; a data quality indicator. Precision is usually expressed as standard deviation, relative standard deviation or relative percent difference.

Preparation factor or prep factor - calculated when the analytes from a given amount of sample are extracted, digested, or otherwise transferred into a known amount of solvent which is analyzed. The prep factor is the final amount of extract divided by the amount of sample extracted. Raw concentrations are multiplied by the prep factor.

Preservation: Any conditions under which a sample must be kept in order to maintain chemical and/or biological integrity prior to analysis.

Proficiency Testing (PT)or Performance Evaluation (PE) - A means of evaluating a laboratory's performance under controlled conditions relative to a given set of criteria through analysis of single blind unknown samples provided by an external source.

Proficiency Testing Program or Performance Evaluation Program - A program that provides laboratories rigorously controlled and standardized blind samples for analysis, reporting of results, statistical evaluation of the results and the collective demographics and results summary of all participating laboratories at regular intervals.

Proficiency Test Sample or Performance Evaluation Sample - A sample, of a known matrix, the composition of which is unknown to the laboratory and is provided to test whether the laboratory can produce analytical results within the specified acceptance criteria.

Appendix B - Continued

Glossary of Terms and Acronyms

Quality Assurance - An integrated system of management activities involving planning, implementation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the client.

Quality Control - The overall system of technical activities that measures the performance of a process, item, or service against defined standards to verify that they meet the stated requirements established by the client; operational techniques and activities that are used to fulfill requirements for quality; also the system of activities and checks used to ensure that measurement systems are maintained within prescribed limits, providing protection against “out of control” conditions and ensuring that the results are of acceptable quality.

Quality Control Sample - A sample used to assess the performance of all or a portion of the measurement system. One of any number of samples, such as Certified Reference Materials, a Quality Management System matrix fortified by spiking, or actual samples fortified by spiking, intended to demonstrate that a measurement system or activity is in control.

Quality Management System (QMS) - A structured and documented management system describing the policies, objectives, principles, organizational authority, responsibilities, accountability, and implementation plan of an organization for ensuring quality in its work processes, products (items), and services. The Quality Management System provides the framework for planning, implementing, and assessing work performed by the organization and for carrying out required quality assurance (QA) and quality control (QC) activities.

Raw Data - The documentation generated during sampling and analysis. This documentation includes, but is not limited to, field notes, electronic data, untabulated sample results, QC sample results, print outs of chromatograms, instrument outputs, and handwritten records.

Raw Concentration or Raw Result – the concentration of a sample or extract taken directly from an instrument readout, before mathematic conversion to a final result.

Reagent Blank - a sample made of an aliquot of a reagent or reagents used in the preparatory and / or analytical steps. It is used to assess the reagents, prep batch, and / or analytical batch for possible contamination.

Same Source Standard – a standard from the same manufacturer and same manufacturer lot as that used to make calibration standards.

Sampling - Activity related to obtaining a representative sample of the object or substance to be tested.

Scope of Accreditation or Field of Accreditation - Those matrix, technology/method, and analyte combinations for which an accreditation body offers accreditation.

Appendix B - Continued

Glossary of Terms and Acronyms

Second source standard - a chemical standard from a different manufacturer or different lot from the same manufacturer, than the standard(s) used for calibrating an instrument.

Selectivity - The ability to analyze, distinguish, and determine a specific analyte or parameter from another component that may be a potential interferent or that may behave similarly to the target analyte or parameter within the measurement system.

Sensitivity - The capability of a method or instrument to discriminate between measurement responses representing different levels (e.g., concentrations) of a variable of interest.

Standard operating procedure (SOP) - a written, laboratory specific document which details the method of an operation, analysis or action whose techniques and procedures are thoroughly prescribed and which is accepted as the method for performing certain routine or repetitive tasks.

Surrogate - an organic compound which is similar to the analytes of interest in chemical composition and behavior in the analytical process, but which is not normally found in client samples and is not an analyte of interest.

Technology - A specific arrangement of analytical instruments, detection systems, and/or preparation techniques.

Traceability - The ability to trace a final sample result to a national or international standard.

Verification - Confirmation by examination and objective evidence that specified requirements have been met.

TCLP – Toxicity Characteristic Leaching Procedure & SPLP – Synthetic Precipitation Leaching Procedure – processes designed to determine the mobility of both organic and inorganic analytes present in liquid, solid, and multiphasic wastes as defined in SW-846 Methods 1311 and 1312.

Test/Analysis - a technical operation that consists of the determination of one or more characteristics or performances of a given product, material, equipment, physical phenomenon, process or service according to a specified procedure.

The NELAC Institute (TNI) - an organization created to combine accreditation standards development and laboratory accreditation. NELAC was transitioned into TNI in 2007.

True value - the accepted or actual value of the quantity being measured.

Appendix B - Continued
Glossary of Terms and Acronyms

USEPA - the United States Environmental Protection Agency.

USEPA Water Pollution (WP) Performance Evaluation Study - a performance evaluation program originally sponsored by the USEPA. Laboratory participation is initiated by contacting vendors approved by NELAP http://www.nelac-institute.org/ptproviders.php.

Validation or Verification - confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled.

Electronic signature - A term for the various ways an electronic record can be signed, including a digital image of a signature or pictorial, a name typed at the end of an e-mail message by the sender, a secret code or PIN, or a digital signature that is uniquely traceable to one authorized signatory.

Appendix C
Lead Technical Director Requirements

Lead Technical Director (TD) - The Laboratory Director is also the Lead Technical Director and is responsible for the overall technical capability and direction of the laboratory workflow. Responsibilities include but are not limited to: 1) developing new technology 2) Improving existing technology 3) Equipment procurement 4) Compliance with all regulatory and safety policies during laboratory operations. 5) Mentoring laboratory personnel.

Education / Experience Requirements

- A minimum of a bachelor's degree in natural or physical sciences or engineering, with at least 24 college semester credit hours in chemistry
- At least two years of experience in the environmental analysis of inorganic and organic analytes. (A master's or doctoral degree in one of the above disciplines may substitute for one year experience).
- A minimum of two years' experience managing a laboratory
- Must be a full time member of the Fibertec staff.

Specific Requirements

- Monitors the validity of laboratory data generated
- The Lead TD may not be the TD of another laboratory
- Ensures communication within the laboratory
- Supervises laboratory personnel
- Ensures that samples are logged into the tracking system and properly labeled and stored
- Ensures that samples are processed in a timely manner
- Directs laboratory supervisors and group leaders
- Designates the Quality Assurance Officer (QAO)
- Designates a Deputy Technical Director if absent for more than fifteen consecutive calendar days (If unable to fulfill this function, designation will be done by the Fibertec President)
- Ensures the laboratory is fully and appropriately staffed
- Oversees client services, client interactions and sample throughput
- Provides support of the quality management system (QMS).
- Investigates and resolves client complaints
- Enforces laboratory policy

Authorities

- Reviews and approves client reports
- Reviews and approves purchase requests from the laboratory
- Manages laboratory staff
- Reviews and approves laboratory changes

Appendix C - Continued
Quality Assurance Officer Requirements

Quality Assurance Officer - The QAO is responsible for implementation of the Quality Management System, for ensuring it is followed at all times and for ensuring compliance to the 2009 TNI Standard in accordance with laboratory accreditation. The QAO reports directly to the Laboratory Director.

Education / Experience Requirements

- A minimum of five years experience as an analyst in a laboratory with documented experience in quality assurance and quality control (QA/QC)
- An understanding of analytical methods from which laboratory data is generated

Specific Requirements

- Functions independently of laboratory operations
- Reviews quality control data
- Performs internal audits in accordance with a prescribed schedule
- Monitors corrective and preventive actions
- Updates the QAM as needed
- Maintains the laboratory accreditation
- Notifies the primary accreditation body in writing if the Lead Technical Director is absent for more than 35 consecutive calendar days.
- Notifies the primary accreditation body in writing within 30 days of changes in ownership, key laboratory personnel, laboratory location or methods that involve a change in technology or instrumentation affecting the NELAP Scope of Accreditation

Authorities

- Reviews effectiveness of and adherence to the Quality Management System (QMS)
- Holds and/or rejects data due to quality concerns
- Notifies laboratory management of deficiencies and/or deviations from the quality management system

Appendix D
Note to File (NTF) Form

Note to File Form

Use this form to modify an existing Standard Operating Procedure (SOP). Approved changes must be incorporated into the next revision of the SOP. The completed and signed copy of this form must be scanned to openKM. Training documentation of approved changes to the SOP must be on record.

SOP Title: _____

SOP Number: _____ SOP Revision: _____

Section(s) Affected: _____ Add ☐ Remove ☐ Change ☐
(Check one)

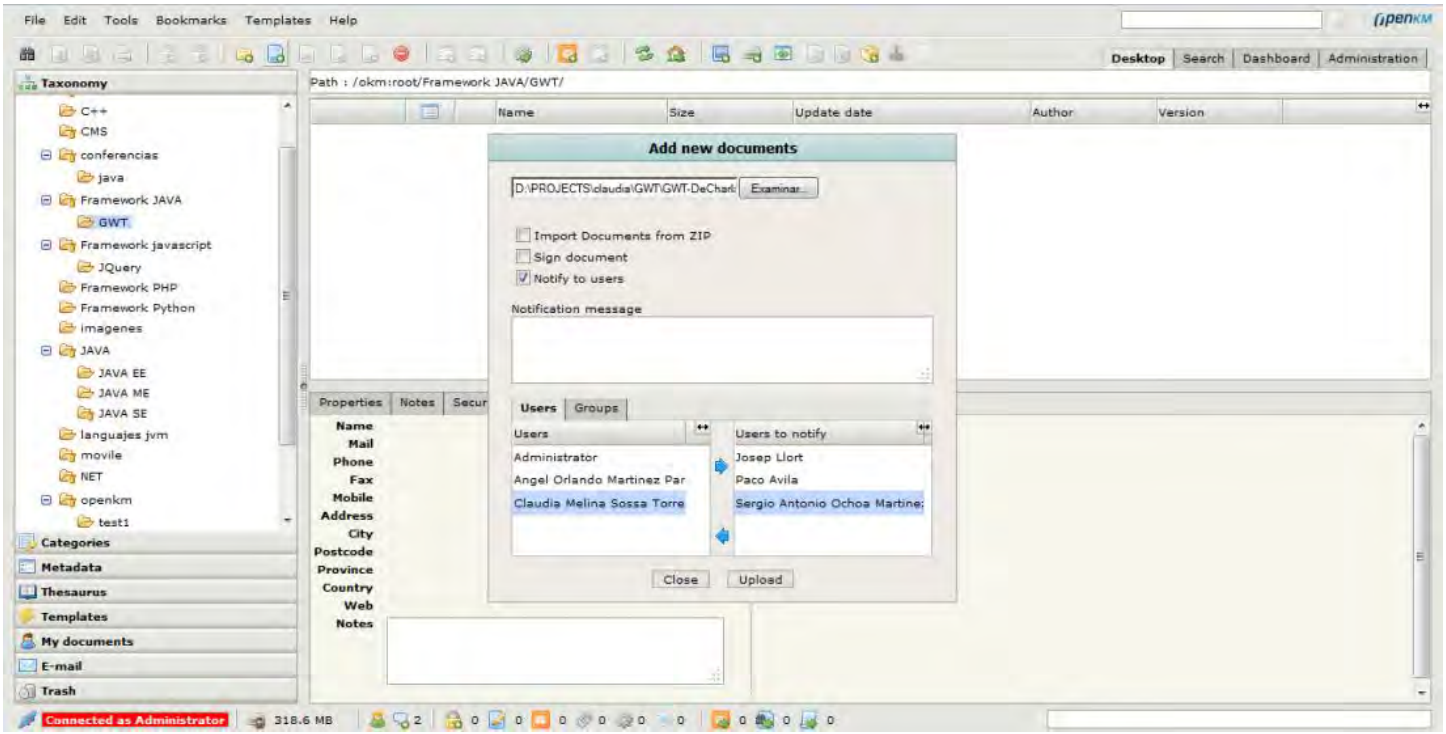
Change(s) Required

Date Implemented _____ Group Leader _____

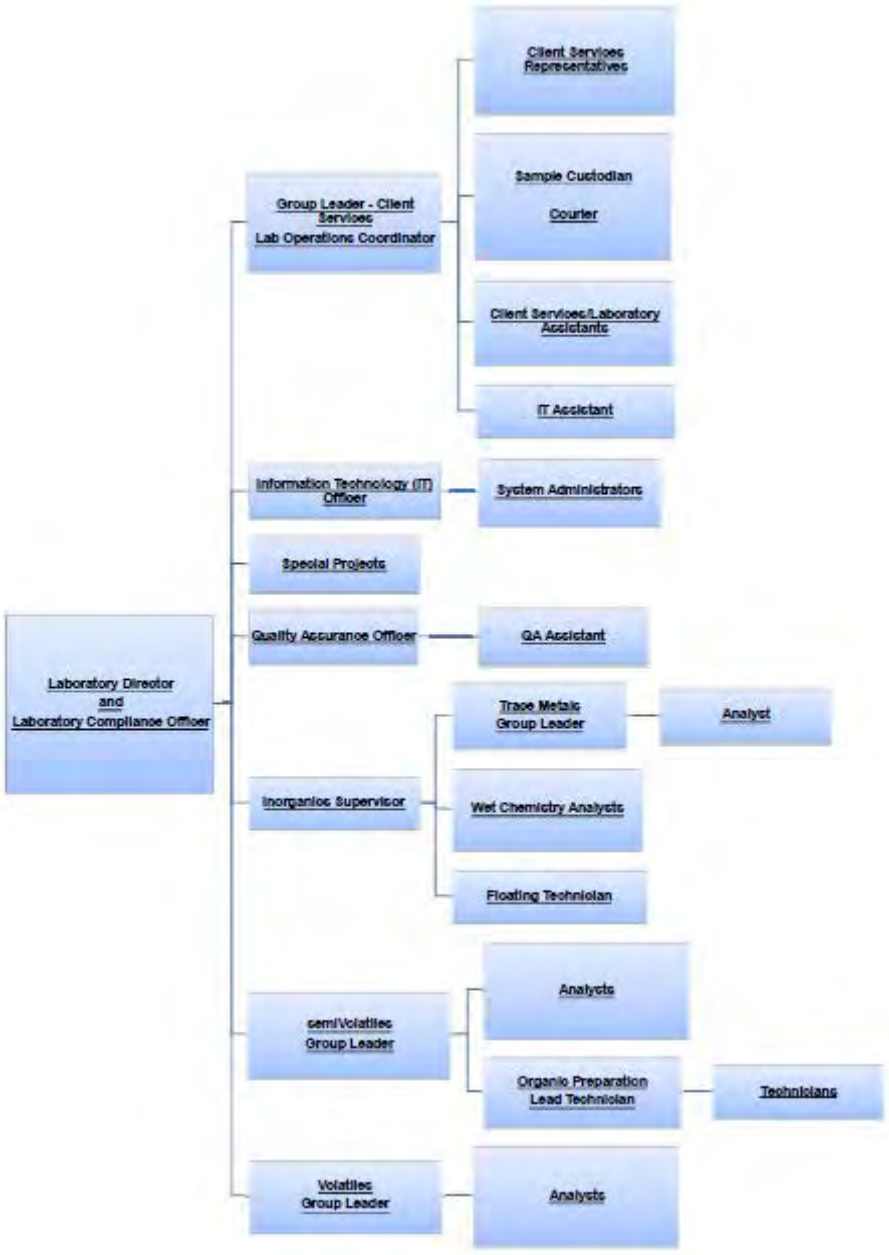
QAO _____ Laboratory Director _____

DCSID: Q-503.3 (08/12/15)

Appendix E
OpenKM



Appendix F
Fibertec Organization Chart



Appendix G
Client Questionnaire



Fibertec environmental services

How are We Doing?

*Required Question(s)

*1. How satisfied were you with our customer service at Fibertec?

Not Satisfied	Satisfied	Highly Satified
○	○	○

*2. When you submitted a laboratory project to Fibertec, was the turnaround time:

Faster	As Expected	Slower
○	○	○

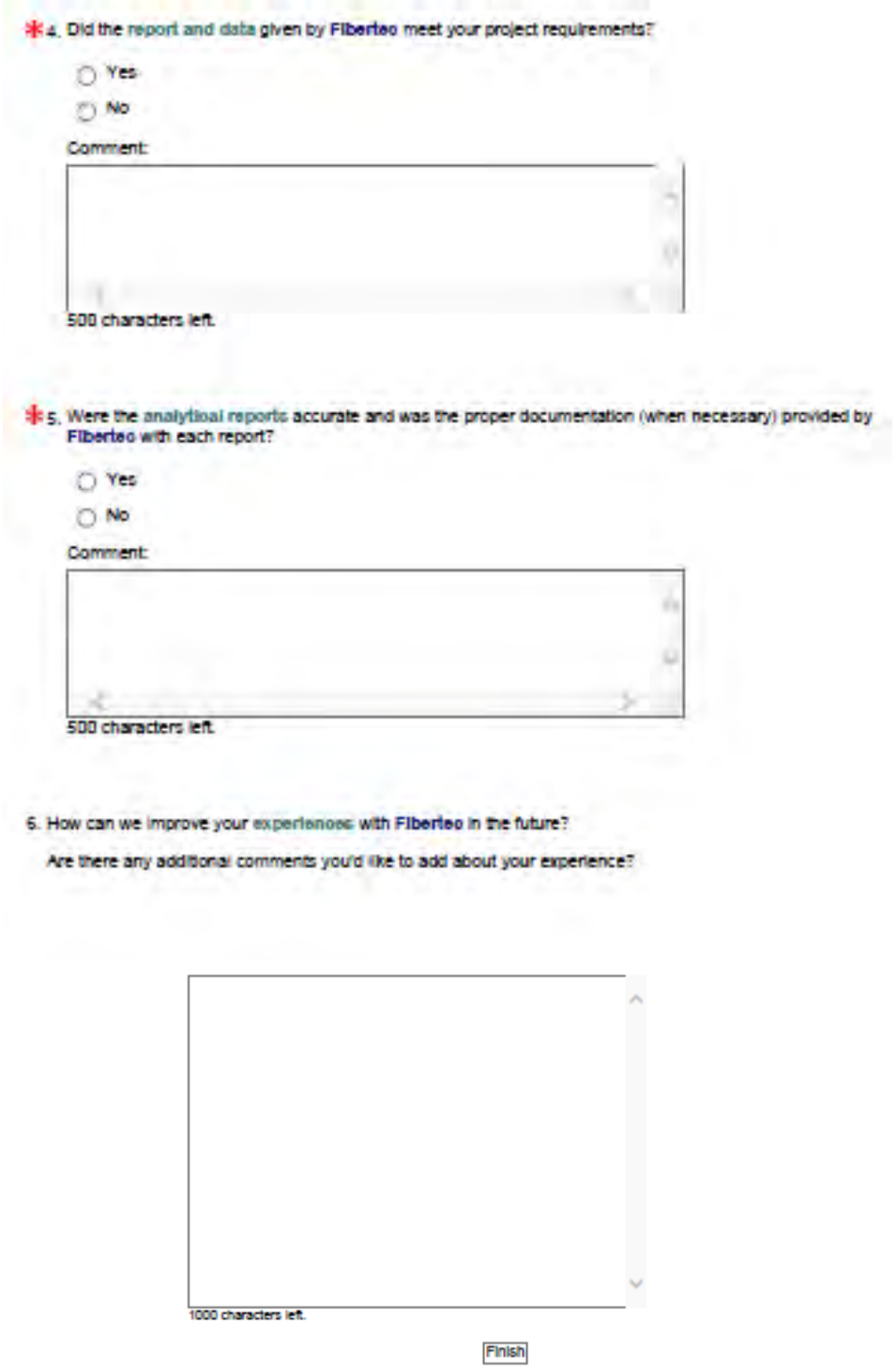
*3. How was our pricing at Fibertec compared to your expectations?

Much Higher	Slightly Higher	About as Expected	Slightly Lower	Much Lower
○	○	○	○	○

Comment:

500 characters left.

Appendix G - Continued
Client Questionnaire



*4. Did the report and data given by Fibertec meet your project requirements?

- Yes
- No

Comment:

500 characters left.

*5. Were the analytical reports accurate and was the proper documentation (when necessary) provided by Fibertec with each report?

- Yes
- No

Comment:

500 characters left.

6. How can we improve your experiences with Fibertec in the future?

Are there any additional comments you'd like to add about your experience?

1000 characters left.

Finish

Appendix H
Corrective/Preventive Action Report Form

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR)

Client:_____ Project/Document Control Number:_____

Sample Number(s):_____ Date Initiated:_____ Date Due:_____

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☒ Audit ☐ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☒ Client Services / Reporting ☐ Other_____

☐ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

_____

_____

_____

_____

_____

_____

_____Initiated By:_____

III. Investigation into Non-Conformance (attach additional information as needed):

_____

_____

_____

_____

_____

_____

_____Investigator(s):_____

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

_____

_____

_____

_____

_____

_____

_____

_____QA Approval:_____

Follow-Up Required? (If required, reference this Report) Yes ☒ No ☐

VI. Approvals:

Managerial:_____ Area Supervisor:_____

Date Closed:_____

DCSID: C-500.2 (07/11/14) page: 1 of 1

Appendix I
Exception Departure from Procedure Form

Exceptional Departure from Procedure

Client: _____ Project: _____ Date: ____/____/____

Batch: _____ Contact Person: _____

Samples: _____ Phone: (____) ____ - ____

_____ _____ _____

_____ _____ _____

_____ _____ _____

SOP: _____

Describe departure and reason for departure:

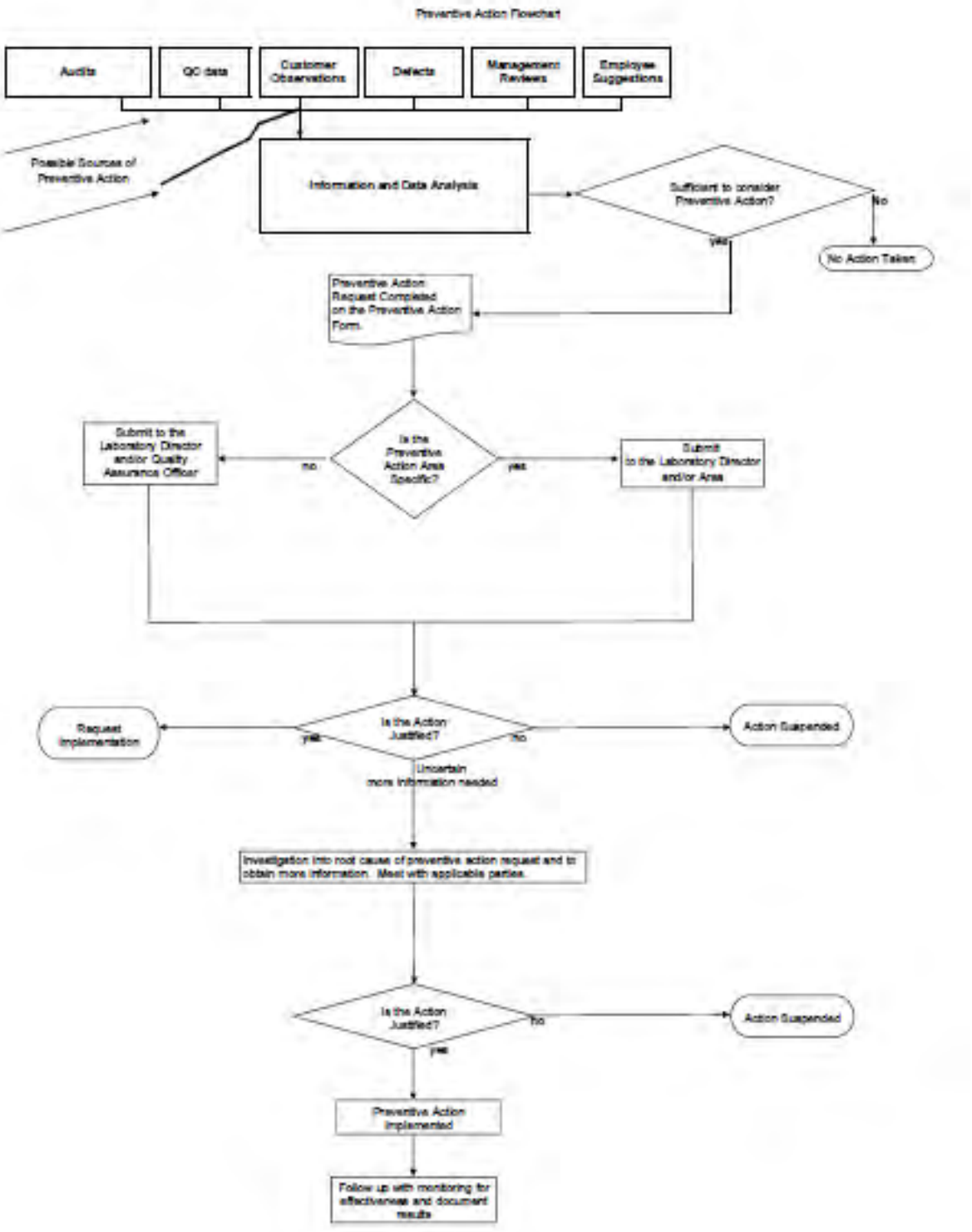
Quality Control Requirements:

Client (Company & Contact Person): _____
Date Client Notified: _____
Client Notified By: _____

Departure Performed by: _____ Date: ____/____/____
Group Leader: _____ Date: ____/____/____
TD: _____ Date: ____/____/____
QAO: _____ Date: ____/____/____

DCSD-Q-515.5 (06/02/14)

Appendix J
Preventive Action Flowchart



Appendix K
Equipment List

Sample Handling Department

Quantity	
1	Walk-In Cooler, 1200 cubic feet (sample storage)
2	IR Thermometer
1	Balance, Top Loading

Sample Preparation Laboratory

Quantity	
4	Digestion Blocks, 48-position, CPI
1	TCLP / SPLP Tumble Extractor, Lars Lande
2	Water Bath, APW Wyott
5	Balances, Top Loading, various manufacturers
2	Turbo-Vaps, Zymark
5	Drying Ovens, various manufacturers
1	Muffle Oven, Thermolyne
1	Microwave Extractor, Ethos
1	Microwave Extractor, CEM
1	Ultrasonic Dismembrator
1	Solid Phase Extraction Manifold, JT Baker
1	Separatory Funnel Shaker, Eberbach
1	Sonication Bath, Branson
2	Freezer (sample extract storage, standard storage)
2	Refrigerator (reagent storage)
1	Centrifuge, Marathon
2	Digital Thermometer, Single Probe - Fisher Traceable High Accuracy Refrigerator Thermometer
1	Digital Thermometer, Dual Probe - Fisher Traceable High Accuracy Refrigerator Thermometer
2	Digital Oven Thermometer, Streck Temp-Chex Digital II Thermometer

Semi-Volatiles Laboratory Laboratory

Quantity	
2	Gas Chromatograph / Mass Spectrometer, Thermo Trace 1310 6C/ISQLT
1	Gas Chromatograph / Mass Spectrometer, Agilent 6890/5975
1	Gas Chromatograph / Mass Spectrometer, Agilent 6890/5973
1	Gas Chromatograph / Mass Spectrometer, Hewlett-Packard 5890A/5971
1	Gas Chromatograph / Flame Ionization Detector, Hewlett-Packard 5890A
3	Gas Chromatograph / Flame Ionization Detector, Agilent 6890 & Agilent 6850
3	Gas Chromatograph / Electron Capture Detector, Hewlett-Packard 5890A
1	Gas Chromatograph / Electron Capture Detector, Thermo Trace 1310 6C/Dual Micro ECD
1	Gas Chromatograph / Flame Ionization Detector, Agilent 7890
1	Teledyne Tekmar HT3 Headspace Analyzer
1	Refrigerator (standard storage)
1	Digital Thermometer, Single Probe - Fisher Traceable High Accuracy Refrigerator Thermometer

Appendix K
Equipment List

Volatiles Laboratory

Quantity	
2	Gas Chromatograph / Mass Spectrometer, Agilent 7890A/5975C
4	Gas Chromatograph / Mass Spectrometer, Agilent 6890A/5975 & 6890N/5975
1	Gas Chromatograph / Mass Spectrometer, Perkin Elmer Clarus 600
2	Concentrator, Teledyne Velocity & EST Encon
5	Automatic Sampler, EST Centurion
1	Automatic Sampler, Entech 7650M
1	Automatic Sampler, Air Canisters, Entech 7016D
4	Concentrator, EST Encon Evolution
1	OI Analytical Eclipse Sample Concentrator Model 4660
2	Preconcentrator, Entech 7200
1	Thermal Transfer System, Entech 5400
1	Air Canister Cleaning Oven, J.C. Metal
1	Cleaning System, Entech 3100
1	High Pressure Transducer, Omega
2	Low Pressure Transducer, Omega
1	6" Gauge, Ashcroft
1	4.5" Gauge, Ashcroft
1	2.5" Glycerin Filled Gauge, Ashcroft
1	Flow Meter, Omega
2	ZHE Tumble Extractor, Millipore
2	Sonicator, Branson
1	Refrigerator (sample storage, standard storage)
2	Freezer (sample storage, standard storage)
2	Balance, Top Loading, various manufacturers
1	Water Filtration System, Barnstead E-Pure
1	Digital Thermometer, Single Probe - Fisher Traceable High Accuracy Refrigerator Thermometer
1	Digital Thermometer, Dual Probe - Fisher Traceable High Accuracy Refrigerator Thermometer

Trace Metals Laboratory

Quantity	
1	Inductively Coupled Plasma / Mass Spectrometer, Thermo ICAPQ
1	Low Level Mercury Analyzer, Cold Vapor Atomic Fluorescent Spectrometer, PSA Millennium
1	Mercury Analyzer, Cold Vapor Atomic Absorption Spectrometer, CETAC M7500A

Quality Assurance Department

Quantity	
1	Class S Weight Set, NIST Traceable
1	Analytical Balance, Sartorius R300S
1	Digital Thermometer with Platinum Probe, Fisher Traceable Ultra-Accurate
1	Digital Thermometer dual channel with High Temperature Probe, Fisher Traceable

Appendix K
Equipment List

Wet Chemistry Laboratory

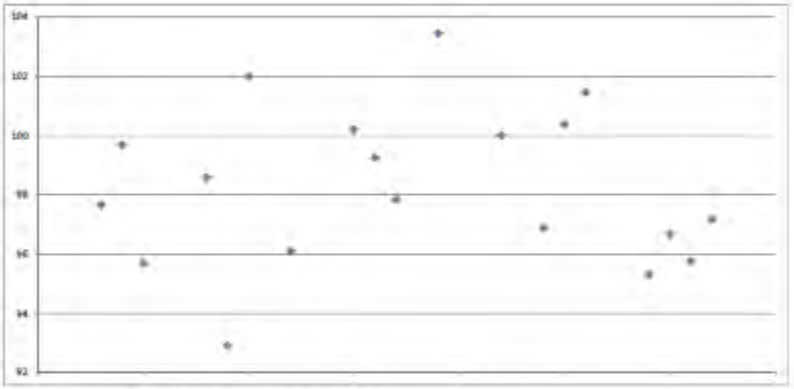
Quantity	
1	Ion Chromatograph with Autosampler, Dionex ICS 2000
1	Ion Chromatograph with Autosampler, Dionex ICS-1100
1	Total Organic Carbon Analyzer with Autosampler, Shimadzu TOC-L
1	Direct Read Spectrophotometer, Hach DR2000
1	Pensky-Martens Flash Point Tester
1	Conductivity, Oxidation-Reduction Potential pH/ISE and Dissolved Oxygen Meter, Thermo Orion 5 Star
1	pH Meter, Orion 230A
1	pH/ISE Meter, Hach EC30
1	Discrete Analyzer, Aquakem 200
1	COD Reactor, Hach 45600
1	Turbidimeter, Hach Ratio/XR
1	Flow Injection Analyzer with Gas Diffusion/Amperometric detection, OI Analytical FS-3100
1	Inline UV Digestion Module, for use with FS-3100 OI Analytical
1	Flow Injection Analyzer with Gas Diffusion/Colorimetry, OI Analytical FS-3700
1	Ammonia-N FSA Module with gas diffusion/colorimetry for use with the FS-3700, OI Analytical
1	Phosphorus FIA Module with colorimetry for use with the FS-3700, OI Analytical
1	Baxter DP-32 Vacuum Drying Oven
2	Sanplatec Corp. Drykeeper Dessicator
1	ShelLab 2020 BOD Incubator
1	Environmental Express Microblock Distillation System
1	Mettler PM 300 Top Loading Balance
1	KJ-201BD Oscillator Orbital Shaker
1	OHAUS AX124/E Analytical Balance
1	Hach H0440D BOD Meter
1	Hach LBOD101 BOD Optical Probe
1	Orion 081010MD Dissolved Oxygen Probe
1	Orion 9770BN Residual Chlorine Electrode
1	Orion 011050MD Conductivity Electrode
1	Orion 9512HPBNWP Ammonia Electrode
1	Orion 927005MD Temperature Probe
1	Orion 9102D pH Meter
1	Orion 917BN Oxygen Reduction Potential Electrode
1	CPI ModBlock Digestion Block with StirBase
1	Barnstead E-Pure™ Water Filtration System
1	JT Baker Vacuum Extraction Station
1	Fisher Scientific Isotemp 500 Series Oven
1	Labconco Gel Dryer
1	Thermolyne Muffle Oven

Appendix L
Control Chart Example

Control Charting

PeakName	Barium
Matrix_Code	N01
Instrument	T4

	Data		
RunTime	Average of Rec	Sum of Cnt	StdDev of Rec
10/1/2014	97.65824677	1	#DIV/0!
10/2/2014	99.65620597	3	1.021089796
10/3/2014	95.7066662	1	#DIV/0!
10/6/2014	98.59702307	2	3.44061737
10/7/2014	92.92416597	1	#DIV/0!
10/8/2014	102.0014521	3	2.026253147
10/10/2014	96.10256022	2	5.068154396
10/13/2014	100.2098512	1	#DIV/0!
10/14/2014	99.24218474	2	6.393735913
10/15/2014	97.83570647	2	2.340616168
10/17/2014	103.4668294	3	5.934101033
10/20/2014	100.0011395	2	6.638061123
10/22/2014	96.83647467	3	3.000406239
10/23/2014	100.373678	1	#DIV/0!
10/24/2014	101.4591396	1	#DIV/0!
10/27/2014	96.31668169	2	1.06408548
10/28/2014	96.65219677	2	5.912348625
10/29/2014	96.78026817	3	3.405811414
10/30/2014	97.17720341	1	#DIV/0!
Grand Total	98.51204566	36	3.930741965



Barium in N01matrix for T4 instrument(s)

98.5	weighted average	
3.9	standard deviation	
87	LCL	85 Current LCL
110	UCL	115 Current UCL

Matrix	N01
Analyte	Barium
Method(s)	200.8 / 6020A / — / —

Appendix M
Standard Operating Procedures (SOP)

SOP	Title
CHP	Chemical Hygiene Plan
G-100	Waste Leaching Procedures by SW-846 Methods 1311 and 1312
G-102	Evaluation of Weights and Balances
G-103	Evaluation of Disposable and nonVolumetric Equipment for Volumetric Measurement
G-112	Collecting Aqueous Samples in the Field
G-120	Laboratory Preparation of Soils Sampled by Incremental Sampling Methods
G-130	Preparing Concrete Samples for Analysis
G-156	Trip Blank Preparation
G-185	Waste Handling
G-200	Detection, Quantitation, and Reporting Limits
G-201	Evaluation Procedure for Fume Hoods
G-205	Percent Moisture Determination
G-210	Density Determination
G-215	Evaluation of Thermometers and temperature Controlling Devices
G-220	Chromatographic Manual Integration
G-225	Re-Establishing Certification or Reagent Certification
G-250	Field Analysis of pH and Temperature
G-300	Method Validation
G-301	Record Keeping System and Design
G-303	Subcontracting
G-304	Purchasing
G-306	Laboratory Control Charting
G-307	Project Administration / Report Generation
G-308	Control of Documents
G-309	Compositing or Splitting Samples
G-310	Internal Audits
G-311	Corrective and Preventive Action
G-312	Sample Log-In Procedures
G-313	Code of Ethics for Data Integrity
G-315	Laboratory Management Procedure for the Exceptional Departure from Documented Policies or Standard Specifications
G-318	Sample Container Preservation and Shipment Procedures
G-322	Spill Clean-Up
G-325	Procedure for the Treatment of Proficiency Test Samples
G-332	Resolution of External (Client) Complaints
G-350	Equipment Control
G-351	Handling of Laboratory Reagents, Standards and Solvents
G-364	Data Review and Results Validation
G-380	Employee Training
G-399	Working Instruction for Glassware Washing
G-700	Laboratory Ethics and Data Integrity Presentation
I-300	Control and Documentation of Electronic Laboratory Items
M-114	Aqueous Digestion for Mercury Analysis by EPA 245.1 and SW-846 7470A (CVAAS)
M-139	Soil and Solids Digestion for Mercury Analysis by SW-846 Method 7471B
M-140	Digestion for Mercury in Air samples by NIOSH 6009
M-218	Mercury Analysis by EPA Method 245.1 SW-846 Methods 7470A, 7471B and NIOSH 6009 (CVAAS)
M-253	Low Level Mercury in Water by Method 1631E (CVAFS)

Appendix M
Standard Operating Procedures (SOP)

SOP	Title
QAM	Quality Assurance Manual
S-130	PCB Wipe Sample Preparation
S-146	Microwave Extraction of Solid Samples by SW-846 Method 3546 for Semi-volatile Compounds
S-147	Separatory Funnel Extraction of Aqueous Samples for Organic Analytes by EPA Methods 608.3, 625.1, and 3510C
S-148	Ultrasonic Extraction of Solid Samples for Base Neutral Acids (BNA)
S-149	Clean up of Extracts for PCB and Pesticide Analysis by SW-846 Methods 3620C, 3660B and 3665A
S-151	Ultrasonic Extraction of Solid Samples for Chlorinated Herbicides
S-154	Extraction of Organic Analytes from Aqueous Samples by SW-846 Method 3535A (SPE)
S-155	Waste Dilution of Non-Aqueous Samples for Semivolatile Organic Analysis by SW-846 Method 3580A
S-156	Separatory Funnel Extraction for Aqueous Samples for Chlorinated Herbicides
S-223	Analysis of PCBs by EPA Method 608.3 and SW-846 Method 8082A with GC-ECD
S-227	Analysis of Organochlorine Pesticides by EPA Method 608.3 and SW-846 8081B with GC-ECD
S-229	Preparation and Analysis of Various 8015 Compounds by Gas Chromatography with Flame Ionization Detector
S-231	Analysis of Gasoline Range Organics (GRO) by Gas Chromatography with Flame Ionization Detector (GC/FID)
S-232	Analysis of Diesel Range Organics and Motor Oil by Gas Chromatography with Flame Ionization Detector
S-246	Semi-Volatile Organic Compounds by GC/MS (SW-846 8270C/EPA 625)
S-252	Microextraction and SIM Analysis of Aqueous Samples for PNAs
S-253	Analysis of Herbicides by Gas Chromatograpy with Electron Capture Detector
S-259	Analysis of Light Hydrocarbons by Gas Chromatography with Flame Ionization Detector (GC/FID) by RSK-175
S-260	Micro-extraction and Analysis of 1,2-Dibromoethane (EDB) and 1,2-Dibromo-3-Chloropropage (DBCP) by EPA Method 8011 with GC-ECD
S-261	[DRAFT] NIOSH 5515 SOP
S-262	Analysis of Gasoline Range Organics (GRO) by SW-846 Method 5021A and 8015C (GC/FID)
T-109	Digestion of Aqueous Samples for Trace Metals and Minerals by EPA Method 200.8 and SW-846 Method 3005A for ICPMS
T-140	Digestion of Solid Samples for Trace Metals and Minerals Analysis by EPA Method 200.2 for Analysis by ICPMS
T-157	Fractionalization of Soil Samples for Lead Analysis
T-208	Trace Metals in Aqueous, Solid and Air Samples by ICPMS
V-113	Preparation and Analysis of Volatiles Refrigerator Blanks
V-162	Canister/BottleVac™ Preparation and Maintenance
V-245	Volatile Organic Compounds in Aqueous Samples by EPA 8260B / EPA 624.1 (GC/MS)
V-254	Volatile Organic Compounds in Solid and Non-aqueous Samples by EPA 5030A/8260A and by 5035A/8260B (SW-846) GC/MS
V-263	Volatile Organic Compounds in Air by EPA TO-15 (GC/MS)
V-411	V-245 Reporting Limits
V-412	V-254 Reporting Limits
V-413	V-263 Reporting Limits
W-200	Operation of Aquakem 20 Discrete Analyzer
W-201	pH and Corrosivity in Aqueous and Solid Samples
W-202	Anions, Inorganic in Aqueous and Solid Samples (Ion Chromatography)
W-203	Specific Conductance
W-204	Residue (Solids) in Aqueous Samples (Gravimetric)
W-205	Alkalinity in Aqueous Samples (Colorimetric) by EPA Method 310.2
W-207	Chemical Oxygen Demand in Aqueous Samples (Colorimetric)
W-208	Sulfate in Aqueous Samples (Turbidimetric)
W-209	Oxygen, Dissolved (Membrane Electrode)
W-212	Chlorine Demand and Residual Chlorine in Aqueous Samples (Ion Selective Electrode)
W-213	Chlorine, Total Residual & Bromine in Aqueous Samples

Appendix M
Standard Operating Procedures (SOP)

SOP	Title
W-214	Turbidity in Aqueous Samples (Nephelometric)
W-220	Oxidation Reduction Potential (ORP) in Aqueous and Solid Samples (Electrode)
W-221	Nitrogen, Ammonia (Potentiometric, Ion Selective Electrode)
W-222	Total and Dissolved Organic Carbon in Aqueous Samples (Nondispersive Infrared Detector)
W-223	Fractional Organic Carbon in Soils by Walkley-Black (Titration)
W-224	Oxygen Demand, Biochemical & Carbonaceous Biochemical (BOD & CBOD) (5 Days, 20 °C)
W-226	Hexavalent Chromium in Air Samples (Colorimetric)
W-227	Available and Free Cyanide by Ligand Exchange and Flow Injection Analysis (Amperometric)
W-228	Residue (Solids) in Solid and Semisolid Samples (Gravimetric)
W-229	Total Cyanide by ASTM D7511-12 (Flow Injection, In-Line UV Digestion with Amperometric Detection)
W-230	Ignitability of Solids
W-231	Sulfide in Aqueous Samples (Colorimetric)
W-232	Ferrous Iron in Aqueous Samples (Colorimetric)
W-234	Phenolics, Total in Aqueous Samples (Colorimetric)
W-235	Fats, Oils and Grease by Solid Phase Extraction using EPA Method 1664B
W-236	Hexavalent Chromium in Solid Samples (Colorimetry)
W-237	Colorimetric Analysis of Total Phosphorus in Aqueous and Solid Samples
W-238	Total, Bicarbonate, Carbonate and Hydroxide Alkalinity (Titrimetric) by Standard Methods 2320 B
W-249	Flash Point in Liquid Samples by Pensky-Martens Closed-Cup Method
W-260	Hexavalent Chromium, Dissolved in Aqueous Samples (Colorimetric) by Standards Method 3500-Cr B and SW-846 Method 7196A
W-295	Paint Filter Liquids Test

Appendix N
Matrix Classifications

FoPT Matrix	Quality Management System Matrix	Fibertec Matrix	Description	Regulatory Statute & CFR Reference	Method Source	Matrix used for QC samples
Air	Air and Emissions	Soil Gas, Indoor Air	Gaseous samples collected in rigid walled containers such as bottles or canisters or flexible walled containers such as Tedlar bags	Title III of the Clean Air Act	EPA Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air	Ambient air in a bottle, canister, or bag
		Type of filter	Gaseous samples collected onto filters, or into sorbent materials	OSHA	NIOSH	Unused filter or sorbent tube material
Nonpotable Water	Aqueous	Wastewater and Surface water	Water that has been used and contains dissolved or suspended waste materials which is carried to a publicly owned treatment works.	Clean Water Act State NPDES Permits 40 CFR, Part 136	SMWW, MCAWW 600-series (organic), MCAWW 200-series (metals), MCAWW 300-series (inorganic), ASTM & Hach	Deionized water
		Ground water		Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846 methods	Deionized water

Appendix N
Matrix Classifications

FoPT Matrix	Quality Management System Matrix	Fibertec Matrix	Description	Regulatory Statute & CFR Reference	Method Source	Matrix used for QC samples
Nonpotable Water	Aqueous	ASTM Extract	Aqueous fluid resulting from the neutral leaching of a sample via ASTM D3987-85	N/A	ASTM, SW-846	Deionized water
		Leachate		Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Deionized water
		TCLP and SPLP Extracts	Aqueous fluid resulting from the leaching process described in EPA 1311 or EPA 1312	Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Unused TCLP or SPLP extraction fluid
	Saline / Estuarian	Brine	Water laden with dissolved ions, brought to the surface as a consequence of the exploration for and extraction of oil and natural gas.	EPA Underground Injection Control section of the 40 CFR Parts 144-149 as authorized by the Safe Drinking Water Act (SDWA)	Dictated by client - will depend on client's well class, method of disposal, municipal and state regulations, etc.	Deionized water

Appendix N
Matrix Classifications

FoPT Matrix	Quality Management System Matrix	Fibertec Matrix	Description	Regulatory Statute & CFR Reference	Method Source	Matrix used for QC samples
Solids and Chemical	Non-Aqueous Liquid	Other Liquid	Organic fluid with < 15% settleable solids, not classified as an oil	Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Method dependent
		Oil		Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Method dependent
	Solid	Soil / Solid	Soils, sediments, sludges and other matrices with >15% settleable solids	Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Organics – cleaned sand Inorganics – PTFE chips, sand, glass beads
		Wipe	Cloth used to swab a surface of known area	Resource Conservation and Recovery Act, 40 CFR Parts 260 & 261	SW-846	Unused wipe

REVIEW HISTORY

This form documents the annual review of the above named SOP. The signatory attests that this version of SOP describes the currently employed activities. This form must reside within the file containing this version of the SOP.

Review #1

Lab Director Signature Date

Quality Assurance Officer Signature Date

Review #2

Lab Director Signature Date

Quality Assurance Officer Signature Date

Review #3

Lab Director Signature Date

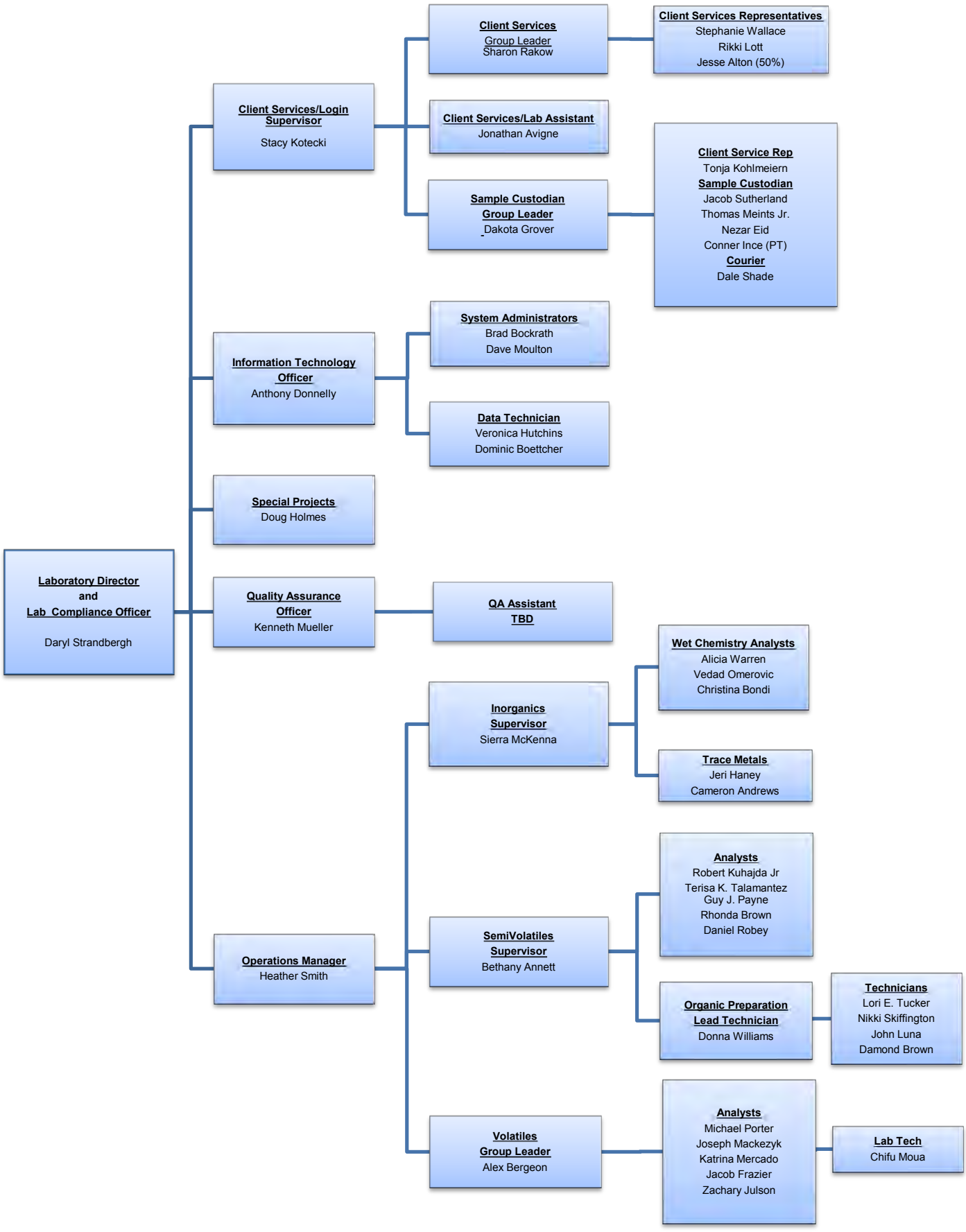
Quality Assurance Officer Signature Date

Review #4

Lab Director Signature Date

Quality Assurance Officer Signature Date

Fibertec, Inc.Laboratory Organization Chart



Fibertec
environmental
services

Additional Information for Questionnaire 1 - Per – and Polyfluoroalkyl Substances

At minimum, three examples, with references, of successful projects performed in the last five years for each service, as requested in Section I General Information, I-4 Contract Award of the Request for Proposal.

1. Ferndale PFAS Project, Ferndale, Michigan. Ongoing project providing laboratory services to GEI Consultants. Analysis included PFAS 24 compound list for wastewater and soil analysis including very hot samples and other analyses. Rush turnaround occasionally requested. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: Allan Blaske, 230 N Washington Square, Suite 203, Lansing, MI 48933. Ablaske@geiconsultants.com, (517) 803-2839.

2. Eaton Rapids Landfill Project, Eaton Rapids, Michigan. Ongoing project providing laboratory services to WSP Michigan, Inc. Analysis included PFOA/PFOS analysis for groundwater samples in addition to other quarterly analyses. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Adam Heft, 6011 W St Joseph Hwy, Suite 400, Lansing, MI 48917. Adam.heft@wsp.com, (517) 886-7400.

3. Gordie Howe International Bridge Project, Detroit Michigan. Ongoing project providing laboratory services to Mannik & Smith Group. Analysis included PFAS in addition to other analyses in various matrices, including occasional requested rush turnaround. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Walter Bolt, 2365 Haggerty Road South, Canton, MI 48188. Wbolt@manniksmithgroup.com, (734) 790-5177.

4. Oscoda – Wurtsmith Airport Authority, Oscoda, Michigan. Project providing laboratory services to DLZ. Project ran in August of 2019. Analysis includes PFAS via method ASTM D7968 for soils. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Thomas Kaugher, 607 Shelby St #650, Detroit, MI 48226. Tkaugher@dlz.com, (313) 961-4040.

5. PFOS Initiative, Southern Clinton County Utilities Authority. Ongoing project providing intermittent analysis to SCCUA. PFOA and PFOS as requested in wastewater. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Chad Nichols, 3671 E Herbison Rd., DeWitt, MI 48820. Nichols@sccmua.com, (517) 669-8311.

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

Contracted Laboratory Questionnaire
Department of Technology, Management and Budget
2020 Laboratory Testing Services Indefinite-Scope Indefinite-Delivery (ISID)

Incremental Sampling Method

INSTRUCTIONS: Firms shall complete the following information in the form provided. A separate sheet may be used if additional space is needed. The Article number(s) the additional information pertains must be included on the separate sheet. Firms are to ensure all questions are answered completely in the most concise way possible to streamline the review process.

ARTICLE 1: BUSINESS ORGANIZATION

1. Business Organization Full Name: Fibertec, Inc.

   Business Organization Street Address: 1914 Holloway Drive, Holt, MI 48842; Office Staff Number: 52 full and part time; all staff have Michigan residency.

   Business Organization Mailing Address: 1914 Holloway Drive, Holt, MI 48842

   Business Organization Telephone Number: 517-699-0345

   Business Organization E-Mail Address: lab@fibertec.us

   Business Organization Website Address: http://www.fibertec.us

   Business Organization Point of Contact: Stacy Kotecki
   Business Organization Point of Contact Email and Phone: skotecki@fibertec.us; 517-699-0345 ext. 2
   SIGMA Vendor ID: CV0032040

   If applicable, state the branch office(s), partnering organization or other subordinate element(s) that will perform, or assist in performing, the work: Fibertec Cadillac – 8660 Mackinaw Trail, Cadillac, MI 49601; Office Staff Number: 1 full time; all staff have Michigan residency. Fibertec Brighton – 11766 E. Grand River Road, Brighton, MI 48116; Office Staff Number: 4 full time; Field Staff Number: 7 full time; all staff have Michigan residency. Fibertec IHS Lansing - 3125 Sovereign Drive, Suite B, Lansing, MI 48911; Office Staff Number: 4 full and part time; Field Staff Number: 2 full time; all staff have Michigan residency. Branch offices may be utilized in pick up and/or drop off of sample supplies and samples, with the final destination being the Holt laboratory. Fibertec, Inc. pays Michigan taxes and all work is expected to be done in Michigan.

1.2 Check the appropriate status:

☐ Individual firm ☐ Association ☐ Partnership ☒ Corporation, or ☐ Combination – Explain:
Click or tap here to enter text.

If you operate as a corporation, include the state in which you are incorporated and the date of incorporation: Michigan, incorporated in 1987

Include a brief description of the Contracted Laboratory's history: Fibertec was established by Matt Frisch in 1987. Over the years it has become a specialized provider of a diverse range of quality environmental services complemented by our value added services and personal care. Fibertec currently employs seventy people at four locations. Our headquarters and analytical laboratory are located in Holt, Michigan. Our industrial hygiene operations are located in Lansing, Michigan. Our geoprobe and drilling operations are located in Brighton, Michigan. We also have a satellite laboratory in Cadillac servicing Northern Michigan. With these offices we provide our clients with one-stop shopping, offering a variety of services that improves the ease in which our clients investigate contaminated properties. We are widely regarded as one of the premier quality service providers to the environmental industry throughout Michigan and parts of the Midwestern United States. We have performed the drilling, sampling, and analysis of samples from thousands of environmentally impacted properties to determine the nature and extent of environmental contamination. The projects we've worked on range from private residential sites to Brownfield Sites.

1.3 Can the firm provide an emergency 24/7 contact telephone number and mobilize analytical staff during non-scheduled work hours (i.e., weekends, holidays, evenings) during an emergency situation?

Yes ☒ No ☐

1.4 The firm is currently accredited and certified: Yes ☒ No ☐

If yes, list accreditations and certifications. Insert copies of accreditations/certifications, showing minimally: accreditation/certification body/agency, date of accreditation/certification, expiration date, methods covered, and parameters covered.

1.5 List the firm's current capacity for analysis of the following:

Methods	Approximate Samples per Day
ISM	15

ARTICLE 2: PRIOR EXPERIENCE

2.1 Indicate any previous and current contract dates for providing Contracted Laboratory services to the Department of Environment, Great Lakes and Energy (EGLE) that you believe best illustrates your firm's capabilities to provide Contracted Laboratory services.

Year of Contract	Starting Date	Expiration Date
2016	March 2016	March 2020
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

2.2 Performance Sample Studies

NA

NOTE: Other documentation than that provided by the provider of the studies, or edited documentation will not be accepted.

2.3 Provide a copy of the laboratories Quality Assurance Project Plan (QAPP). Please note that individual file size may not exceed 6 MB. The QAPP may be divided into multiple files for submittal.

ARTICLE 3: PERSONNEL STAFFING

3.1 Include an organizational chart.

3.2 Please fill out the following information regarding the personnel your firm considers key to the successful completion of the study or project scope of work:

Key Personnel 1
Name: Daryl Strandbergh — Job Title: Analytical Laboratory Director
Years Experience: 30+ — College Degree(s): BS, MBA

Key Personnel 2
Name:Heather Smith — Job Title:Operations Manager
Years Experience:16 — College Degree(s):BS

Key Personnel 3
Name:Ken Mueller — Job Title:Quality Assurance Officer
Years Experience: 30+ — College Degree(s): AS, BBA

Key Personnel 4
Name: Donna Williams — Job Title: Group Leader – Prep Lab/Lab Technician

Years Experience:: 3 College Degree(s): N/A. High School Diploma

Key Personnel 5
Name: Lori Tucker Job Title: Lab Technician
Years Experience: 1 College Degree(s): N/A, High School Diploma

3.3 Does the Contracted Laboratory Project Manager (PM) have at least three (3) years' experience as a PM? Yes ☒ No ☐

3.4 Does the Contracted Laboratory PM have a minimum of ten (10) years' experience with similar projects? Yes ☒ No ☐

3.5 Resumes for Key Personnel provided? Yes ☒ No ☐

ARTICLE 4: CONSULTANTS / SUBCONTRACTORS

4.1 Specifically, identify any other laboratories/consultants/subcontractors you plan to use for any part of the scope of work (*NOTE: If any support must be provided by a laboratory/consultant/subcontractor, said laboratory/consultant/subcontractor must indicate their capability and willingness to carry out the work*):

Laboratory/Consultant/Subcontractor 1
Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 2
Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 3
Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #: Click or tap here to enter text.
Description of Work to Be Conducted: Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

ARTICLE 5: SPECIAL FACTORS

5.1 Attach a list in table format of all other analyses not included in this Request ofr Proposal (RFP) with the following infornation: Analysis Description, Method, Matrix, Preparation (if appropriate), and Cost per Sample.

5.2 Include a brief description of your firm's special qualifications such as awards, recognitions, innovations, etc.
Fibertec is one of the largest providers of environmental laboratory services in the state of Michigan and has serviced as an Overflow Laboratory since 2016. We have a staff of 70 people, including approximately 30 working directly in the laboratory, with 3 directly working with ISM processing. Our environmental laboratory has more equipment and experienced staff available to devote to projects than most laboratories in Michigan. We have worked on a large number and variety of projects, including a significant number of EPA Brownfield projects within the state. We are accredited by NELAP, including for analysis of TO-15 through the state of Texas. We work with a variety of environmental consulting firms, including a number of consultants currently under contract with EGLE. Geographically, our main laboratory in Holt is close to the state laboratory for faster reponse time for sample pick up. We have offices in Lansing, Cadillac, and Brighton as well, giving us one of

the widest geographical reaches of all environmental laboratories in the state We can provide pick up and drop offs from Traverse City to Grand Rapids to Monroe, Michigan. Much of our work on numerous Brownfield projects provide similar experience to projects within the overflow. These projects must meet Operational memorandum 2 criteria. Fibertec also provides a number of specialized tests including: 1.. Analysis of sub slab vapor samples, utilizing summa canisters and bottle vacs via TO-15 as well as analysis of PNA, PCB, and mercury in sub slab air samples via NIOSH methodology. Fibertec has provided this service for over 12 years. 2. Low level mercury analysis via EPA 1631, as well as sampling via EPA method 1669. 3. Available cyanide analysis via EPA method OIA 1677. 4. Fibertec has provided incremental sampling processing, subsampling, and analysis for clients. 5. Fibertec has provided asbestos laboratory services for the past 30 years. We are also involved in analysis of unique matrices such as ambient air, indoor air, and stationary sources. We are involved with testing methane in groundwater and PCB wipes. Our LIMS allows us to provide result in a variety of EDD formats to better integrate with consultants' information systems. We offer extensive experience and capability with both routine and non-routine testing with a focus on customer service and turnaround time. We believe Fibertec is qualified to continue to support EGLE as an overflow laboratory.

Fibertec environmental services

Additional Personnel – Questionnaire 2

Key Personnel 6

Name: Nikki Skiffington
Job Title: Lab Technician
Years Experience: 1
College Degree (s): N/A, High School Diploma

Key Personnel 7

Name: Matthew Frisch
Job Title: Principal- in- Charge, President
Years Experience: 35
College Degree (s): BS

Key Personnel 8

Name: Anthony Donnelly
Job Title: IT Officer, Laboratory
Years Experience: 27
College Degree (s): BS

Key Personnel 9

Name: Stacy Kotecki
Job Title: Client Services Coordinator
Years Experience: 15
College Degree (s): BS

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Additional Information for Questionnaire 2 – Incremental Sampling Method

At minimum three examples, with references, of successful projects performed in the last five years for each service, as requested in Section I General Information, I-4 Contract Award of the Request for Proposal.

1. Former Midwest Refinery, Alma, Michigan. Project was conducted in May of 2017. Project providing laboratory services to MRP Properties Company, LLC. Samples were prepped for ISM for analysis of Michigan 10 Metals, Base Neutral Acids, and fine/coarse lead. All analyses were conducted in accordance with EGLE Op. Memo 2. Contact: Rick Draper, 1780 E. Superior Street, Alma, MI 48801. Richard.Draper@valero.com, (989) 463-9646.

2. Marathon Oil Scipio Site, Scipio Township, Michigan. Project was conducted in April of 2017. Project providing laboratory services to Hamp Mathews, and Associates. Samples were prepped for ISM analysis of arsenic, lead, barium, copper, mercury, zinc, and benzo (a) pyrene. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Alan Mathews, 15266 Ann Drive, Bath, MI 48808. Mathews@hampmathews.com, (517) 641-7333.

3. Suburban Ford, Waterford, Michigan. Project was conducted in April of 2017. Project providing laboratory services to Environmental Resources Group (ERG). Samples were prepped for ISM analysis of PCBs, PNAs, RCRA 8 Metals (including mercury), and 1L amber methanol kits processed for VOCs. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Robert Anderson, 28003 Center Oaks Suite 106, Wixom, MI 48393. Robert.Anderson@ergrp.net, (248) 773-7986.

4. RACER Site, Saginaw, Michigan. Project was conducted in July and August of 2019. Project providing laboratory services to NTH Consultants, Ltd. Samples were prepped for ISM analysis of SVOCs, PCBs, Michigan 10 Metals, Fine/Coarse Lead, and manganese. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Cliff Andrews, 41780 6 Mile Rd. , Northville, MI 48168. Candrews@nthconsultants.com, (248) 662-2741.

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5. Grandview Commons, Dexter, Michigan. Project was conducted in April of 2019. Project providing laboratory services to AKT Peerless Environmental. Samples were prepped for ISM analysis for Michigan 10 metals, PCBs, PNA, and 1L amber methanol kits processed for VOCs, All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Jeremy Fox, 22725 Orchard Lake Rd, Farmington Hills, MI 48336. Foxj@aktpeerless.com, (248) 615-1333.

6. Choice Auto, Springfield, Michigan. Project was conducted in May and June of 2019. Project providing laboratory services to State of Michigan DEGLE. Samples were prepped for ISM analysis for Michigan 10 Metals and Nickel, additional analysis was done for Fine/Coarse lead and hexavalent chromium. All analyses were conducted in accordance with EGLE Op. Memo 2. Contact: Ron Smedley, Constitution Hall, South, 5th Floor, South, 525 West Allegan Street, Lansing, MI 48933. Smedleyr@michigan.gov, (517) 284-5153.

Contracted Laboratory Questionnaire

Department of Technology, Management and Budget
2020 Laboratory Testing Services Indefinite-Scope Indefinite-Delivery (ISID)

All Services Except PFAS and ISM

INSTRUCTIONS: Firms shall complete the following information in the form provided. A separate sheet may be used if additional space is needed. The Article number(s) the additional information pertains must be included on the separate sheet. Firms are to ensure all questions are answered completely in the most concise way possible to streamline the review process.

ARTICLE 1: BUSINESS ORGANIZATION

1. Business Organization Full Name: Fibertec, Inc.

   Business Organization Street Address: 1914 Holloway Drive, Holt, MI 48842; Office Staff Number: 52 full and part time; all staff have Michigan residency.

   Business Organization Mailing Address: 1914 Holloway Drive, Holt, MI 48842

   Business Organization Telephone Number: 517-699-0345

   Business Organization E-Mail Address: lab@fibertec.us

   Business Organization Website Address: http://www.fibertec.us

   Business Organization Point of Contact: Stacy Kotecki
   Business Organization Point of Contact Email and Phone: skotecki@fibertec.us; 517-699-0345 ext. 2
   SIGMA Vendor ID: CV0032040

   If applicable, state the branch office(s), partnering organization or other subordinate element(s) that will perform, or assist in performing, the work: Fibertec Cadillac – 8660 Mackinaw Trail, Cadillac, MI 49601; Office Staff Number: 1 full time; all staff have Michigan residency. Fibertec Brighton – 11766 E. Grand River Road, Brighton, MI 48116; Office Staff Number: 4 full time; Field Staff Number: 7 full time; all staff have Michigan residency. Fibertec IHS Lansing - 3125 Sovereign Drive, Suite B, Lansing, MI 48911; Office Staff Number: 4 full and part time; Field Staff Number: 2 full time; all staff have Michigan residency. Branch offices may be utilized in pick up and/or drop off of sample supplies and samples, with the final destination being the Holt laboratory. Fibertec, Inc. pays Michigan taxes and all work is expected to be done in Michigan.

1.2 Check the appropriate status:

☐ Individual firm ☐ Association ☐ Partnership ☒ Corporation, or ☐ Combination – Explain:
Click or tap here to enter text.

If you operate as a corporation, include the state in which you are incorporated and the date of incorporation: Michigan, incorporated in 1987.

Include a brief description of the Contracted Laboratory's history: Fibertec was established by Matt Frisch in 1987. Over the years it has become a specialized provider of a diverse range of quality environmental services complemented by our value added services and personal care. Fibertec currently employs seventy people at four locations. Our headquarters and analytical laboratory are located in Holt, Michigan. Our industrial hygiene operations are located in Lansing, Michigan. Our geoprobe and drilling operations are located in Brighton, Michigan. We also have a satellite laboratory in Cadillac servicing Northern Michigan. With these offices we provide our clients with one-stop shopping, offering a variety of services that impoves the ease in which our clients investigate contaminated properties. We are widely regarded as one of the premier quality service providers to the environmental industry throughout Michigan and parts of the Midwestern United States. We have performed the drilling, sampling, and analysis of samples from thousands of environmentally impacted properties to determine the nature and extent of environmental contamination. The projects we've worked on range from private residential sites to Brownfield Sites.

1.3 Can the firm provide an emergency 24/7 contact telephone number and mobilize analytical staff during non-scheduled work hours (i.e., weekends, holidays, evenings) during an emergency situation?

Yes ☒ No ☐

1.4 The firm is currently accredited and certified: Yes ☒ No ☐

If yes, list accreditations and certifications. Insert copies of accreditations/certifications, showing minimally: accreditation/certification body/agency, date of accreditation/certification, expiration date, methods covered, and parameters covered.

1.5 List the firm's current capacity for analysis of the following:

Methods	Number of Instruments per Location	Approximate Samples per Day per Location	Number of Locations
Method 8260	5	180	1
Method 8270	5	150	1
Method 8082	3	110	1
Method 6010 or 200.7	N/A	N/A	N/A
Method 6020 or 200.8	1	200	1
Method 8081	2	80	1

Article 2: PRIOR EXPERIENCE

2.1 Indicate any previous and current contract dates for providing Contracted Laboratory services to the Department of Environment, Great Lakes and Energy (EGLE) that you believe best illustrates your firm's capabilities to provide Contracted Laboratory services.

Year of Contract	Starting Date	Expiration Date
2016	March 2016	March 2020
Click or tap here to enter	Click or tap here to enter text.	Click or tap here to enter text.

text.		
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

2.2 Performance Sample Studies

Copies of the last three (3) years of performance sample studies for water and soil from the provider of the studies for the following;

Analysis of Metals using USEPA Methods 6010, 200.7, 200.8 and 6020
Yes ☒ No ☐

Analysis of Volatile Organic Compounds using USEPA Method 8260
Yes ☒ No ☐

Analysis of Semi - Volatile Organic Compounds using USEPA Method 8270
Yes ☒ No ☐

Analysis of Pesticide Compounds using USEPA Method 8081
Yes ☒ No ☐

Analysis of Polychlorinated Biphenyls using USEPA Method 8082
Yes ☒ No ☐

NOTE: Other documentation than that provided by the provider of the studies, or edited documentation will not be accepted.

2.3 Provide a copy of the laboratories Quality Assurance Project Plan (QAPP). Please note that individual file size may not exceed 6 MB. The QAPP may be divided into multiple files for submittal.

ARTICLE 3: PERSONNEL STAFFING

3.1 Include an organizational chart.

3.2 Please fill out the following information regarding the personnel your firm considers key to the successful completion of the study or project scope of work:

Key Personnel 1
Name:Daryl Strandbergh Job Title: Analytical Laboratory Director :
Years Experience:30+ College Degree(s): BS, MBA

Key Personnel 2
Name:Heather Smith Job Title: Operations Manager
Years Experience:16 College Degree(s): BS

Key Personnel 3
Name:Kenneth Mueller Job Title: Quality Assurance Officer
Years Experience:30+ College Degree(s): AS, BBA

Key Personnel 4
Name:Bethany Annett Job Title: Senior Project Chemist, Group Leader Semivolatiles
Years Experience:20 College Degree(s):BS, MS

Key Personnel 5
Name:Alexandra Bergeon Job Title:Senior Project Chemist, Group Leader Volatiles
Years Experience:3 College Degree(s):BS

3.3 Does the Contracted Laboratory Project Manager (PM) have at least three (3) years' experience as a PM? Yes ☒ No ☐

3.4 Does the Contracted Laboratory PM have a minimum of ten (10) years' experience with similar projects? Yes ☒ No ☐

3.5 Resumes for Key Personnel provided? Yes ☒ No ☐

ARTICLE 4: CONSULTANTS / SUBCONTRACTORS

4.1 Specifically, identify any other laboratories/consultants/subcontractors you plan to use for any part of the scope of work (*NOTE: If any support must be provided by a laboratory/consultant/subcontractor, said laboratory/consultant/subcontractor must indicate their capability and willingness to carry out the work*):

Laboratory/Consultant/Subcontractor 1

Business Name:Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #:Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 2
Business Name: Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/Zip:Click or tap here to enter text.
Contact Name and Telephone #: Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

Laboratory/Consultant/Subcontractor 3
Business Name: Click or tap here to enter text.
Address:Click or tap here to enter text.
City/State/ZipClick or tap here to enter text.:
Contact Name and Telephone #: Click or tap here to enter text.
Description of Work to Be Conducted:Click or tap here to enter text.
Letter of intent provided? ☐Yes ☐No

ARTICLE 5: SPECIAL FACTORS

5.1 Attach a list in table format of all other analyses not included in this Request for Proposal (RFP) with the following infornation: analysis description, method, matrix, preparation (if appropriate), and cost per sample.

5.2 Include a brief description of your firm's special qualifications such as awards, recognitions, innovations, etc.

Fibertec is one of the largest providers of environmental laboratory services in the state of Michigan and has serviced as an Overflow Laboratory since 2016. We have a staff of 70 people, including approximately 30 working directly in the laboratory. Our environmental laboratory has more equipment and experienced staff available to devote to projects than most laboratories in Michigan. We have worked on a large number and variety of projects, including a significant number of EPA Brownfield projects within the state. We are accredited by NELAP, including for analysis of TO-15 through the state of Texas. We work with a variety of environmental consulting firms, including a number of consultants currently under contract with EGLE. Geographically, our main laboratory in Holt is close to the state laboratory for faster reponse time for sample pick up. We have offices in Lansing, Cadillac, and Brighton as well, giving us one of the widest geographical reaches of all environmental laboratories in the state We can provide pick up and drop offs from Traverse City to Grand Rapids to Monroe, Michigan. Much of our work on numberous Brownfield projects provide similar experience to projects within the overflow. These projects must meet Operational memorandum 2 criteria. Fibertec also provides a number of specialized tests including: 1.. Analysis of sub slab vapor samples, utilizing summa canisters and bottle vacs via TO-15 as well as analysis of PNA, PCB, and mercury in sub slab air samples via NIOSH methodology. Fibertec has provided this service for over 12 years. 2. Low level mercury analysis via EPA 1631, as well as sampling via EPA method 1669. 3. Available cyanide analysis via EPA method OIA 1677. 4. Fibertec has provided incremental sampling processing, subsampling, and analysis for clients. 5. Fibertec has provided asbestos laboratory services for the past 30 years. We are also invovled in analysis of unique matrices such as ambient air, indoor air, and stationary sources. We are involved with testing methane in groundwater and PCB wipes. Our LIMS allows us to provide result in a variety of EDD formats to better integrate with consultants' information systems. We offer extensive experience and capability with both routine and non-routine testing with a focus on customer service and turnaround time. We believe Fibertec is qualified to continue to support EGLE as an overflow laboratory.

Fibertec environmental services

Additional Personnel – Questionnaire 3

Key Personnel 6

Name: Sierra McKenna — Job Title: Senior Project Chemist, Group Leader Inorganic Chemistry
Years Experience: 3 — College Degree (s): BS, MS

Key Personnel 7

Name: Phil Peterson — Job Title: Vice President – Fibertec Industrial Hygiene Services
Years Experience: 30+ — College Degree (s): BS

Key Personnel 8

Name: Matthew Frisch — Job Title: Principal- in- Charge, President
Years Experience: 35 — College Degree (s): BS

Key Personnel 9

Name: Anthony Donnelly — Job Title: IT Officer, Laboratory
Years Experience: 27 — College Degree (s): BS

Key Personnel 10

Name: Stacy Kotecki — Job Title: Client Services Coordinator
Years Experience: 15 — College Degree (s): BS

Key Personnel 11

Name: Robert Kuhajda — Job Title: Chemist
Years Experience: 25 — College Degree (s): BS, MS

Fibertec environmental services

Article 5 – Special Factors

5.1 Analyses not included in the RFP:

Analysis Description	Method (Analysis)	Matrix	Preparation	Cost per Sample
PNA	TO-13	Air	NIOSH 5515	$110.00
PCB	8082	Air	NIOSH 5503	$100.00
PCB	8082	Wipe	8082	$50.00

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

Certificate of Accreditation to ISO/IEC 17025:2017

NVLAP LAB CODE: 101510-0

Fibertec Industrial Hygiene Services, Inc.

Lansing, MI

is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:

Asbestos Fiber Analysis

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communique dated January 2009).

2020-01-01 through 2020-12-31

Effective Dates

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

For the National Voluntary Laboratory Accreditation Program

National Voluntary Laboratory Accreditation Program

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

Fibertec Industrial Hygiene Services, Inc.
3125 Sovereign Drive
Suite B
Lansing, MI 48911
Mr. Phillip A. Peterson
Phone: 517-999-6020
Email: ppeterson@fibertecihs.com
http://www.fibertecihs.com

ASBESTOS FIBER ANALYSIS — NVLAP LAB CODE 101510-0

Bulk Asbestos Analysis

Code	*Description*
18/A01	EPA -- 40 CFR Appendix E to Subpart E of Part 763, Interim Method of the Determination of Asbestos in Bulk Insulation Samples
18/A03	EPA 600/R-93/116: Method for the Determination of Asbestos in Bulk Buildiug Materials

For the National Voluntary Laboratory Accreditation Program

PT Studies

2017 – 2019

2017 PT Studies

WP – 234

Winter, 2017

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-234 - Shipped: 01/11/2017 - Closed: 02/24/2017
Reports Printed On: 03/14/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	25.1	32.7	32.8	mg/L	5.14	16.5 to 49.2	1.48	ACCEPT.	2/6/17	AMG
1555	CBOD	20135255	GALV	SM 5210 B - 2001	20.4	28.9	29.8	mg/L	6.67	12.4 to 47.1	1.27	ACCEPT.	2/6/17	AMG
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	65.0	54.0	52.7	mg/L	9.36	35.7 to 67.4	1.18	ACCEPT.	2/1/17	AMG
2040	TOC	20137819	TOC-IR	SM 5310 B - 2000	23.9	21.0	20.8	mg/L	2.44	16.8 to 24.8	1.19	ACCEPT.	2/3/17	SEM
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	23.9	21.0	20.8	mg/L	2.44	16.8 to 24.8	1.19	ACCEPT.	2/3/17	SEM

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	21.5	23.7	24.7	mg/L	2.78	12.5 to 33.1	0.791	ACCEPT.	2/7/17	SEM

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.577	0.642	0.668	mg/L	0.119	0.434 to 0.902	0.546	ACCEPT.	2/1/17	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.261	0.304	0.327	mg/L	0.113	0.0480 to 0.606	0.381	ACCEPT.	2/1/17	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	2.18	2.14	2.52	mg/L	0.296	1.28 to 3.75	0.135	ACCEPT.	2/1/17	RKP
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	2.18	2.14	2.52	mg/L	0.296	1.28 to 3.75	0.135	ACCEPT.	2/1/17	RKP

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	0.706	0.689	0.727	mg/L	0.0631	0.547 to 0.891	0.269	ACCEPT.	2/17/17	RKP
1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	0.629	0.689	0.727	mg/L	0.0631	0.547 to 0.891	0.951	ACCEPT.	2/16/17	RKP

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	2960	2726	2750	ug/L	180	2290 to 3130	1.30	ACCEPT.	2/14/17	NRV
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	2960	2726	2750	ug/L	180	2290 to 3130	1.30	ACCEPT.	2/14/17	NRV
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	859	799	800	ug/L	43.0	657 to 919	1.40	ACCEPT.	2/10/17	NRV
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	859	799	800	ug/L	43.0	657 to 919	1.40	ACCEPT.	2/10/17	NRV
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	828	801	817	ug/L	45.8	692 to 930	0.590	ACCEPT.	2/10/17	NRV
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	828	801	817	ug/L	45.8	692 to 930	0.590	ACCEPT.	2/10/17	NRV
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	987	985	983	ug/L	59.6	836 to 1130	0.0336	ACCEPT.	2/10/17	NRV
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	987	985	983	ug/L	59.6	836 to 1130	0.0336	ACCEPT.	2/10/17	NRV
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	242	251	250	ug/L	10.3	213 to 288	0.874	ACCEPT.	2/14/17	NRV
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	242	251	250	ug/L	10.3	213 to 288	0.874	ACCEPT.	2/14/17	NRV
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	818	820	817	ug/L	35.8	694 to 940	0.0559	ACCEPT.	2/10/17	NRV
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	818	820	817	ug/L	35.8	694 to 940	0.0559	ACCEPT.	2/10/17	NRV
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	342	332	333	ug/L	18.8	283 to 383	0.532	ACCEPT.	2/10/17	NRV
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	342	332	333	ug/L	18.8	283 to 383	0.532	ACCEPT.	2/10/17	NRV
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	511	503	500	ug/L	28.3	425 to 575	0.283	ACCEPT.	2/10/17	NRV
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	511	503	500	ug/L	28.3	425 to 575	0.283	ACCEPT.	2/10/17	NRV
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	767	711	700	ug/L	40.6	595 to 805	1.38	ACCEPT.	2/10/17	NRV
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	767	711	700	ug/L	40.6	595 to 805	1.38	ACCEPT.	2/10/17	NRV
1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	903	860	850	ug/L	48.4	723 to 978	0.888	ACCEPT.	2/10/17	NRV
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	903	860	850	ug/L	48.4	723 to 978	0.888	ACCEPT.	2/10/17	NRV
1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	338	318	317	ug/L	13.6	269 to 365	1.47	ACCEPT.	2/10/17	NRV

1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	338	318	317	ug/L	13.6	269 to 365	1.47	ACCEPT.	2/10/17	NRV
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	306	339	333	ug/L	18.3	283 to 383	1.80	ACCEPT.	2/10/17	NRV
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	306	339	333	ug/L	18.3	283 to 383	1.80	ACCEPT.	2/10/17	NRV
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	323	334	333	ug/L	15.1	286 to 376	0.728	ACCEPT.	2/10/17	NRV
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	323	334	333	ug/L	15.1	286 to 376	0.728	ACCEPT.	2/10/17	NRV
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	324	303	300	ug/L	17.0	257 to 347	1.24	ACCEPT.	2/10/17	NRV
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	324	303	300	ug/L	17.0	257 to 347	1.24	ACCEPT.	2/10/17	NRV
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	968	925	950	ug/L	59.5	808 to 1090	0.723	ACCEPT.	2/10/17	NRV
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	968	925	950	ug/L	59.5	808 to 1090	0.723	ACCEPT.	2/10/17	NRV
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	339	318	333	ug/L	22.6	283 to 383	0.929	ACCEPT.	2/10/17	NRV
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	339	318	333	ug/L	22.6	283 to 383	0.929	ACCEPT.	2/10/17	NRV
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	296	304	300	ug/L	16.0	255 to 345	0.500	ACCEPT.	2/10/17	NRV
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	296	304	300	ug/L	16.0	255 to 345	0.500	ACCEPT.	2/10/17	NRV
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	526	500	500	ug/L	30.2	411 to 580	0.861	ACCEPT.	2/10/17	NRV
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	526	500	500	ug/L	30.2	411 to 580	0.861	ACCEPT.	2/10/17	NRV
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	133	131	133	ug/L	9.09	113 to 153	0.220	ACCEPT.	2/10/17	NRV
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	133	131	133	ug/L	9.09	113 to 153	0.220	ACCEPT.	2/10/17	NRV
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	375	368	367	ug/L	20.3	312 to 422	0.345	ACCEPT.	2/10/17	NRV
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	375	368	367	ug/L	20.3	312 to 422	0.345	ACCEPT.	2/10/17	NRV

PEI-034-2 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1370	1312	1380	ug/L	190	968 to 1800	0.305	ACCEPT.	2/13/17	NRV
1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	1370	1312	1380	ug/L	190	968 to 1800	0.305	ACCEPT.	2/13/17	NRV

1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	122	116	117	ug/L	7.49	99.5 to 135	0.801	ACCEPT.	2/10/17	NRV
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	122	116	117	ug/L	7.49	99.5 to 135	0.801	ACCEPT.	2/10/17	NRV

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105219	ISE	SM 4500-H+ B - 2000	8.32	8.31	8.40	units	0.368	8.20 to 8.60	0.0272	ACCEPT.	1/31/17	AMG
1900	pH	10244403	ISE	SW-846 9040C - 2002	8.32	8.31	8.40	units	0.368	8.20 to 8.60	0.0272	ACCEPT.	1/31/17	AMG

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051201	GRAV	SM 2540 D - 1997	47.3	43.0	47.6	mg/L	3.90	36.6 to 54.7	1.10	ACCEPT.	2/1/17	AMG
1950	Total Solids	20049405	GRAV	SM 2540 B - 1997	622	655	656	mg/L	41.9	590 to 722	0.788	ACCEPT.	2/1/17	AMG

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	9.50	8.10	8.74	mg/L	1.63	4.31 to 12.3	0.859	ACCEPT.	2/16/17	VJH

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 - 1994	6.41	6.00	5.80	ug/L	0.667	4.06 to 7.54	0.615	ACCEPT.	2/1/17	JLH
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	6.41	6.00	5.80	ug/L	0.667	4.06 to 7.54	0.615	ACCEPT.	2/1/17	JLH

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	7.10	6.99	7.35	NTU	0.403	5.82 to 8.86	0.273	ACCEPT.	2/8/17	RKP
2055	Turbidity	20048219	TURB	SM 2130 B - 2001	7.10	6.99	7.35	NTU	0.403	5.82 to 8.86	0.273	ACCEPT.	2/8/17	RKP

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066028	UV-VIS	SM 3500-Cr B - 2001	196	197	198	ug/L	7.89	163 to 232	0.127	ACCEPT.	2/1/17	SEM

1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	196	197	198	ug/L	7.89	163 to 232	0.127	ACCEPT.	2/1/17	SEM

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.83	2.90	2.86	mg/L	0.276	2.46 to 3.26	0.254	ACCEPT.	2/8/17	RKP
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	2.83	2.90	2.86	mg/L	0.276	2.46 to 3.26	0.254	ACCEPT.	2/8/17	RKP

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	1.74	1.74	1.82	mg/L	0.207	1.29 to 2.28	0	ACCEPT.	2/8/17	RKP
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	1.74	1.74	1.82	mg/L	0.207	1.29 to 2.28	0	ACCEPT.	2/8/17	RKP

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1290	1117	1130	ug/L	65.7	956 to 1290	2.63	ACCEPT.	2/16/17	NRV
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1290	1117	1130	ug/L	65.7	956 to 1290	2.63	ACCEPT.	2/16/17	NRV

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	383	420	450	mg/L	29.3	360 to 499	1.26	ACCEPT.	2/10/17	SEM
1970	Volatile Solids	20051585	GRAV	SM 2540 E - 1997	383	420	450	mg/L	29.3	360 to 499	1.26	ACCEPT.	2/10/17	SEM

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	40.9	45.2	44.8	mg/L	2.83	38.7 to 51.0	1.52	ACCEPT.	2/8/17	RKP
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	40.9	45.2	44.8	mg/L	2.83	38.7 to 51.0	1.52	ACCEPT.	2/8/17	RKP
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	0.710	0.838	0.856	mg/L	0.109	0.642 to 1.06	1.17	ACCEPT.	2/8/17	RKP
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	0.710	0.838	0.856	mg/L	0.109	0.642 to 1.06	1.17	ACCEPT.	2/8/17	RKP

1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	36.2	33.0	33.7	mg/L	3.15	27.0 to 40.4	1.02	ACCEPT.	2/10/17	NRV
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	36.2	33.0	33.7	mg/L	3.15	27.0 to 40.4	1.02	ACCEPT.	2/10/17	NRV
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	50.9	49.0	50.0	mg/L	3.94	40.0 to 60.0	0.482	ACCEPT.	2/10/17	NRV
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	50.9	49.0	50.0	mg/L	3.94	40.0 to 60.0	0.482	ACCEPT.	2/10/17	NRV
1610	Specific Conductance (at 25C)	20048606	COND	SM 2510 B - 1997	372	359	359	umhos/cm	56.9	323 to 395	0.228	ACCEPT.	2/6/17	AMG
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	372	359	359	umhos/cm	56.9	323 to 395	0.228	ACCEPT.	2/6/17	AMG
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	39.6	41.6	41.4	mg/L	3.50	33.8 to 47.6	0.571	ACCEPT.	2/8/17	RKP
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	39.6	41.6	41.4	mg/L	3.50	33.8 to 47.6	0.571	ACCEPT.	2/8/17	RKP
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	46.6	44.4	44.6	mg/L	2.35	37.9 to 51.3	0.936	ACCEPT.	2/13/17	RKP
1505	Total Alkalinity (CaCO3)	20045607	TITR	SM 2320 B - 1997	42.7	44.4	44.6	mg/L	2.35	37.9 to 51.3	0.723	ACCEPT.	2/13/17	AMG
1955	Total Dissolved Solids (TDS)	20050402	GRAV	SM 2540 C - 1997	234	242	242	mg/L	26.0	197 to 287	0.308	ACCEPT.	2/9/17	SEM

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	68.7	71.5	71.8	mg/L	4.94	61.0 to 82.6	0.567	ACCEPT.	2/14/17	NRV
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	68.7	71.5	71.8	mg/L	4.94	61.0 to 82.6	0.567	ACCEPT.	2/14/17	NRV
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	171	178	179	mg/L	11.7	152 to 206	0.598	ACCEPT.	2/14/17	NRV
1550	Calcium Hardness (CaCO3)	20046600	CALC	SM 2340 B - 1997	171	178	179	mg/L	11.7	152 to 206	0.598	ACCEPT.	2/14/17	NRV
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	171	178	179	mg/L	11.7	152 to 206	0.598	ACCEPT.	2/14/17	NRV
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	5.98	6.00	5.95	mg/L	0.919	5.06 to 6.84	0.0218	ACCEPT.	2/10/17	NRV
1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	5.98	6.00	5.95	mg/L	0.919	5.06 to 6.84	0.0218	ACCEPT.	2/10/17	NRV
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	195	205	204	mg/L	10.2	173 to 235	0.980	ACCEPT.	2/14/17	NRV
1755	Total Hardness (CaCO3)	20046600	CALC	SM 2340 B - 1997	195	205	204	mg/L	10.2	173 to 235	0.980	ACCEPT.	2/14/17	NRV
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	195	205	204	mg/L	10.2	173 to 235	0.980	ACCEPT.	2/14/17	NRV

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109404	ISE	SM 4500-NH3 D - 1997	15.4	15.7	15.5	mg/L	1.64	12.5 to 18.4	0.183	ACCEPT.	2/9/17	RKP
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	12.0	12.8	12.8	mg/L	0.865	10.6 to 14.9	0.925	ACCEPT.	2/8/17	RKP
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	12.0	12.8	12.8	mg/L	0.865	10.6 to 14.9	0.925	ACCEPT.	2/8/17	RKP
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	12.0	13.1	12.8	mg/L	1.23	10.7 to 14.8	0.894	ACCEPT.	2/8/17	RKP
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	12.0	13.1	12.8	mg/L	1.23	10.7 to 14.8	0.894	ACCEPT.	2/8/17	RKP
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	1.81	1.72	1.75	mg/L	0.104	1.49 to 2.01	0.865	ACCEPT.	2/8/17	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	1.81	1.72	1.75	mg/L	0.104	1.49 to 2.01	0.865	ACCEPT.	2/8/17	RKP

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	2.27	2.33	2.38	mg/L	0.265	1.93 to 2.81	0.226	ACCEPT.	2/2/17	AMG
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E - 1999	2.27	2.33	2.38	mg/L	0.265	1.93 to 2.81	0.226	ACCEPT.	2/2/17	AMG
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8900	Arochlor 1248	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8905	Arochlor 1254	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA

8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8910	Arochlor 1260	10103603	GC-ECD	EPA 608	3.36	3.10	3.44	ug/L	0.637	1.30 to 4.82	0.408	ACCEPT.	1/31/17	BDA
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	3.36	3.10	3.44	ug/L	0.637	1.30 to 4.82	0.408	ACCEPT.	1/31/17	BDA
8912	Arochlor 1262	10103603	GC-ECD	EPA 608	<0.200	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	<0.200	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8913	Arochlor 1268	10103603	GC-ECD	EPA 608	<0.200	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	<0.200	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/17	BDA

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10107401	GC-MS	EPA 625	168	148	181	ug/L	29.4	66.0 to 220	0.680	ACCEPT.	2/1/17	SAM
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	168	148	181	ug/L	29.4	66.0 to 220	0.680	ACCEPT.	2/1/17	SAM
6840	2,4,6-Trichlorophenol	10107401	GC-MS	EPA 625	111	100	127	ug/L	17.0	47.1 to 154	0.647	ACCEPT.	2/1/17	SAM
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	111	100	127	ug/L	17.0	47.1 to 154	0.647	ACCEPT.	2/1/17	SAM
6000	2,4-Dichlorophenol	10107401	GC-MS	EPA 625	97.9	94.8	123	ug/L	15.8	40.3 to 146	0.196	ACCEPT.	2/1/17	SAM
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	97.9	94.8	123	ug/L	15.8	40.3 to 146	0.196	ACCEPT.	2/1/17	SAM
6130	2,4-Dimethylphenol	10107401	GC-MS	EPA 625	145	146	176	ug/L	33.3	48.6 to 219	0.0300	ACCEPT.	2/1/17	SAM
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	145	146	176	ug/L	33.3	48.6 to 219	0.0300	ACCEPT.	2/1/17	SAM
6175	2,4-Dinitrophenol	10107401	GC-MS	EPA 625	177	122	158	ug/L	48.7	15.8 to 212	1.13	ACCEPT.	2/1/17	SAM
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	177	122	158	ug/L	48.7	15.8 to 212	1.13	ACCEPT.	2/1/17	SAM
6005	2,6-Dichlorophenol	10107401	GC-MS	EPA 625	153	140	189	ug/L	20.3	57.1 to 235	0.640	ACCEPT.	2/1/17	SAM
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	153	140	189	ug/L	20.3	57.1 to 235	0.640	ACCEPT.	2/1/17	SAM
5800	2-Chlorophenol	10107401	GC-MS	EPA 625	38.9	38.1	56.9	ug/L	7.27	17.0 to 68.9	0.110	ACCEPT.	2/1/17	SAM
5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	38.9	38.1	56.9	ug/L	7.27	17.0 to 68.9	0.110	ACCEPT.	2/1/17	SAM
6360	2-Methyl-4,6-Dinitrophenol	10107401	GC-MS	EPA 625	71.2	54.5	64.2	ug/L	17.3	18.9 to 92.4	0.965	ACCEPT.	2/1/17	SAM
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	71.2	54.5	64.2	ug/L	17.3	18.9 to 92.4	0.965	ACCEPT.	2/1/17	SAM
6400	2-Methylphenol	10107401	GC-MS	EPA 625	64.7	61.5	90.6	ug/L	12.8	20.8 to 107	0.250	ACCEPT.	2/1/17	SAM
6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	64.7	61.5	90.6	ug/L	12.8	20.8 to 107	0.250	ACCEPT.	2/1/17	SAM
6490	2-Nitrophenol	10107401	GC-MS	EPA 625	65.5	58.2	75.5	ug/L	20.6	22.6 to 94.9	0.354	ACCEPT.	2/1/17	SAM
6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	65.5	58.2	75.5	ug/L	20.6	22.6 to 94.9	0.354	ACCEPT.	2/1/17	SAM
5700	4-Chloro-3-methylphenol	10107401	GC-MS	EPA 625	64.6	58.3	72.0	ug/L	10.6	27.4 to 89.0	0.594	ACCEPT.	2/1/17	SAM

5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	64.6	58.3	72.0	ug/L	10.6	27.4 to 89.0	0.594	ACCEPT.	2/1/17	SAM
6410	4-Methylphenol	10107401	GC-MS	EPA 625	76.8	75.7	114	ug/L	18.8	11.4 to 148	0.0585	ACCEPT.	2/1/17	SAM
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	76.8	75.7	114	ug/L	18.8	11.4 to 148	0.0585	ACCEPT.	2/1/17	SAM
6500	4-Nitrophenol	10107401	GC-MS	EPA 625	67.7	61.3	140	ug/L	29.2	14.0 to 189	0.219	ACCEPT.	2/1/17	SAM
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	67.7	61.3	140	ug/L	29.2	14.0 to 189	0.219	ACCEPT.	2/1/17	SAM
6605	Pentachlorophenol	10107401	GC-MS	EPA 625	51.7	44.7	53.0	ug/L	13.3	14.8 to 73.5	0.526	ACCEPT.	2/1/17	SAM
6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	51.7	44.7	53.0	ug/L	13.3	14.8 to 73.5	0.526	ACCEPT.	2/1/17	SAM
6625	Phenol	10107401	GC-MS	EPA 625	44.3	49.8	133	ug/L	22.3	13.3 to 179	0.247	ACCEPT.	2/1/17	SAM
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	44.3	49.8	133	ug/L	22.3	13.3 to 179	0.247	ACCEPT.	2/1/17	SAM
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10103603	GC-ECD	EPA 608	7.46	8.36	9.19	ug/L	1.43	3.86 to 12.6	0.629	ACCEPT.	2/3/17	BDA
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	7.46	8.36	9.19	ug/L	1.43	3.86 to 12.6	0.629	ACCEPT.	2/3/17	BDA

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10103603	GC-ECD	EPA 608	45.5	42.5	46.0	ug/L	6.93	10.1 to 68.1	0.433	ACCEPT.	2/3/17	BDA
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	45.5	42.5	46.0	ug/L	6.93	10.1 to 68.1	0.433	ACCEPT.	2/3/17	BDA

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	6.60	6.67	8.39	ug/L	1.42	1.90 to 12.0	0.0493	ACCEPT.	2/16/17	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	5.20	5.65	6.53	ug/L	1.59	0.653 to 10.1	0.283	ACCEPT.	2/16/17	RDK
8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	6.44	7.18	7.57	ug/L	1.46	1.80 to 10.6	0.507	ACCEPT.	2/16/17	RDK
8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	8.06	8.28	8.91	ug/L	1.51	2.06 to 13.1	0.146	ACCEPT.	2/16/17	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/16/17	RDK

8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/16/17	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/16/17	RDK
8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/16/17	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	2690	3336	4580	ug/L	1631	1240 to 5700	0.396	ACCEPT.	2/7/17	TKT

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1460	1662	1840	ug/L	264	661 to 3260	0.765	ACCEPT.	1/31/17	RDK

PEO-103 Low Level Halocarbons - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4570	1,2-Dibromo-3-chloropropane	10173009	GC-ECD	SW-846 8011 - 1992	0.187	0.279	0.290	ug/L	0.0700	0.160 to 0.465	1.31	ACCEPT.	2/15/17	BDA
4585	1,2-Dibromoethane	10173009	GC-ECD	SW-846 8011 - 1992	0.473	0.623	0.590	ug/L	0.144	0.316 to 0.845	1.04	ACCEPT.	2/15/17	BDA
5180	1,2,3-Trichloropropane	-- Not Reported --												

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10107207	GC-MS	EPA 624	145	137	131	ug/L	12.3	85.0 to 177	0.650	ACCEPT.	2/3/17	MES
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	145	137	131	ug/L	12.3	85.0 to 177	0.650	ACCEPT.	2/3/17	MES
5160	1,1,1-Trichloroethane	10107207	GC-MS	EPA 624	24.3	25.1	21.4	ug/L	3.48	12.8 to 29.9	0.230	ACCEPT.	2/3/17	MES
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	24.3	25.1	21.4	ug/L	3.48	12.8 to 29.9	0.230	ACCEPT.	2/3/17	MES
5110	1,1,2,2-Tetrachloroethane	10107207	GC-MS	EPA 624	33.7	33.7	35.3	ug/L	3.06	22.9 to 47.6	0	ACCEPT.	2/3/17	MES
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	33.7	33.7	35.3	ug/L	3.06	22.9 to 47.6	0	ACCEPT.	2/3/17	MES
5165	1,1,2-Trichloroethane	10107207	GC-MS	EPA 624	93.9	95.9	101	ug/L	6.02	70.7 to 131	0.332	ACCEPT.	2/3/17	MES
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	93.9	95.9	101	ug/L	6.02	70.7 to 131	0.332	ACCEPT.	2/3/17	MES
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES

5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	79.2	75.0	83.9	ug/L	10.6	38.4 to 126	0.396	ACCEPT.	2/3/17	MES
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	79.2	75.0	83.9	ug/L	10.6	38.4 to 126	0.396	ACCEPT.	2/3/17	MES
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	77.5	76.4	83.2	ug/L	19.6	36.6 to 113	0.0561	ACCEPT.	2/3/17	MES
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	77.5	76.4	83.2	ug/L	19.6	36.6 to 113	0.0561	ACCEPT.	2/3/17	MES
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	87.7	82.0	82.8	ug/L	7.55	53.9 to 112	0.755	ACCEPT.	2/3/17	MES
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	87.7	82.0	82.8	ug/L	7.55	53.9 to 112	0.755	ACCEPT.	2/3/17	MES
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	82.8	80.8	89.9	ug/L	8.37	58.4 to 121	0.239	ACCEPT.	2/3/17	MES
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	82.8	80.8	89.9	ug/L	8.37	58.4 to 121	0.239	ACCEPT.	2/3/17	MES
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	70.8	78.8	81.7	ug/L	5.32	51.6 to 112	1.50	ACCEPT.	2/3/17	MES
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	70.8	78.8	81.7	ug/L	5.32	51.6 to 112	1.50	ACCEPT.	2/3/17	MES
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	67.7	73.3	74.0	ug/L	5.76	42.6 to 107	0.972	ACCEPT.	2/3/17	MES
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	67.7	73.3	74.0	ug/L	5.76	42.6 to 107	0.972	ACCEPT.	2/3/17	MES
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	77.9	92.1	94.7	ug/L	12.6	56.8 to 133	1.13	ACCEPT.	2/3/17	MES
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	120	123	116	ug/L	17.6	81.0 to 150	0.170	ACCEPT.	2/3/17	MES
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	120	123	116	ug/L	17.6	81.0 to 150	0.170	ACCEPT.	2/3/17	MES
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	23.4	25.1	24.2	ug/L	3.18	17.1 to 33.2	0.535	ACCEPT.	2/3/17	MES
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	23.4	25.1	24.2	ug/L	3.18	17.1 to 33.2	0.535	ACCEPT.	2/3/17	MES
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	24.8	25.0	21.4	ug/L	2.15	15.0 to 27.8	0.0930	ACCEPT.	2/3/17	MES
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	24.8	25.0	21.4	ug/L	2.15	15.0 to 27.8	0.0930	ACCEPT.	2/3/17	MES
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	114	116	115	ug/L	14.1	80.6 to 150	0.142	ACCEPT.	2/3/17	MES
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	114	116	115	ug/L	14.1	80.6 to 150	0.142	ACCEPT.	2/3/17	MES
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	56.0	56.7	57.0	ug/L	10.5	39.9 to 74.0	0.0667	ACCEPT.	2/3/17	MES
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	56.0	56.7	57.0	ug/L	10.5	39.9 to 74.0	0.0667	ACCEPT.	2/3/17	MES
4410	2-Butanone	10107207	GC-MS	EPA 624	<25.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4860	2-Hexanone	10107207	GC-MS	EPA 624	157	170	167	ug/L	19.4	84.7 to 249	0.670	ACCEPT.	2/3/17	MES
4860	2-Hexanone	10184802	GC-MS	SW-846 8260B - 1996	157	170	167	ug/L	19.4	84.7 to 249	0.670	ACCEPT.	2/3/17	MES

4995	4-Methyl-2-pentanone	10107207	GC-MS	EPA 624	172	165	164	ug/L	18.2	105 to 222	0.385	ACCEPT.	2/3/17	MES
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846 8260B - 1996	172	165	164	ug/L	18.2	105 to 222	0.385	ACCEPT.	2/3/17	MES
4315	Acetone	10107207	GC-MS	EPA 624	94.5	130	146	ug/L	26.9	38.9 to 227	1.32	ACCEPT.	2/3/17	MES
4315	Acetone	10184802	GC-MS	SW-846 8260B - 1996	94.5	130	146	ug/L	26.9	38.9 to 227	1.32	ACCEPT.	2/3/17	MES
4325	Acrolein	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4325	Acrolein	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4340	Acrylonitrile	10107207	GC-MS	EPA 624	<2.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4340	Acrylonitrile	10184802	GC-MS	SW-846 8260B - 1996	<2.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4375	Benzene	10107207	GC-MS	EPA 624	111	115	107	ug/L	8.35	74.9 to 139	0.479	ACCEPT.	2/3/17	MES
4375	Benzene	10184802	GC-MS	SW-846 8260B - 1996	111	115	107	ug/L	8.35	74.9 to 139	0.479	ACCEPT.	2/3/17	MES
4395	Bromodichloromethane	10107207	GC-MS	EPA 624	81.3	81.9	89.5	ug/L	5.30	53.7 to 125	0.113	ACCEPT.	2/3/17	MES
4395	Bromodichloromethane	10184802	GC-MS	SW-846 8260B - 1996	81.3	81.9	89.5	ug/L	5.30	53.7 to 125	0.113	ACCEPT.	2/3/17	MES
4400	Bromoform	10107207	GC-MS	EPA 624	97.6	110	99.2	ug/L	11.1	59.5 to 139	1.12	ACCEPT.	2/3/17	MES
4400	Bromoform	10184802	GC-MS	SW-846 8260B - 1996	97.6	110	99.2	ug/L	11.1	59.5 to 139	1.12	ACCEPT.	2/3/17	MES
4950	Bromomethane	10107207	GC-MS	EPA 624	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4950	Bromomethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4450	Carbon disulfide	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4450	Carbon disulfide	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4455	Carbon tetrachloride	10107207	GC-MS	EPA 624	61.7	59.4	67.5	ug/L	6.53	37.9 to 91.4	0.352	ACCEPT.	2/3/17	MES
4455	Carbon tetrachloride	10184802	GC-MS	SW-846 8260B - 1996	61.7	59.4	67.5	ug/L	6.53	37.9 to 91.4	0.352	ACCEPT.	2/3/17	MES
4475	Chlorobenzene	10107207	GC-MS	EPA 624	90.6	91.9	92.7	ug/L	6.23	64.9 to 120	0.209	ACCEPT.	2/3/17	MES
4475	Chlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	90.6	91.9	92.7	ug/L	6.23	64.9 to 120	0.209	ACCEPT.	2/3/17	MES
4485	Chloroethane	10107207	GC-MS	EPA 624	31.3	39.9	40.0	ug/L	5.94	16.0 to 64.0	1.45	ACCEPT.	2/3/17	MES
4485	Chloroethane	10184802	GC-MS	SW-846 8260B - 1996	31.3	39.9	40.0	ug/L	5.94	16.0 to 64.0	1.45	ACCEPT.	2/3/17	MES
4505	Chloroform	10107207	GC-MS	EPA 624	82.6	83.1	91.2	ug/L	6.63	63.8 to 119	0.0754	ACCEPT.	2/3/17	MES
4505	Chloroform	10184802	GC-MS	SW-846 8260B - 1996	82.6	83.1	91.2	ug/L	6.63	63.8 to 119	0.0754	ACCEPT.	2/3/17	MES
4960	Chloromethane	10107207	GC-MS	EPA 624	35.8	38.6	48.1	ug/L	13.8	19.2 to 76.9	0.203	ACCEPT.	2/3/17	MES
4960	Chloromethane	10184802	GC-MS	SW-846 8260B - 1996	35.8	38.6	48.1	ug/L	13.8	19.2 to 76.9	0.203	ACCEPT.	2/3/17	MES
4645	cis-1,2-Dichloroethene	10107207	GC-MS	EPA 624	<7.00	0	<7	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	<7.00	0	<7	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4680	cis-1,3-Dichloropropene	10107207	GC-MS	EPA 624	18.8	18.8	19.6	ug/L	1.55	12.7 to 26.4	0	ACCEPT.	2/3/17	MES

4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	18.8	18.8	19.6	ug/L	1.55	12.7 to 26.4	0	ACCEPT.	2/3/17	MES
4575	Dibromochloromethane	10107207	GC-MS	EPA 624	72.6	71.9	64.1	ug/L	5.96	38.5 to 89.8	0.117	ACCEPT.	2/3/17	MES
4575	Dibromochloromethane	10184802	GC-MS	SW-846 8260B - 1996	72.6	71.9	64.1	ug/L	5.96	38.5 to 89.8	0.117	ACCEPT.	2/3/17	MES
4595	Dibromomethane	10107207	GC-MS	EPA 624	109	112	98.7	ug/L	7.81	64.2 to 133	0.384	ACCEPT.	2/3/17	MES
4595	Dibromomethane	10184802	GC-MS	SW-846 8260B - 1996	109	112	98.7	ug/L	7.81	64.2 to 133	0.384	ACCEPT.	2/3/17	MES
4625	Dichlorodifluoromethane	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
4765	Ethylbenzene	10107207	GC-MS	EPA 624	22.0	21.9	21.8	ug/L	1.52	15.3 to 28.3	0.0658	ACCEPT.	2/3/17	MES
4765	Ethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	22.0	21.9	21.8	ug/L	1.52	15.3 to 28.3	0.0658	ACCEPT.	2/3/17	MES
4585	Ethylene dibromide	10107207	GC-MS	EPA 624	111	111	112	ug/L	20.1	72.6 to 151	0	ACCEPT.	2/3/17	MES
4585	Ethylene dibromide	10184802	GC-MS	SW-846 8260B - 1996	111	111	112	ug/L	20.1	72.6 to 151	0	ACCEPT.	2/3/17	MES
4975	Methylene chloride	10107207	GC-MS	EPA 624	111	120	119	ug/L	9.16	71.7 to 167	0.983	ACCEPT.	2/3/17	MES
4975	Methylene chloride	10184802	GC-MS	SW-846 8260B - 1996	111	120	119	ug/L	9.16	71.7 to 167	0.983	ACCEPT.	2/3/17	MES
5000	MTBE	10107207	GC-MS	EPA 624	<9.00	0	<9	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5000	MTBE	10184802	GC-MS	SW-846 8260B - 1996	<9.00	0	<9	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5005	Naphthalene	10107207	GC-MS	EPA 624	38.6	39.6	40.9	ug/L	4.61	18.7 to 56.0	0.217	ACCEPT.	2/3/17	MES
5005	Naphthalene	10184802	GC-MS	SW-846 8260B - 1996	38.6	39.6	40.9	ug/L	4.61	18.7 to 56.0	0.217	ACCEPT.	2/3/17	MES
5100	Styrene	10107207	GC-MS	EPA 624	90.2	85.1	98.3	ug/L	7.63	63.9 to 133	0.668	ACCEPT.	2/3/17	MES
5100	Styrene	10184802	GC-MS	SW-846 8260B - 1996	90.2	85.1	98.3	ug/L	7.63	63.9 to 133	0.668	ACCEPT.	2/3/17	MES
5115	Tetrachloroethene	10107207	GC-MS	EPA 624	152	144	141	ug/L	14.7	81.1 to 184	0.544	ACCEPT.	2/3/17	MES
5115	Tetrachloroethene	10184802	GC-MS	SW-846 8260B - 1996	152	144	141	ug/L	14.7	81.1 to 184	0.544	ACCEPT.	2/3/17	MES
5140	Toluene	10107207	GC-MS	EPA 624	49.1	50.1	53.9	ug/L	4.16	37.7 to 70.0	0.240	ACCEPT.	2/3/17	MES
5140	Toluene	10184802	GC-MS	SW-846 8260B - 1996	49.1	50.1	53.9	ug/L	4.16	37.7 to 70.0	0.240	ACCEPT.	2/3/17	MES
5240	m+p-Xylene	10107207	GC-MS	EPA 624	26.8	26.4	28.2	ug/L	1.63	16.9 to 39.5	0.245	ACCEPT.	2/3/17	MES
5240	m+p-Xylene	10184802	GC-MS	SW-846 8260B - 1996	26.8	26.4	28.2	ug/L	1.63	16.9 to 39.5	0.245	ACCEPT.	2/3/17	MES
5250	o-Xylene	10107207	GC-MS	EPA 624	<6.00	0	<6.0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5250	o-Xylene	10184802	GC-MS	SW-846 8260B - 1996	<6.00	0	<6.0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5260	Total Xylenes	10107207	GC-MS	EPA 624	26.8	26.2	28.2	ug/L	1.99	16.9 to 39.5	0.302	ACCEPT.	2/3/17	MES
5260	Total Xylenes	10184802	GC-MS	SW-846 8260B - 1996	26.8	26.2	28.2	ug/L	1.99	16.9 to 39.5	0.302	ACCEPT.	2/3/17	MES
4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	19.8	20.8	20.0	ug/L	1.42	12.0 to 28.0	0.704	ACCEPT.	2/3/17	MES
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	19.8	20.8	20.0	ug/L	1.42	12.0 to 28.0	0.704	ACCEPT.	2/3/17	MES

4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	16.8	17.0	19.2	ug/L	1.38	12.5 to 25.9	0.145	ACCEPT.	2/3/17	MES
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	16.8	17.0	19.2	ug/L	1.38	12.5 to 25.9	0.145	ACCEPT.	2/3/17	MES
5170	Trichloroethene	10107207	GC-MS	EPA 624	<6.20	0	<6.2	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	<6.20	0	<6.2	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	27.2	30.3	32.6	ug/L	3.68	13.0 to 52.1	0.842	ACCEPT.	2/3/17	MES
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	27.2	30.3	32.6	ug/L	3.68	13.0 to 52.1	0.842	ACCEPT.	2/3/17	MES
5225	Vinyl acetate	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/3/17	MES
5235	Vinyl chloride	10107207	GC-MS	EPA 624	69.3	81.3	80.4	ug/L	12.0	32.1 to 129	1.00	ACCEPT.	2/3/17	MES
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	69.3	81.3	80.4	ug/L	12.0	32.1 to 129	1.00	ACCEPT.	2/3/17	MES
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	27.7	27.3	39.9	ug/L	6.44	4.82 to 51.4	0.0621	ACCEPT.	2/1/17	SAM
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	27.7	27.3	39.9	ug/L	6.44	4.82 to 51.4	0.0621	ACCEPT.	2/1/17	SAM
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	77.5	73.8	100	ug/L	14.2	27.8 to 120	0.261	ACCEPT.	2/1/17	SAM
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	77.5	73.8	100	ug/L	14.2	27.8 to 120	0.261	ACCEPT.	2/1/17	SAM
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	53.3	55.7	96.9	ug/L	13.3	11.7 to 113	0.180	ACCEPT.	2/1/17	SAM
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	53.3	55.7	96.9	ug/L	13.3	11.7 to 113	0.180	ACCEPT.	2/1/17	SAM
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	90.2	93.9	154	ug/L	23.5	15.4 to 178	0.157	ACCEPT.	2/1/17	SAM
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	90.2	93.9	154	ug/L	23.5	15.4 to 178	0.157	ACCEPT.	2/1/17	SAM
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	102	107	177	ug/L	25.7	17.7 to 195	0.195	ACCEPT.	2/1/17	SAM
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	102	107	177	ug/L	25.7	17.7 to 195	0.195	ACCEPT.	2/1/17	SAM
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	147	114	146	ug/L	31.6	63.1 to 177	1.04	ACCEPT.	2/20/17	SAM
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	147	114	146	ug/L	31.6	63.1 to 177	1.04	ACCEPT.	2/20/17	SAM
6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	183	141	181	ug/L	31.4	73.5 to 217	1.34	ACCEPT.	2/1/17	SAM

6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	183	141	181	ug/L	31.4	73.5 to 217	1.34	ACCEPT.	2/1/17	SAM
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	116	107	141	ug/L	20.0	36.5 to 164	0.450	ACCEPT.	2/1/17	SAM
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	116	107	141	ug/L	20.0	36.5 to 164	0.450	ACCEPT.	2/1/17	SAM
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	162	123	142	ug/L	41.4	35.0 to 219	0.942	ACCEPT.	2/2/17	RDK
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	162	123	142	ug/L	41.4	35.0 to 219	0.942	ACCEPT.	2/2/17	RDK
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	102	87.0	112	ug/L	16.0	46.5 to 141	0.938	ACCEPT.	2/1/17	SAM
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	102	87.0	112	ug/L	16.0	46.5 to 141	0.938	ACCEPT.	2/1/17	SAM
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	<9.90	0	<9.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	<9.90	0	<9.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5500	Acenaphthene	10107401	GC-MS	EPA 625	36.8	34.3	44.4	ug/L	6.38	15.9 to 54.6	0.392	ACCEPT.	2/1/17	SAM
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	36.8	34.3	44.4	ug/L	6.38	15.9 to 54.6	0.392	ACCEPT.	2/1/17	SAM
5505	Acenaphthylene	10107401	GC-MS	EPA 625	<2.90	0	<2.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	<2.90	0	<2.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5555	Anthracene	10107401	GC-MS	EPA 625	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5595	Benzidine	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/2/17	RDK
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/2/17	RDK
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	85.8	76.4	94.4	ug/L	15.4	45.0 to 114	0.610	ACCEPT.	2/1/17	SAM
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	85.8	76.4	94.4	ug/L	15.4	45.0 to 114	0.610	ACCEPT.	2/1/17	SAM
5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	118	101	129	ug/L	22.6	47.1 to 165	0.752	ACCEPT.	2/1/17	SAM

5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	118	101	129	ug/L	22.6	47.1 to 165	0.752	ACCEPT.	2/1/17	SAM
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	125	107	135	ug/L	24.9	51.7 to 174	0.723	ACCEPT.	2/1/17	SAM
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	125	107	135	ug/L	24.9	51.7 to 174	0.723	ACCEPT.	2/1/17	SAM
5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	<5.10	0	<5.1	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	<5.10	0	<5.1	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	39.1	33.6	41.2	ug/L	9.72	9.48 to 62.3	0.566	ACCEPT.	2/1/17	SAM
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	39.1	33.6	41.2	ug/L	9.72	9.48 to 62.3	0.566	ACCEPT.	2/1/17	SAM
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	30.6	27.6	36.9	ug/L	6.82	10.7 to 46.5	0.440	ACCEPT.	2/1/17	SAM
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	30.6	27.6	36.9	ug/L	6.82	10.7 to 46.5	0.440	ACCEPT.	2/1/17	SAM
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	62.1	65.9	97.6	ug/L	34.1	25.3 to 118	0.111	ACCEPT.	2/1/17	SAM
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	62.1	65.9	97.6	ug/L	34.1	25.3 to 118	0.111	ACCEPT.	2/1/17	SAM
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	<3.10	0	<3.1	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	<3.10	0	<3.1	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	63.5	55.1	66.4	ug/L	14.9	21.9 to 90.3	0.564	ACCEPT.	2/1/17	SAM
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	63.5	55.1	66.4	ug/L	14.9	21.9 to 90.3	0.564	ACCEPT.	2/1/17	SAM
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	75.2	65.2	76.8	ug/L	20.2	21.9 to 104	0.495	ACCEPT.	2/1/17	SAM
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	75.2	65.2	76.8	ug/L	20.2	21.9 to 104	0.495	ACCEPT.	2/1/17	SAM
5680	Carbazole	10107401	GC-MS	EPA 625	143	124	148	ug/L	24.2	14.8 to 163	0.785	ACCEPT.	2/1/17	SAM
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	143	124	148	ug/L	24.2	14.8 to 163	0.785	ACCEPT.	2/1/17	SAM
5855	Chrysene	10107401	GC-MS	EPA 625	84.9	79.0	97.6	ug/L	18.8	42.0 to 122	0.314	ACCEPT.	2/1/17	SAM
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	84.9	79.0	97.6	ug/L	18.8	42.0 to 122	0.314	ACCEPT.	2/1/17	SAM
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	184	145	186	ug/L	36.3	66.5 to 239	1.07	ACCEPT.	2/1/17	SAM
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	184	145	186	ug/L	36.3	66.5 to 239	1.07	ACCEPT.	2/1/17	SAM
5905	Dibenzofuran	10107401	GC-MS	EPA 625	137	130	165	ug/L	26.5	64.5 to 186	0.264	ACCEPT.	2/1/17	SAM
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	137	130	165	ug/L	26.5	64.5 to 186	0.264	ACCEPT.	2/1/17	SAM
6070	Diethyl phthalate	10107401	GC-MS	EPA 625	103	83.3	126	ug/L	26.5	23.4 to 172	0.743	ACCEPT.	2/1/17	SAM
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	103	83.3	126	ug/L	26.5	23.4 to 172	0.743	ACCEPT.	2/1/17	SAM
6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	<11.5	0	<11.5	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM

6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<11.5	0	<11.5	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	<15.8	0	<15.8	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<15.8	0	<15.8	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	79.0	64.0	81.7	ug/L	18.4	23.8 to 116	0.815	ACCEPT.	2/1/17	SAM
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	79.0	64.0	81.7	ug/L	18.4	23.8 to 116	0.815	ACCEPT.	2/1/17	SAM
6265	Fluoranthene	10107401	GC-MS	EPA 625	124	109	133	ug/L	21.5	59.7 to 162	0.698	ACCEPT.	2/1/17	SAM
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	124	109	133	ug/L	21.5	59.7 to 162	0.698	ACCEPT.	2/1/17	SAM
6270	Fluorene	10107401	GC-MS	EPA 625	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	22.0	18.9	22.7	ug/L	5.17	10.0 to 27.6	0.600	ACCEPT.	2/1/17	SAM
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	22.0	18.9	22.7	ug/L	5.17	10.0 to 27.6	0.600	ACCEPT.	2/1/17	SAM
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	<4.30	0	<4.3	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	<4.30	0	<4.3	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	<5.00	0	<5	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	<5	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
4840	Hexachloroethane	10107401	GC-MS	EPA 625	51.3	54.4	93.2	ug/L	14.6	9.32 to 103	0.212	ACCEPT.	2/1/17	SAM
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	51.3	54.4	93.2	ug/L	14.6	9.32 to 103	0.212	ACCEPT.	2/1/17	SAM
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6320	Isophorone	10107401	GC-MS	EPA 625	117	92.1	119	ug/L	16.7	43.5 to 148	1.49	ACCEPT.	2/1/17	SAM
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	117	92.1	119	ug/L	16.7	43.5 to 148	1.49	ACCEPT.	2/1/17	SAM
5005	Naphthalene	10107401	GC-MS	EPA 625	59.5	61.4	86.6	ug/L	12.9	20.7 to 103	0.147	ACCEPT.	2/1/17	SAM
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	59.5	61.4	86.6	ug/L	12.9	20.7 to 103	0.147	ACCEPT.	2/1/17	SAM
5015	Nitrobenzene	10107401	GC-MS	EPA 625	146	137	195	ug/L	26.4	63.9 to 229	0.341	ACCEPT.	2/1/17	SAM
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	146	137	195	ug/L	26.4	63.9 to 229	0.341	ACCEPT.	2/1/17	SAM
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	57.1	55.8	122	ug/L	22.3	12.2 to 137	0.0583	ACCEPT.	2/1/17	SAM
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	57.1	55.8	122	ug/L	22.3	12.2 to 137	0.0583	ACCEPT.	2/1/17	SAM
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	134	133	184	ug/L	26.6	60.0 to 231	0.0376	ACCEPT.	2/1/17	SAM
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846 8270C - 1996	134	133	184	ug/L	26.6	60.0 to 231	0.0376	ACCEPT.	2/1/17	SAM
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM

6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846 8270C - 1996	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6615	Phenanthrene	10107401	GC-MS	EPA 625	19.7	18.1	22.1	ug/L	3.17	10.4 to 30.8	0.505	ACCEPT.	2/1/17	SAM
6615	Phenanthrene	10185805	GC-MS	SW-846 8270C - 1996	19.7	18.1	22.1	ug/L	3.17	10.4 to 30.8	0.505	ACCEPT.	2/1/17	SAM
6665	Pyrene	10107401	GC-MS	EPA 625	<4.90	0	<4.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6665	Pyrene	10185805	GC-MS	SW-846 8270C - 1996	<4.90	0	<4.9	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5095	Pyridine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
5095	Pyridine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/1/17	SAM
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												
6420	1,4-Naphthoquinone	-- Not Reported --												
6425	1-Naphthylamine	-- Not Reported --												
6430	2-Naphthylamine	-- Not Reported --												
6444	Naphthalene-d8	-- Not Reported --												
6510	4-Nitroquinoline-1-oxide	-- Not Reported --												

6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
7065	Atrazine	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10103603	GC-ECD	EPA 608	7.42	5.56	6.51	ug/L	1.04	2.30 to 8.77	1.79	ACCEPT.	2/3/17	BDA
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	7.42	5.56	6.51	ug/L	1.04	2.30 to 8.77	1.79	ACCEPT.	2/3/17	BDA
7110	alpha-BHC	10103603	GC-ECD	EPA 608	8.45	6.76	7.19	ug/L	1.16	3.13 to 9.83	1.46	ACCEPT.	2/3/17	BDA
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	8.45	6.76	7.19	ug/L	1.16	3.13 to 9.83	1.46	ACCEPT.	2/3/17	BDA
7115	beta-BHC	10103603	GC-ECD	EPA 608	3.06	2.35	2.38	ug/L	0.499	1.10 to 3.52	1.42	ACCEPT.	2/3/17	BDA
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	3.06	2.35	2.38	ug/L	0.499	1.10 to 3.52	1.42	ACCEPT.	2/3/17	BDA
7355	4,4'-DDD	10103603	GC-ECD	EPA 608	8.66	6.84	6.86	ug/L	1.77	3.34 to 9.45	1.03	ACCEPT.	2/3/17	BDA

7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	8.66	6.84	6.86	ug/L	1.77	3.34 to 9.45	1.03	ACCEPT.	2/3/17	BDA
7360	4,4'-DDE	10103603	GC-ECD	EPA 608	11.1	8.23	8.77	ug/L	1.55	3.80 to 11.8	1.85	ACCEPT.	2/3/17	BDA
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	11.1	8.23	8.77	ug/L	1.55	3.80 to 11.8	1.85	ACCEPT.	2/3/17	BDA
7365	4,4'-DDT	10103603	GC-ECD	EPA 608	8.94	7.44	7.48	ug/L	2.96	2.96 to 10.7	0.507	ACCEPT.	2/3/17	BDA
7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	8.94	7.44	7.48	ug/L	2.96	2.96 to 10.7	0.507	ACCEPT.	2/3/17	BDA
7105	delta-BHC	10103603	GC-ECD	EPA 608	13.2	11.4	12.4	ug/L	1.76	5.44 to 17.2	1.02	ACCEPT.	2/3/17	BDA
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	13.2	11.4	12.4	ug/L	1.76	5.44 to 17.2	1.02	ACCEPT.	2/3/17	BDA
7470	Dieldrin	10103603	GC-ECD	EPA 608	9.47	7.59	7.90	ug/L	1.29	4.02 to 10.5	1.46	ACCEPT.	2/3/17	BDA
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	9.47	7.59	7.90	ug/L	1.29	4.02 to 10.5	1.46	ACCEPT.	2/3/17	BDA
7510	Endosulfan I	10103603	GC-ECD	EPA 608	4.19	3.90	4.17	ug/L	0.665	1.47 to 5.67	0.436	ACCEPT.	2/3/17	BDA
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	4.19	3.90	4.17	ug/L	0.665	1.47 to 5.67	0.436	ACCEPT.	2/3/17	BDA
7515	Endosulfan II	10103603	GC-ECD	EPA 608	13.3	10.5	11.3	ug/L	2.15	4.69 to 15.4	1.30	ACCEPT.	2/3/17	BDA
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	13.3	10.5	11.3	ug/L	2.15	4.69 to 15.4	1.30	ACCEPT.	2/3/17	BDA
7520	Endosulfan sulfate	10103603	GC-ECD	EPA 608	21.0	16.6	17.6	ug/L	2.74	8.21 to 23.7	1.61	ACCEPT.	2/3/17	BDA
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	21.0	16.6	17.6	ug/L	2.74	8.21 to 23.7	1.61	ACCEPT.	2/3/17	BDA
7540	Endrin	10103603	GC-ECD	EPA 608	18.9	15.5	17.9	ug/L	3.88	7.87 to 25.2	0.876	ACCEPT.	2/3/17	BDA
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	18.9	15.5	17.9	ug/L	3.88	7.87 to 25.2	0.876	ACCEPT.	2/3/17	BDA
7530	Endrin aldehyde	10103603	GC-ECD	EPA 608	17.9	15.2	17.6	ug/L	2.94	6.66 to 24.4	0.918	ACCEPT.	2/3/17	BDA
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	17.9	15.2	17.6	ug/L	2.94	6.66 to 24.4	0.918	ACCEPT.	2/3/17	BDA
7120	gamma-BHC	10103603	GC-ECD	EPA 608	20.4	18.4	19.6	ug/L	3.16	8.61 to 26.7	0.633	ACCEPT.	2/3/17	BDA
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	20.4	18.4	19.6	ug/L	3.16	8.61 to 26.7	0.633	ACCEPT.	2/3/17	BDA
7685	Heptachlor	10103603	GC-ECD	EPA 608	10.4	8.32	9.09	ug/L	2.08	3.27 to 12.2	1.00	ACCEPT.	2/3/17	BDA
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	10.4	8.32	9.09	ug/L	2.08	3.27 to 12.2	1.00	ACCEPT.	2/3/17	BDA
7690	Heptachlor epoxide	10103603	GC-ECD	EPA 608	5.36	4.64	5.00	ug/L	0.717	2.50 to 6.69	1.00	ACCEPT.	2/3/17	BDA
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	5.36	4.64	5.00	ug/L	0.717	2.50 to 6.69	1.00	ACCEPT.	2/3/17	BDA
7810	Methoxychlor	10103603	GC-ECD	EPA 608	7.52	5.22	4.89	ug/L	1.41	1.90 to 7.58	1.63	ACCEPT.	2/3/17	BDA
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	7.52	5.22	4.89	ug/L	1.41	1.90 to 7.58	1.63	ACCEPT.	2/3/17	BDA
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-234

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	53.9	55.6	54.6	ng/L	5.02	39.5 to 69.1	0.339	ACCEPT.	2/17/17	JLH

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to Â±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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SM-113

Spring, 2017

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-113 - Shipped: 04/18/2017 - Closed: 06/01/2017 - Reports Printed On: 06/20/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, QA Officer
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Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	442	938	1100	mg/kg	537	93.8 to 3510	0.924	ACCEPT.	5/8/17	NRV
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	86.2	104	115	mg/kg	125	11.5 to 127	0.142	ACCEPT.	5/8/17	NRV
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	216	217	257	mg/kg	26.9	156 to 283	0.0372	ACCEPT.	5/8/17	NRV
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	560	546	671	mg/kg	85.0	418 to 703	0.165	ACCEPT.	5/8/17	NRV
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	111	105	116	mg/kg	13.7	79.0 to 132	0.438	ACCEPT.	5/8/17	NRV
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	187	188	240	mg/kg	19.0	139 to 264	0.0526	ACCEPT.	5/8/17	NRV
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	4310	4337	4250	mg/kg	1293	3050 to 5430	0.0209	NO EVAL.	5/8/17	NRV
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	299	301	375	mg/kg	45.8	221 to 401	0.0437	ACCEPT.	5/8/17	NRV
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	212	215	267	mg/kg	31.4	163 to 275	0.0955	ACCEPT.	5/8/17	NRV
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	287	268	313	mg/kg	26.6	203 to 331	0.714	ACCEPT.	5/8/17	NRV
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	7810	8170	8850	mg/kg	1388	950 to 15300	0.259	ACCEPT.	5/8/17	NRV
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	90.2	82.8	111	mg/kg	22.8	54.0 to 122	0.325	ACCEPT.	5/8/17	NRV
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	1220	1392	1500	mg/kg	570	666 to 2020	0.302	ACCEPT.	5/8/17	NRV
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	580	645	861	mg/kg	103	508 to 947	0.631	ACCEPT.	5/8/17	NRV
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	31.0	23.6	30.0	mg/kg	6.73	13.0 to 37.5	1.10	ACCEPT.	5/4/17	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	196	179	243	mg/kg	37.0	129 to 267	0.459	ACCEPT.	5/8/17	NRV
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	312	318	359	mg/kg	46.9	245 to 413	0.128	ACCEPT.	5/8/17	NRV
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	10300	10296	10920	mg/kg	2524	7410 to 14000	0.0016	ACCEPT.	5/8/17	NRV
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	274	259	342	mg/kg	55.0	187 to 376	0.273	ACCEPT.	5/8/17	NRV
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	43.2	39.1	75.8	mg/kg	16.8	25.0 to 83.3	0.244	ACCEPT.	5/8/17	NRV
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	4020	4921	4600	mg/kg	839	3250 to 6410	1.07	ACCEPT.	5/8/17	NRV

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	192	185	217	mg/kg	24.2	128 to 243	0.289	ACCEPT.	5/8/17	NRV
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	138	150	168	mg/kg	28.1	88.5 to 208	0.427	ACCEPT.	5/8/17	NRV
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	274	281	330	mg/kg	27.5	213 to 363	0.255	ACCEPT.	5/8/17	NRV
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	577	579	807	mg/kg	63.1	429 to 887	0.0317	ACCEPT.	5/8/17	NRV
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	174	203	264	mg/kg	24.1	83.2 to 323	1.20	ACCEPT.	5/18/17	SEM

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	9.71	10.5	11.3	mg/L	0.915	7.75 to 12.4	0.863	ACCEPT.	5/12/17	NRV
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	1.72	0.00	<2	mg/L	0.00	0.00 to 2.00	n/a	ACCEPT.	5/12/17	NRV
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	4.50	4.54	5.10	mg/L	0.456	3.17 to 5.91	0.0877	ACCEPT.	5/12/17	NRV
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0250	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/12/17	NRV
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	20.7	25.1	24.4	mg/L	8.69	2.44 to 51.3	0.506	ACCEPT.	5/12/17	NRV
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	<.005	mg/L	0.00	0.00 to 0.0050	n/a	ACCEPT.	5/10/17	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	<0.0240	0.00	<.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	5/12/17	NRV
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	10.5	11.5	16.4	mg/L	8.14	1.64 to 34.4	0.123	ACCEPT.	5/12/17	NRV
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	0.690	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	5/12/17	NRV
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	8.00	8.27	8.26	pH units	0.202	7.66 to 8.86	1.34	ACCEPT.	5/1/17	AMG

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	168	131	124	oF	15.2	107 to 141	2.43	NOT ACCEPT.	5/4/17	VJH

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	37.2	41.6	45.6	mg/kg	3.17	29.8 to 53.4	1.39	ACCEPT.	5/18/17	RKP
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	586	684	696	mg/kg	78.4	485 to 883	1.25	ACCEPT.	5/18/17	RKP
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	351	398	465	mg/kg	42.6	179 to 617	1.10	ACCEPT.	5/18/17	RKP
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	48.5	50.8	52.2	mg/kg	5.37	32.8 to 68.0	0.428	ACCEPT.	5/18/17	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	216	236	309	mg/kg	34.2	133 to 340	0.585	ACCEPT.	5/18/17	RKP
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	147	168	154	mg/kg	18.4	84.4 to 252	1.14	ACCEPT.	5/18/17	RKP
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	130	200	352	ug/kg	81.4	35.2 to 596	0.860	ACCEPT.	5/3/17	BDA
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	350	593	984	ug/kg	175	139 to 1080	1.39	ACCEPT.	5/3/17	BDA
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	180	344	516	ug/kg	143	51.6 to 685	1.15	ACCEPT.	5/3/17	BDA
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	221	387	565	ug/kg	106	76.5 to 697	1.57	ACCEPT.	5/3/17	BDA
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	117	206	267	ug/kg	67.9	81.0 to 331	1.31	ACCEPT.	5/3/17	BDA
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	58.9	98.8	133	ug/kg	23.1	22.6 to 175	1.73	ACCEPT.	5/3/17	BDA
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	147	284	320	ug/kg	81.2	131 to 437	1.69	ACCEPT.	5/3/17	BDA
5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	309	444	709	ug/kg	154	70.9 to 837	0.877	ACCEPT.	5/3/17	BDA
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	218	396	437	ug/kg	92.8	156 to 636	1.92	ACCEPT.	5/3/17	BDA

5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	29.0	57.3	68.3	ug/kg	13.3	14.9 to 99.7	2.13	ACCEPT.	5/3/17	BDA
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	52.8	95.5	133	ug/kg	21.6	25.7 to 165	1.98	ACCEPT.	5/3/17	BDA
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	55.1	112	133	ug/kg	27.8	39.5 to 185	2.05	ACCEPT.	5/3/17	BDA
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	106	207	260	ug/kg	89.2	50.0 to 364	1.13	ACCEPT.	5/3/17	BDA
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	61.4	109	135	ug/kg	27.3	22.5 to 194	1.74	ACCEPT.	5/3/17	BDA
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	209	273	461	ug/kg	112	46.1 to 541	0.571	ACCEPT.	5/3/17	BDA
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	226	370	567	ug/kg	156	131 to 624	0.923	ACCEPT.	5/3/17	BDA
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	150	321	435	ug/kg	90.5	113 to 529	1.89	ACCEPT.	5/3/17	BDA
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1635	Cyanide	30032985	AUTO	ASTM D7511-09	80.9	79.8	86.3	mg/kg	12.8	32.8 to 127	0.0859	ACCEPT.	5/9/17	SEM

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B --2007	114	131	143	ug/kg	31.6	45.0 to 238	0.538	ACCEPT.	5/4/17	TKT
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B --2007	59.8	67.6	73.3	ug/kg	10.5	18.0 to 120	0.743	ACCEPT.	5/4/17	TKT
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B --2007	234	240	245	ug/kg	40.6	70.5 to 409	0.148	ACCEPT.	5/4/17	TKT
7025	Aldrin	10178811	GC-ECD	SW 8081 B --2007	125	158	177	ug/kg	32.3	56.6 to 260	1.02	ACCEPT.	5/4/17	TKT
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B --2007	371	389	474	ug/kg	100	146 to 632	0.180	ACCEPT.	5/4/17	TKT
7115	beta-BHC	10178811	GC-ECD	SW 8081 B --2007	73.2	88.0	105	ug/kg	14.2	13.2 to 163	1.04	ACCEPT.	5/4/17	TKT
7105	delta-BHC	10178811	GC-ECD	SW 8081 B --2007	103	120	135	ug/kg	23.7	29.0 to 211	0.717	ACCEPT.	5/4/17	TKT
7470	Dieldrin	10178811	GC-ECD	SW 8081 B --2007	227	238	277	ug/kg	64.6	99.1 to 377	0.170	ACCEPT.	5/4/17	TKT
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B --2007	288	295	355	ug/kg	74.1	118 to 472	0.0945	ACCEPT.	5/4/17	TKT

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	257	271	303	ug/kg	49.2	96.6 to 445	0.285	ACCEPT.	5/4/17	TKT
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	212	214	238	ug/kg	34.5	54.9 to 373	0.0580	ACCEPT.	5/4/17	TKT
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	91.7	105	127	ug/kg	26.2	38.3 to 172	0.508	ACCEPT.	5/4/17	TKT
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	327	362	459	ug/kg	73.2	81.0 to 643	0.478	ACCEPT.	5/4/17	TKT
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	267	283	336	ug/kg	77.7	99.0 to 467	0.206	ACCEPT.	5/4/17	TKT
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	92.6	116	139	ug/kg	32.2	40.2 to 193	0.727	ACCEPT.	5/4/17	TKT
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	213	238	268	ug/kg	39.3	98.8 to 377	0.636	ACCEPT.	5/4/17	TKT
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	430	438	477	ug/kg	144	65.5 to 811	0.0556	ACCEPT.	5/4/17	TKT
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	299	401	491	ug/kg	77.2	169 to 633	1.32	ACCEPT.	5/4/17	TKT

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	14.9	23.0	27.9	mg/kg	8.78	6.44 to 35.0	0.923	ACCEPT.	5/2/17	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<1.33	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<1.33	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	5/2/17	TKT
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<1.33	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	5/2/17	TKT

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	588	535	836	ug/kg	54.4	371 to 920	0.974	ACCEPT.	5/12/17	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	362	304	281	ug/kg	118	28.1 to 658	0.492	ACCEPT.	5/12/17	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	566	396	657	ug/kg	151	65.7 to 848	1.13	ACCEPT.	5/12/17	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/12/17	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	741	573	801	ug/kg	207	80.1 to 1190	0.812	ACCEPT.	5/12/17	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/12/17	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	426	242	462	ug/kg	99.3	46.2 to 539	1.85	ACCEPT.	5/12/17	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	645	490	717	ug/kg	154	71.7 to 952	1.01	ACCEPT.	5/12/17	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	2780	4086	6140	ug/kg	1101	614 to 7750	1.19	ACCEPT.	5/3/17	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	2430	3652	5720	ug/kg	961	572 to 7460	1.27	ACCEPT.	5/3/17	RDK
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	4550	7030	12140	ug/kg	2073	1210 to 14000	1.20	ACCEPT.	5/3/17	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	10600	8138	10090	ug/kg	1837	1850 to 14400	1.34	ACCEPT.	5/19/17	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	9480	7159	8380	ug/kg	1616	2220 to 12100	1.44	ACCEPT.	5/19/17	RDK

6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	10700	7866	9730	ug/kg	1766	2180 to 13600	1.60	ACCEPT.	5/19/17	RDK
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	6280	6424	7230	ug/kg	1431	2130 to 10700	0.101	ACCEPT.	5/3/17	RDK
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	<1500	2811	7700	ug/kg	1387	770 to 8530	n/a	ACCEPT.	5/3/17	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	9670	7085	8910	ug/kg	1631	2190 to 12000	1.58	ACCEPT.	5/19/17	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	9410	6676	9410	ug/kg	1427	2780 to 10600	1.92	ACCEPT.	5/19/17	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	2850	2552	3860	ug/kg	555	730 to 4370	0.537	ACCEPT.	5/3/17	RDK
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	4100	4460	5990	ug/kg	1039	1070 to 7830	0.346	ACCEPT.	5/3/17	RDK
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	5350	6075	9400	ug/kg	2068	940 to 14300	0.351	ACCEPT.	5/3/17	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	4980	5078	7490	ug/kg	1123	1900 to 8260	0.0873	ACCEPT.	5/3/17	RDK
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	8530	7532	9440	ug/kg	1605	1410 to 13700	0.622	ACCEPT.	5/19/17	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	7850	6977	9710	ug/kg	1504	1300 to 12700	0.580	ACCEPT.	5/19/17	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	12200	9371	11860	ug/kg	1884	3660 to 15100	1.50	ACCEPT.	5/19/17	RDK
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	6200	5657	6780	ug/kg	1241	2120 to 9200	0.438	ACCEPT.	5/3/17	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	10700	8211	9980	ug/kg	1967	2910 to 13500	1.27	ACCEPT.	5/19/17	RDK
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	4000	3827	5210	ug/kg	843	1300 to 6360	0.205	ACCEPT.	5/3/17	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	7670	7183	9740	ug/kg	1984	974 to 15500	0.245	ACCEPT.	5/19/17	RDK
5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	2060	1932	2710	ug/kg	394	561 to 3300	0.325	ACCEPT.	5/3/17	RDK
5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	6320	7029	9450	ug/kg	1240	2350 to 11700	0.572	ACCEPT.	5/3/17	RDK

5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	3070	2936	4060	ug/kg	605	906 to 4970	0.221	ACCEPT.	5/3/17	RDK
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	3970	3703	4960	ug/kg	661	1510 to 5890	0.404	ACCEPT.	5/3/17	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	2780	2509	3310	ug/kg	498	762 to 4260	0.544	ACCEPT.	5/3/17	RDK
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	10800	8683	11090	ug/kg	1564	3140 to 14200	1.35	ACCEPT.	5/19/17	RDK
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	5/3/17	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	6510	6250	8260	ug/kg	1103	2190 to 10300	0.236	ACCEPT.	5/3/17	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	2560	2364	3480	ug/kg	616	560 to 4160	0.318	ACCEPT.	5/3/17	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	5560	7623	11250	ug/kg	1577	2170 to 13100	1.31	ACCEPT.	5/3/17	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	6010	6076	7870	ug/kg	1192	1700 to 10500	0.0554	ACCEPT.	5/3/17	RDK
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	2460	2306	3040	ug/kg	492	834 to 3790	0.313	ACCEPT.	5/3/17	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	7910	7379	9180	ug/kg	1664	1400 to 13400	0.319	ACCEPT.	5/19/17	RDK
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	6120	5650	7600	ug/kg	1156	2120 to 9180	0.407	ACCEPT.	5/3/17	RDK
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	11800	9727	12600	ug/kg	2327	3470 to 16000	0.891	ACCEPT.	5/19/17	RDK
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	4290	4109	5520	ug/kg	792	1670 to 6550	0.229	ACCEPT.	5/3/17	RDK
6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	9170	7305	9540	ug/kg	1324	3150 to 11500	1.41	ACCEPT.	5/19/17	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK

4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	4550	6890	12520	ug/kg	1983	1250 to 13800	1.18	ACCEPT.	5/3/17	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	5/3/17	RDK
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	3190	3880	5820	ug/kg	822	1130 to 6630	0.839	ACCEPT.	5/3/17	RDK
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	5/3/17	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6350	6327	8060	ug/kg	1736	806 to 12300	0.0132	ACCEPT.	5/3/17	RDK
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	10300	8297	11460	ug/kg	1590	3590 to 13000	1.26	ACCEPT.	5/19/17	RDK
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	4880	5466	7140	ug/kg	1326	786 to 10200	0.442	ACCEPT.	5/3/17	RDK
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	3180	3109	4140	ug/kg	933	1180 to 5040	0.0761	ACCEPT.	5/3/17	RDK
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	RDK
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
4659	2,2-Oxybis(1-chloropropane)	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												
5610	Benzoic acid	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --

6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	<520	0.00	<520	ug/kg	0.00	0.00 to 520	n/a	ACCEPT.	5/3/17	CDH
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	<530	0.00	<530	ug/kg	0.00	0.00 to 530	n/a	ACCEPT.	5/3/17	CDH
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	3210	3013	3240	ug/kg	347	1690 to 4620	0.568	ACCEPT.	5/3/17	CDH
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	9760	9213	9580	ug/kg	730	6680 to 12500	0.749	ACCEPT.	5/3/17	CDH
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<676	0.00	<676	ug/kg	0.00	0.00 to 676	n/a	ACCEPT.	5/3/17	CDH
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	2480	2231	2270	ug/kg	161	1140 to 3410	1.55	ACCEPT.	5/3/17	CDH
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	4740	4181	4520	ug/kg	626	2090 to 6700	0.893	ACCEPT.	5/3/17	CDH
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	2240	2290	2350	ug/kg	220	1410 to 3290	0.227	ACCEPT.	5/3/17	CDH

5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	5660	6186	6640	ug/kg	528	3990 to 9300	0.996	ACCEPT.	5/3/17	CDH
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	5800	5600	5190	ug/kg	198	3110 to 7270	1.01	ACCEPT.	5/3/17	CDH
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	5460	5485	4900	ug/kg	454	3560 to 6350	0.0551	ACCEPT.	5/3/17	CDH
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	8190	8817	7860	ug/kg	942	5790 to 10100	0.666	ACCEPT.	5/3/17	CDH
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	7330	7406	8670	ug/kg	650	6070 to 11300	0.117	ACCEPT.	5/3/17	CDH
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8000	7845	7460	ug/kg	648	5390 to 9660	0.239	ACCEPT.	5/3/17	CDH
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	10200	10703	9920	ug/kg	550	7350 to 12200	0.915	ACCEPT.	5/3/17	CDH
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	9650	8679	9570	ug/kg	1621	2510 to 15100	0.599	ACCEPT.	5/3/17	CDH
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	19000	17500	18470	ug/kg	3983	9240 to 27700	0.377	ACCEPT.	5/3/17	CDH
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	9290	8294	7770	ug/kg	1131	4090 to 10600	0.881	ACCEPT.	5/3/17	CDH
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	4050	4606	5460	ug/kg	900	1370 to 8430	0.618	ACCEPT.	5/3/17	CDH
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	6120	6379	6030	ug/kg	583	4390 to 7810	0.444	ACCEPT.	5/3/17	CDH
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	7390	7041	6220	ug/kg	638	4320 to 8700	0.547	ACCEPT.	5/3/17	CDH
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	3700	3367	3640	ug/kg	313	2300 to 5010	1.06	ACCEPT.	5/3/17	CDH
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	9920	7863	7640	ug/kg	985	4870 to 10300	2.09	ACCEPT.	5/3/17	CDH
4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8100	8478	8240	ug/kg	496	6220 to 10400	0.762	ACCEPT.	5/3/17	CDH

4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	7580	7087	7030	ug/kg	709	4840 to 9250	0.695	ACCEPT.	5/3/17	CDH
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	1870	1836	2040	ug/kg	191	1220 to 2850	0.178	ACCEPT.	5/3/17	CDH
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	2730	2510	2720	ug/kg	184	1780 to 3660	1.20	ACCEPT.	5/3/17	CDH
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	5/3/17	CDH
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	6940	7146	6660	ug/kg	418	4580 to 8980	0.493	ACCEPT.	5/3/17	CDH
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	9330	8766	8420	ug/kg	720	6480 to 11200	0.783	ACCEPT.	5/3/17	CDH
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	<1400	0.00	<1400	ug/kg	0.00	0.00 to 1400	n/a	ACCEPT.	5/3/17	CDH
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	5540	5117	5620	ug/kg	1636	3070 to 7990	0.259	ACCEPT.	5/3/17	CDH
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	6320	5795	5310	ug/kg	920	3170 to 7250	0.571	ACCEPT.	5/3/17	CDH
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	4800	4506	4270	ug/kg	307	2560 to 5980	0.958	ACCEPT.	5/3/17	CDH
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH

4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	<543	0.00	<543	ug/kg	0.00	0.00 to 543	n/a	ACCEPT.	5/3/17	CDH
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	7880	7751	7810	ug/kg	491	5530 to 10200	0.263	ACCEPT.	5/3/17	CDH
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	11200	11304	10160	ug/kg	710	7180 to 13600	0.146	ACCEPT.	5/3/17	CDH
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	7980	7414	7370	ug/kg	831	4420 to 10300	0.681	ACCEPT.	5/3/17	CDH
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	<638	0.00	<638	ug/kg	0.00	0.00 to 638	n/a	ACCEPT.	5/3/17	CDH
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/3/17	CDH
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												
4835	Hexachlorobutadiene	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												

5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	477	490	536	ug/kg	78.0	128 to 852	0.167	ACCEPT.	5/4/17	TKT

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	<0.1	mg/L	0.00	0.00 to 0.100	n/a	ACCEPT.	5/9/17	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	2.72	1.56	8.96	mg/L	0.661	0.896 to 9.86	1.75	ACCEPT.	5/10/17	RDK
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	3.49	2.50	6.53	mg/L	0.936	0.653 to 7.18	1.06	ACCEPT.	5/10/17	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	<0.4	mg/L	0.00	0.00 to 0.400	n/a	ACCEPT.	5/9/17	RDK
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	5.85	5.25	4.30	mg/L	0.849	1.83 to 6.96	0.707	ACCEPT.	5/11/17	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/9/17	RDK
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.0588	0.122	0.320	mg/L	0.133	0.0320 to 0.521	0.475	ACCEPT.	5/12/17	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.186	0.232	0.560	mg/L	0.204	0.0560 to 0.620	0.225	ACCEPT.	5/12/17	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/11/17	TKT
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/11/17	TKT
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	0.180	0.151	0.392	mg/L	0.0505	0.0392 to 0.431	0.574	ACCEPT.	5/11/17	TKT
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/11/17	TKT
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/11/17	TKT
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	0.122	0.112	0.367	mg/L	0.0203	0.0370 to 0.404	0.493	ACCEPT.	5/11/17	TKT
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/11/17	TKT

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	745	666	848	mg/kg	64.3	135 to 1200	1.23	ACCEPT.	5/22/17	SEM
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<3.75	0.00	<1.7	mg/kg	0.00	0.00 to 1.70	n/a	ACCEPT.	5/4/17	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<3.75	0.00	<1.7	mg/kg	0.00	0.00 to 1.70	n/a	ACCEPT.	5/4/17	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	28.7	27.1	38.5	mg/kg	6.85	5.96 to 75.4	0.234	ACCEPT.	5/4/17	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<3.75	0.00	<2.4	mg/kg	0.00	0.00 to 2.40	n/a	ACCEPT.	5/4/17	TKT

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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SM-113

Corrective Action Report

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 622/PAR)

Client: Fibertec PT SM-113 Project/Document Control Number: 78324

Sample Number(s): -014 Date Initiated: 06/28/17 Date Due: 07/12/17

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☒ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The result submitted for Ignitability (flashpoint) was graded as unacceptable. The reported value was 168F and the true value was 124F. The acceptance range was 107F to 141F and had a mean value of 131F. Please investigate and provide a cause for the failure and a plan to prevent the reoccurrence of the issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

After analyzing the sample again, I determined the cause of the failure. I had not left the ignition source lowered long enough (see Fibertec SOP W-249.1, 14.2.10). Also, I noticed that this particular sample did not behave like the LCS or most of the samples that I have seen previously.

Investigator(s):

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

In the future, I will count the time during the flame dip to get more accurate results.

QA Approval:

Follow-Up Required? (If required, reference this Report) Yes ☒ No ☐ Remedial PT was passed. See attached

VI. Approvals:

Managerial: Area Supervisor:

Date Closed: 7/14/18

SQCI-014B Flash Point - Fibertec, Inc. - NSI Lab Solutions/SM-PTX453

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	108	108	oF	91.0 to 125	ACCEPT.	10/9/17	SEM

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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SM-113-Remedial PT Study

SM-PTX453

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 09/25/2017 - Closed: 10/17/2017 - Reports Printed On: 10/18/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCI-014B Flash Point - Fibertec, Inc. - NSI Lab Solutions/SM-PTX453

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	108	108	oF	91.0 to 125	ACCEPT.	10/9/17	SEM

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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UST-088

Spring, 2017

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-088 - Shipped: 04/18/2017 - Closed: 06/01/2017 - Reports Printed On: 06/22/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
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Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, QA Officer
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1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-088

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	799	1630	1220	mg/kg	1517	298 to 2140	0.548	ACCEPT.	5/8/17	RDK

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-088

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	577	706	861	mg/kg	144	316 to 1410	0.896	ACCEPT.	4/28/17	TKT

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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WP-238

Summer, 2017

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-238 - Shipped: 07/12/2017 - Closed: 08/25/2017 - Reports Printed On: 09/08/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to: State Only
EPA Lab Code: MI00129
State Lab Code: MI00129
Primary Agency: TX -- Texas CEO
Frank Jamison
12100 Park 35 CircleBldg. A, MC-176
Austin, TX 78753
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Participant Information

NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer.

Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com

This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	32.4	36.4	33.8	mg/L	14.1	17.0 to 50.6	0.284	ACCEPT.	8/7/17	AMG
1555	CBOD	20135255	GALV	SM 5210 B - 2001	25.3	32.0	30.7	mg/L	8.21	12.8 to 48.5	0.816	ACCEPT.	8/7/17	AMG
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	45.0	58.5	54.3	mg/L	17.5	37.0 to 69.2	0.771	ACCEPT.	8/3/17	AMG
2040	TOC	20137819	TOC-IR	SM 5310 B - 2000	20.8	21.4	21.5	mg/L	2.15	17.4 to 25.6	0.279	ACCEPT.	8/7/17	SEM
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	20.8	21.4	21.5	mg/L	2.15	17.4 to 25.6	0.279	ACCEPT.	8/7/17	SEM

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	103	93.5	108	mg/L	14.5	77.2 to 125	0.655	ACCEPT.	8/11/17	SEM

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.840	0.889	0.950	mg/L	0.187	0.618 to 1.28	0.262	ACCEPT.	7/31/17	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.152	0.414	0.472	mg/L	0.111	0.295 to 0.649	2.36	NOT ACCEPT.	7/31/17	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.54	1.64	1.72	mg/L	0.226	0.870 to 2.56	0.442	ACCEPT.	8/3/17	RKP
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.54	1.64	1.72	mg/L	0.226	0.870 to 2.56	0.442	ACCEPT.	8/3/17	RKP

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	0.955	0.914	0.963	mg/L	0.185	0.718 to 1.16	0.222	ACCEPT.	8/17/17	RKP
1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	1 05	0.914	0 963	mg/L	0.185	0.718 to 1.16	0 735	ACCEPT.	8/17/17	RKP

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	2280	2084	2080	ug/L	104	1730 to 2380	1.88	ACCEPT.	8/2/17	JLH
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	2280	2084	2080	ug/L	104	1730 to 2380	1.88	ACCEPT.	8/2/17	JLH
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	624	570	567	ug/L	25.9	460 to 657	2.08	ACCEPT.	8/2/17	JLH
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	624	570	567	ug/L	25.9	460 to 657	2.08	ACCEPT.	8/2/17	JLH
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	796	794	800	ug/L	32.7	678 to 911	0.0612	ACCEPT.	8/2/17	JLH
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	796	794	800	ug/L	32.7	678 to 911	0.0612	ACCEPT.	8/2/17	JLH
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1490	1576	1570	ug/L	66.5	1330 to 1800	1.29	ACCEPT.	8/2/17	JLH
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	1490	1576	1570	ug/L	66.5	1330 to 1800	1.29	ACCEPT	8/2/17	JLH
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	104	101	100	ug/L	6.07	85.0 to 115	0.494	ACCEPT.	8/2/17	JLH
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	104	101	100	ug/L	6.07	85.0 to 115	0.494	ACCEPT.	8/2/17	JLH
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	451	456	450	ug/L	15.3	383 to 518	0.327	ACCEPT.	8/2/17	JLH
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	451	456	450	ug/L	15.3	383 to 518	0.327	ACCEPT.	8/2/17	JLH
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	649	658	650	ug/L	22.4	553 to 748	0.402	ACCEPT.	8/2/17	JLH
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	649	658	650	ug/L	22.4	553 to 748	0.402	ACCEPT.	8/2/17	JLH
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	563	553	550	ug/L	18.6	468 to 633	0.538	ACCEPT.	8/7/17	JLH
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	563	553	550	ug/L	18.6	468 to 633	0.538	ACCEPT.	8/7/17	JLH
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	349	339	333	ug/L	10.5	283 to 383	0.952	ACCEPT.	8/2/17	JLH
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	349	339	333	ug/L	10.5	283 to 383	0.952	ACCEPT.	8/2/17	JLH
1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1110	1065	1050	ug/L	38.1	893 to 1210	1 18	ACCEPT.	8/2/17	JLH
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	1110	1065	1050	ug/L	38.1	893 to 1210	1.18	ACCEPT.	8/2/17	JLH
1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	696	668	667	ug/L	23.5	567 to 767	1.19	ACCEPT.	8/2/17	JLH
1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	696	668	667	ug/L	23.5	567 to 767	1.19	ACCEPT.	8/2/17	JLH
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	393	407	400	ug/L	33.4	340 to 460	0.419	ACCEPT.	8/2/17	JLH
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	393	407	400	ug/L	33.4	340 to 460	0.419	ACCEPT.	8/2/17	JLH
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	391	400	400	ug/L	15.9	346 to 450	0.566	ACCEPT.	8/2/17	JLH
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	391	400	400	ug/L	15.9	346 to 450	0.566	ACCEPT.	8/2/17	JLH
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	503	492	483	ug/L	18.3	420 to 550	0.601	ACCEPT.	8/2/17	JLH
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	503	492	483	ug/L	18.3	420 to 550	0.601	ACCEPT.	8/2/17	JLH
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	786	795	800	ug/L	50.6	680 to 920	0.178	ACCEPT.	8/2/17	JLH
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	786	795	800	ug/L	50.6	680 to 920	0.178	ACCEPT.	8/2/17	JLH
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	621	565	563	ug/L	65.9	496 to 670	0.850	ACCEPT.	8/2/17	JLH

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	621	565	583	ug/L	65.9	496 to 670	0.850	ACCEPT	8/2/17	JLH
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	100	102	100	ug/L	4.10	85.0 to 115	0.488	ACCEPT.	8/3/17	JLH
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	100	102	100	ug/L	4.10	85.0 to 115	0.488	ACCEPT.	8/3/17	JLH
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	734	712	700	ug/L	36.5	581 to 808	0.603	ACCEPT	8/2/17	JLH
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	734	712	700	ug/L	36.5	581 to 808	0.603	ACCEPT.	8/2/17	JLH
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1760	1698	1720	ug/L	232	1460 to 1970	0.267	ACCEPT	8/3/17	JLH
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	1760	1698	1720	ug/L	232	1460 to 1970	0.267	ACCEPT.	8/3/17	JLH
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1420	1396	1380	ug/L	65.8	1180 to 1590	0.365	ACCEPT.	8/2/17	JLH
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	1420	1396	1380	ug/L	65.8	1180 to 1590	0.365	ACCEPT	8/2/17	JLH

PEI-034-2 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1950	1857	1970	ug/L	168	1380 to 2560	0.554	ACCEPT.	8/3/17	JLH
1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	1950	1857	1970	ug/L	168	1380 to 2560	0.554	ACCEPT.	8/3/17	JLH
1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	74.6	68.6	68.7	ug/L	18.4	58.7 to 78.7	0.326	ACCEPT.	8/2/17	JLH
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	74.6	68.6	68.7	ug/L	18.4	58.7 to 78.7	0.326	ACCEPT.	8/2/17	JLH

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105219	ISE	SM 4500-H+ B - 2000	6.37	6.40	6.39	units	0.131	6.19 to 6.59	0.229	ACCEPT.	7/24/17	AMG
1900	pH	10244403	ISE	SW-846 9040C - 2002	6.37	6.40	6.39	units	0.131	6.19 to 6.59	0.229	ACCEPT.	7/24/17	AMG

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051201	GRAV	SM 2540 D - 1997	56.8	51.9	58.4	mg/L	4.91	46.2 to 66.2	0.998	ACCEPT.	7/26/17	AMG
1950	Total Solids	20049405	GRAV	SM 2540 B - 1997	467	468	474	mg/L	18.0	427 to 521	0.0556	ACCEPT.	7/26/17	AMG

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	2.74	3.40	3.04	mg/L	1.38	0.885 to 4.75	0.478	ACCEPT.	8/1/17	SEM

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 1994	10.5	9.44	9.70	ug/L	1.22	6.78 to 12.6	0.869	ACCEPT.	7/31/17	NRV
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	10.5	9.44	9.70	ug/L	1.22	6.78 to 12.6	0.869	ACCEPT.	7/31/17	NRV

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	24.5	16.2	16.5	NTU	2.02	13.7 to 19.4	4.11	NOT ACCEPT.	7/27/17	RKP
2055	Turbidity	20048219	TURB	SM 2130 B - 2001	24.5	16.2	16.5	NTU	2.02	13.7 to 19.4	4.11	NOT ACCEPT.	7/27/17	RKP

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066028	UV-VIS	SM 3500-Cr B - 2001	502	471	478	ug/L	24.1	400 to 550	1.29	ACCEPT.	7/26/17	SEM
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	502	471	478	ug/L	24.1	400 to 550	1.29	ACCEPT.	7/26/17	SEM

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.67	2.66	2.64	mg/L	0.142	2.27 to 3.02	0.0704	ACCEPT.	8/8/17	RKP
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	2.67	2.66	2.64	mg/L	0.142	2.27 to 3.02	0.0704	ACCEPT.	8/8/17	RKP

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	7.24	7.36	7.30	mg/L	0.293	6.17 to 8.47	0.410	ACCEPT.	8/8/17	RKP
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	7.24	7.36	7.30	mg/L	0.293	6.17 to 8.47	0.410	ACCEPT.	8/8/17	RKP

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1290	1268	1290	ug/L	65.1	1100 to 1480	0.338	ACCEPT.	8/7/17	JLH
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1290	1268	1290	ug/L	65.1	1100 to 1480	0.338	ACCEPT.	8/7/17	JLH

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	95.0	107	103	mg/L	15.1	44.1 to 145	0.795	ACCEPT.	8/11/17	AMG
1970	Volatile Solids	20051585	GRAV	SM 2540 E - 1997	95.0	107	103	mg/L	15.1	44.1 to 145	0.795	ACCEPT.	8/11/17	AMG

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	48.2	50.0	49.8	mg/L	2.45	43.1 to 56.6	0.735	ACCEPT.	8/8/17	RKP
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	48.2	50.0	49.8	mg/L	2.45	43.1 to 56.6	0.735	ACCEPT.	8/8/17	RKP
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.30	2.54	2.60	mg/L	0.290	2.09 to 3.01	0.828	ACCEPT.	8/8/17	RKP
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	2.30	2.54	2.60	mg/L	0.290	2.09 to 3.01	0.828	ACCEPT.	8/8/17	RKP
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	14.8	14.2	13.9	mg/L	0.739	11.1 to 16.7	0.812	ACCEPT.	8/2/17	JLH
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	14.8	14.2	13.9	mg/L	0.739	11.1 to 16.7	0.812	ACCEPT.	8/2/17	JLH
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	87.2	80.5	81.6	mg/L	4.85	65.3 to 97.9	1.38	ACCEPT.	8/2/17	JLH
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	87.2	80.5	81.6	mg/L	4.85	65.3 to 97.9	1.38	ACCEPT.	8/2/17	JLH
1610	Specific Conductance (at 25C)	20048608	COND	SM 2510 B - 1997	420	398	398	umhos/cm	29.9	358 to 438	0.736	ACCEPT.	7/26/17	AMG
1610	Specific Conductance (at 25C)	10199608	COND	SW-846 9050A - 1996	420	398	398	umhos/cm	29.9	358 to 438	0.736	ACCEPT.	7/26/17	AMG
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	16.1	16.8	17.1	mg/L	1.43	13.3 to 20.1	0.490	ACCEPT.	8/8/17	RKP

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	16.1	16.8	17.1	mg/L	1.43	13.3 to 20.1	0.490	ACCEPT.	8/8/17	RKP
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	104	99.7	104	mg/L	9.90	88.4 to 120	0.434	ACCEPT.	8/3/17	RKP
1505	Total Alkalinity (CaCO3)	20045607	TITR	SM 2320 B - 1997	106	99.7	104	mg/L	9.90	88.4 to 120	0.636	ACCEPT.	8/1/17	AMG
1955	Total Dissolved Solids (TDS)	20050402	GRAV	SM 2540 C - 1997	340	345	345	mg/L	38.2	300 to 390	0.131	ACCEPT.	8/2/17	AMG

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	103	101	98.5	mg/L	5.47	83.7 to 113	0.366	ACCEPT.	8/2/17	JLH
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	103	101	98.5	mg/L	5.47	83.7 to 113	0.366	ACCEPT.	8/2/17	JLH
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	256	247	246	mg/L	12.4	209 to 283	0.726	ACCEPT.	8/2/17	JLH
1550	Calcium Hardness (CaCO3)	20046600	CALC	SM 2340 B - 1997	256	247	246	mg/L	12.4	209 to 283	0.726	ACCEPT.	8/2/17	JLH
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	256	247	246	mg/L	12.4	209 to 283	0.726	ACCEPT.	8/2/17	JLH
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	32.8	33.0	34.0	mg/L	2.56	28.9 to 39.1	0.0781	ACCEPT.	8/2/17	JLH
1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	32.8	33.0	34.0	mg/L	2.56	28.9 to 39.1	0.0781	ACCEPT.	8/2/17	JLH
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	391	378	386	mg/L	38.2	328 to 444	0.340	ACCEPT.	8/2/17	JLH
1755	Total Hardness (CaCO3)	20046600	CALC	SM 2340 B - 1997	391	378	386	mg/L	38.2	328 to 444	0.340	ACCEPT.	8/2/17	JLH
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	391	378	386	mg/L	38.2	328 to 444	0.340	ACCEPT.	8/2/17	JLH

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109404	ISE	SM 4500-NH3 D - 1997	4.76	5.86	5.75	mg/L	0.652	4.48 to 7.04	1.69	ACCEPT.	8/11/17	RKP
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	10.2	10.1	10.5	mg/L	1.26	8.69 to 12.3	0.0794	ACCEPT.	8/8/17	RKP
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	10.2	10.1	10.5	mg/L	1.26	8.69 to 12.3	0.0794	ACCEPT.	8/8/17	RKP
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	10.2	10.4	10.5	mg/L	0.536	8.73 to 12.2	0.373	ACCEPT.	8/8/17	RKP
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	10.2	10.4	10.5	mg/L	0.536	8.73 to 12.2	0.373	ACCEPT.	8/8/17	RKP
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	3.37	3.81	3.58	mg/L	0.664	3.04 to 4.12	0.663	ACCEPT.	8/8/17	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	3.37	3.81	3.58	mg/L	0.664	3.04 to 4.12	0.663	ACCEPT.	8/8/17	RKP

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	1.58	1.62	1.48	mg/L	0.864	1.18 to 1.78	0.0463	ACCEPT.	7/27/17	AMG
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E - 1999	1.58	1.62	1.48	mg/L	0.864	1.18 to 1.78	0.0463	ACCEPT.	7/27/17	AMG
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	2.00	2.69	2.43	ug/L	0.872	0.945 to 3.50	0.791	ACCEPT.	7/27/17	BDA
8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	2.00	2.69	2.43	ug/L	0.872	0.945 to 3.50	0.791	ACCEPT.	7/27/17	BDA
8900	Arochlor 1248	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8905	Arochlor 1254	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8910	Arochlor 1260	10103603	GC-ECD	EPA 608	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	<0.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8912	Arochlor 1262	10103603	GC-ECD	EPA 608	< 1.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8913	Arochlor 1268	10103603	GC-ECD	EPA 608	< 1.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	< 1.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	BDA

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10107401	GC-MS	EPA 625	90.2	86.0	109	ug/L	25.5	39.9 to 135	0.165	ACCEPT	7/27/17	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	90.2	86.0	109	ug/L	25.5	39.9 to 135	0.165	ACCEPT.	7/27/17	RDK
6840	2,4,6-Trichlorophenol	10107401	GC-MS	EPA 625	133	121	156	ug/L	36.9	57.8 to 190	0.325	ACCEPT.	7/27/17	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	133	121	156	ug/L	36.9	57.8 to 190	0.325	ACCEPT.	7/27/17	RDK

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6000	2,4-Dichlorophenol	10107401	GC-MS	EPA 625	86.1	84.3	109	ug/L	24.7	36.0 to 130	0.154	ACCEPT.	7/27/17	RDK
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	86.1	84.3	109	ug/L	24.7	36.0 to 130	0.154	ACCEPT.	7/27/17	RDK
6130	2,4-Dimethylphenol	10107401	GC-MS	EPA 625	97.5	98.7	124	ug/L	31.1	34.7 to 155	0.0386	ACCEPT.	7/27/17	RDK
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	97.5	98.7	124	ug/L	31.1	34.7 to 155	0.0386	ACCEPT.	7/27/17	RDK
6175	2,4-Dinitrophenol	10107401	GC-MS	EPA 625	192	156	184	ug/L	46.3	18.4 to 243	0.778	ACCEPT.	7/27/17	RDK
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	192	156	184	ug/L	46.3	18.4 to 243	0.778	ACCEPT.	7/27/17	RDK
6005	2,6-Dichlorophenol	10107401	GC-MS	EPA 625	47.0	40.2	58.0	ug/L	14.8	20.0 to 74.6	0.459	ACCEPT.	7/27/17	RDK
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	47.0	40.2	58.0	ug/L	14.8	20.0 to 74.6	0.459	ACCEPT.	7/27/17	RDK
5800	2-Chlorophenol	10107401	GC-MS	EPA 625	130	116	169	ug/L	40.0	47.6 to 201	0.350	ACCEPT.	7/27/17	RDK
5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	130	116	169	ug/L	40.0	47.6 to 201	0.350	ACCEPT.	7/27/17	RDK
6360	2-Methyl-4,6-Dinitrophenol	10107401	GC-MS	EPA 625	128	105	119	ug/L	28.8	37.6 to 163	0.799	ACCEPT.	7/27/17	RDK
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	128	105	119	ug/L	28.8	37.6 to 163	0.799	ACCEPT.	7/27/17	RDK
6400	2-Methylphenol	10107401	GC-MS	EPA 625	45.8	42.2	58.8	ug/L	12.3	13.7 to 70.9	0.293	ACCEPT.	7/27/17	RDK
6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	45.8	42.2	58.8	ug/L	12.3	13.7 to 70.9	0.293	ACCEPT.	7/27/17	RDK
6490	2-Nitrophenol	10107401	GC-MS	EPA 625	99.6	93.6	123	ug/L	25.3	40.7 to 149	0.237	ACCEPT.	7/27/17	RDK
6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	99.6	93.6	123	ug/L	25.3	40.7 to 149	0.237	ACCEPT.	7/27/17	RDK
5700	4-Chloro-3-methylphenol	10107401	GC-MS	EPA 625	68.9	66.9	86.0	ug/L	18.3	32.6 to 106	0.109	ACCEPT.	7/27/17	RDK
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	68.9	66.9	86.0	ug/L	18.3	32.6 to 106	0.109	ACCEPT.	7/27/17	RDK
6410	4-Methylphenol	10107401	GC-MS	EPA 625	124	124	182	ug/L	43.1	18.2 to 233	0	ACCEPT.	7/27/17	RDK
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	124	124	182	ug/L	43.1	18.2 to 233	0	ACCEPT.	7/27/17	RDK
6500	4-Nitrophenol	10107401	GC-MS	EPA 625	94.0	85.7	172	ug/L	34.5	17.2 to 231	0.241	ACCEPT.	7/27/17	RDK
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	94.0	85.7	172	ug/L	34.5	17.2 to 231	0.241	ACCEPT.	7/27/17	RDK
6605	Pentachlorophenol	10107401	GC-MS	EPA 625	41.5	46.0	52.0	ug/L	14.3	14.4 to 72.2	0.315	ACCEPT.	7/27/17	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	41.5	46.0	52.0	ug/L	14.3	14.4 to 72.2	0.315	ACCEPT.	7/27/17	RDK
6625	Phenol	10107401	GC-MS	EPA 625	65.9	69.1	163	ug/L	34.4	16.3 to 218	0.0930	ACCEPT.	7/27/17	RDK
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	65.9	69.1	163	ug/L	34.4	16.3 to 218	0.0930	ACCEPT.	7/27/17	RDK
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10103603	GC-ECD	EPA 608	7.43	6.77	6.88	ug/L	2.07	2.97 to 9.55	0.319	ACCEPT	7/25/17	BDA
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	7.43	6.77	6.88	ug/L	2.07	2.97 to 9.55	0.319	ACCEPT.	7/25/17	BDA

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10103603	GC-ECD	EPA 608	43.5	41.2	48.6	ug/L	12.7	10.6 to 71.7	0.181	ACCEPT.	7/25/17	BDA
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	43.5	41.2	48.6	ug/L	12.7	10.6 to 71.7	0.181	ACCEPT.	7/25/17	BDA

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	4.32	5.36	6.60	ug/L	0.889	1.44 to 9.58	1.17	ACCEPT.	7/26/17	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	5.58	6.93	8.18	ug/L	1.56	0.816 to 12.5	0.865	ACCEPT.	7/26/17	RDK
8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	6.42	6.43	7.16	ug/L	1.96	1.70 to 10.1	0.0051	ACCEPT.	7/26/17	RDK
8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	3.42	3.65	4.13	ug/L	0.640	1.01 to 6.19	0.359	ACCEPT.	7/26/17	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	< 10.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/26/17	RDK
8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	< 10.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/26/17	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	< 10.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/26/17	RDK
8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT	7/26/17	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	2770	2751	3980	ug/L	1299	1020 to 4980	0.0146	ACCEPT.	7/24/17	BDA

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1890	2648	2760	ug/L	864	1050 to 4840	0.877	ACCEPT.	8/1/17	RDK

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10107207	GC-MS	EPA 624	126	117	115	ug/L	7.48	74.5 to 155	1.20	ACCEPT.	7/28/17	MES
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	126	117	115	ug/L	7.48	74.5 to 155	1.20	ACCEPT.	7/28/17	MES
5160	1,1,1-Trichloroethane	10107207	GC-MS	EPA 624	81.0	73.7	77.8	ug/L	13.4	46.7 to 109	0.545	ACCEPT.	7/28/17	MES
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	81.0	73.7	77.8	ug/L	13.4	46.7 to 109	0.545	ACCEPT	7/28/17	MES
5110	1,1,2,2-Tetrachloroethane	10107207	GC-MS	EPA 624	56.0	51.8	50.5	ug/L	8.87	32.8 to 68.1	0.474	ACCEPT	7/28/17	MES
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	56.0	51.8	50.5	ug/L	8.87	32.8 to 68.1	0.474	ACCEPT.	7/28/17	MES
5165	1,1,2-Trichloroethane	10107207	GC-MS	EPA 624	77.9	74.4	71.4	ug/L	3.90	50.0 to 92.8	0.897	ACCEPT.	7/28/17	MES
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	77.9	74.4	71.4	ug/L	3.90	50.0 to 92.8	0.897	ACCEPT.	7/28/17	MES
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	< 5.00	0	<6.5	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	< 5.00	0	<6.5	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	57.0	50 9	56.7	ug/L	6.52	24.8 to 86.0	0.936	ACCEPT.	7/28/17	MES
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	57.0	50.9	56.7	ug/L	6.52	24.8 to 86.0	0.936	ACCEPT.	7/28/17	MES
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	126	129	138	ug/L	14.4	62.6 to 188	0.208	ACCEPT.	7/28/17	MES
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	126	129	138	ug/L	14.4	62.6 to 188	0.208	ACCEPT.	7/28/17	MES
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	123	107	117	ug/L	16.0	76.1 to 158	1.00	ACCEPT.	7/28/17	MES
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	123	107	117	ug/L	16.0	76.1 to 158	1.00	ACCEPT.	7/28/17	MES
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	42.3	39.4	40.8	ug/L	5.93	26.5 to 55.1	0.489	ACCEPT.	7/28/17	MES
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	42.3	39.4	40.8	ug/L	5.93	26.5 to 55.1	0.489	ACCEPT.	7/28/17	MES
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	25.4	24.4	23.4	ug/L	2.88	14.9 to 32.2	0.347	ACCEPT.	7/28/17	MES
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	25.4	24.4	23.4	ug/L	2.88	14.9 to 32.2	0.347	ACCEPT.	7/28/17	MES
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	< 6.20	0	<6.2	ug/L	0	0.00 to 0.00	n/a	ACCEPT	7/28/17	MES
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	< 6.20	0	<6.2	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	< 9.00	0	<9	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	112	112	111	ug/L	11 1	77.7 to 144	0	ACCEPT.	7/28/17	MES
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	112	112	111	ug/L	11.1	77.7 to 144	0	ACCEPT.	7/28/17	MES
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	101	91.6	86.7	ug/L	7.45	61.6 to 112	1.26	ACCEPT.	7/28/17	MES
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	101	91.6	86.7	ug/L	7.45	61.6 to 112	1.26	ACCEPT.	7/28/17	MES
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	76.4	72.6	75.4	ug/L	4.60	52.8 to 98.0	0.826	ACCEPT.	7/28/17	MES
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	76.4	72 6	75.4	ug/L	4.60	52.8 to 98.0	0.826	ACCEPT.	7/28/17	MES
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	109	107	112	ug/L	10.7	78.4 to 146	0.187	ACCEPT.	7/28/17	MES
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	109	107	112	ug/L	10.7	78.4 to 146	0.187	ACCEPT.	7/28/17	MES
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	21.7	21.4	21.7	ug/L	2.02	15.2 to 28.1	0.149	ACCEPT.	7/28/17	MES
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	21.7	21.4	21.7	ug/L	2.02	15.2 to 28.1	0.149	ACCEPT.	7/28/17	MES
4410	2-Butanone	10107207	GC-MS	EPA 624	< 25.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	< 25.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	< 10.0	0	<20	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846 8260B - 1996	< 10.0	0	<20	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4860	2-Hexanone	10107207	GC-MS	EPA 624	< 4.40	0	<4.4	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4860	2-Hexanone	10184802	GC-MS	SW-846 8260B - 1996	< 4.40	0	<4.4	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4995	4-Methyl-2-pentanone	10107207	GC-MS	EPA 624	< 2.00	0	<2	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846 8260B - 1996	< 2.00	0	<2	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4315	Acetone	10107207	GC-MS	EPA 624	151	133	148	ug/L	21.4	39.3 to 230	0.841	ACCEPT.	7/28/17	MES
4315	Acetone	10184802	GC-MS	SW-846 8260B - 1996	151	133	148	ug/L	21.4	39.3 to 230	0.841	ACCEPT.	7/28/17	MES
4325	Acrolein	10107207	GC-MS	EPA 624	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4325	Acrolein	10184802	GC-MS	SW-846 8260B - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4340	Acrylonitrile	10107207	GC-MS	EPA 624	< 2.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4340	Acrylonitrile	10184802	GC-MS	SW-846 8260B - 1996	< 2.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4375	Benzene	10107207	GC-MS	EPA 624	23.7	23.0	25.0	ug/L	1.63	17.5 to 32.5	0.429	ACCEPT.	7/28/17	MES
4375	Benzene	10184802	GC-MS	SW-846 8260B - 1996	23.7	23.0	25.0	ug/L	1.63	17.5 to 32.5	0.429	ACCEPT.	7/28/17	MES
4395	Bromodichloromethane	10107207	GC-MS	EPA 624	48.5	47.4	44.3	ug/L	3.68	26.6 to 62.0	0.299	ACCEPT.	7/28/17	MES
4395	Bromodichloromethane	10184802	GC-MS	SW-846 8260B - 1996	48.5	47.4	44.3	ug/L	3.68	26.6 to 62.0	0.299	ACCEPT.	7/28/17	MES
4400	Bromoform	10107207	GC-MS	EPA 624	53.9	51.7	46.0	ug/L	6.34	27.6 to 64.4	0.347	ACCEPT.	7/28/17	MES
4400	Bromoform	10184802	GC-MS	SW-846 8260B - 1996	53.9	51.7	46.0	ug/L	6.34	27.6 to 64.4	0.347	ACCEPT.	7/28/17	MES
4950	Bromomethane	10107207	GC-MS	EPA 624	72.9	72.2	80.3	ug/L	21.9	32.1 to 129	0.0320	ACCEPT.	7/28/17	MES
4950	Bromomethane	10184802	GC-MS	SW-846 8260B - 1996	72.9	72.2	80.3	ug/L	21.9	32.1 to 129	0.0320	ACCEPT.	7/28/17	MES
4450	Carbon disulfide	10107207	GC-MS	EPA 624	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4450	Carbon disulfide	10184802	GC-MS	SW-846 8260B - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4455	Carbon tetrachloride	10107207	GC-MS	EPA 624	< 7.70	0	<7.7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4455	Carbon tetrachloride	10184802	GC-MS	SW-846 8260B - 1996	< 7.70	0	<7.7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4475	Chlorobenzene	10107207	GC-MS	EPA 624	< 7.00	0	<7.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4475	Chlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	< 7.00	0	<7.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4485	Chloroethane	10107207	GC-MS	EPA 624	82.8	74.7	72.1	ug/L	11.0	28.8 to 115	0.736	ACCEPT.	7/28/17	MES
4485	Chloroethane	10184802	GC-MS	SW-846 8260B - 1996	82.8	74.7	72.1	ug/L	11.0	28.8 to 115	0.736	ACCEPT.	7/28/17	MES
4505	Chloroform	10107207	GC-MS	EPA 624	29.2	26.4	23.3	ug/L	2.95	16.3 to 30.3	0.949	ACCEPT.	7/28/17	MES
4505	Chloroform	10184802	GC-MS	SW-846 8260B - 1996	29.2	26.4	23.3	ug/L	2.95	16.3 to 30.3	0.949	ACCEPT.	7/28/17	MES
4960	Chloromethane	10107207	GC-MS	EPA 624	86.5	82.9	80.1	ug/L	22.0	32.0 to 128	0.164	ACCEPT.	7/28/17	MES
4960	Chloromethane	10184802	GC-MS	SW-846 8260B - 1996	86.5	82.9	80.1	ug/L	22.0	32.0 to 128	0.164	ACCEPT.	7/28/17	MES
4645	cis-1,2-Dichloroethene	10107207	GC-MS	EPA 624	< 7.00	0	<7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	< 7.00	0	<7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4680	cis-1,3-Dichloropropene	10107207	GC-MS	EPA 624	< 6.50	0	<6.5	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	< 6.50	0	<6.5	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4575	Dibromochloromethane	10107207	GC-MS	EPA 624	72.5	69.5	71.1	ug/L	4.47	42.6 to 99.5	0.671	ACCEPT.	7/28/17	MES
4575	Dibromochloromethane	10184802	GC-MS	SW-846 8260B - 1996	72.5	69.5	71.1	ug/L	4.47	42.6 to 99.5	0.671	ACCEPT.	7/28/17	MES
4595	Dibromomethane	10107207	GC-MS	EPA 624	71.5	76.1	71.8	ug/L	10.2	46.6 to 96.9	0.451	ACCEPT.	7/28/17	MES
4595	Dibromomethane	10184802	GC-MS	SW-846 8260B - 1996	71.5	76.1	71.8	ug/L	10.2	46.6 to 96.9	0.451	ACCEPT.	7/28/17	MES
4625	Dichlorodifluoromethane	10107207	GC-MS	EPA 624	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846 8260B - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
4765	Ethylbonzene	10107207	GC-MS	EPA 624	36.9	34.8	36.8	ug/L	3.69	25.8 to 47.9	0.569	ACCEPT.	7/28/17	MES
4765	Ethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	36.9	34.8	36.8	ug/L	3.69	25.8 to 47.9	0.569	ACCEPT.	7/28/17	MES
4585	Ethylene dibromide	10107207	GC-MS	EPA 624	116	115	118	ug/L	6.93	76.6 to 159	0.144	ACCEPT.	7/28/17	MES
4585	Ethylene dibromide	10184802	GC-MS	SW-846 8260B - 1996	116	115	118	ug/L	6.93	76.6 to 159	0.144	ACCEPT.	7/28/17	MES
4975	Methylene chloride	10107207	GC-MS	EPA 624	< 6.00	0	<6.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4975	Methylene chloride	10184802	GC-MS	SW-846 8260B - 1996	< 6.00	0	<6.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5000	MTBE	10107207	GC-MS	EPA 624	141	124	128	ug/L	16.0	87.0 to 174	1.06	ACCEPT.	7/28/17	MES
5000	MTBE	10184802	GC-MS	SW-846 8260B - 1996	141	124	128	ug/L	16.0	87.0 to 174	1.06	ACCEPT.	7/28/17	MES
5005	Naphthalene	10107207	GC-MS	EPA 624	103	101	98.6	ug/L	17.9	46.3 to 130	0.112	ACCEPT.	7/28/17	MES
5005	Naphthalene	10184802	GC-MS	SW-846 8260B - 1996	103	101	98.6	ug/L	17.9	46.3 to 130	0.112	ACCEPT.	7/28/17	MES
5100	Styrene	10107207	GC-MS	EPA 624	38.5	37.5	35.1	ug/L	3.96	22.8 to 47.4	0.253	ACCEPT.	7/28/17	MES
5100	Styrene	10184802	GC-MS	SW-846 8260B - 1996	38.5	37.5	35.1	ug/L	3.96	22.8 to 47.4	0.253	ACCEPT.	7/28/17	MES
5115	Tetrachloroethene	10107207	GC-MS	EPA 624	< 4.30	0	<4.3	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5115	Tetrachloroethene	10184802	GC-MS	SW-846 8260B - 1996	< 4.30	0	<4.3	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5140	Toluene	10107207	GC-MS	EPA 624	65.1	63.0	66.9	ug/L	4.13	46.8 to 87.0	0.508	ACCEPT.	7/28/17	MES
5140	Toluene	10184802	GC-MS	SW-846 8260B - 1996	65.1	63.0	66.9	ug/L	4.13	46.8 to 87.0	0.508	ACCEPT.	7/28/17	MES
5240	m+p-Xylene	10107207	GC-MS	EPA 624	132	118	123	ug/L	20.1	73.8 to 172	0.697	ACCEPT.	7/28/17	MES
5240	m+p-Xylene	10184802	GC-MS	SW-846 8260B - 1996	132	118	123	ug/L	20.1	73.8 to 172	0.697	ACCEPT.	7/28/17	MES
5250	o-Xylene	10107207	GC-MS	EPA 624	76.1	69.7	72.9	ug/L	9.58	43.7 to 102	0.668	ACCEPT.	7/28/17	MES
5250	o-Xylene	10184802	GC-MS	SW-846 8260B - 1996	76.1	69.7	72.9	ug/L	9.58	43.7 to 102	0.668	ACCEPT.	7/28/17	MES
5260	Total Xylenes	10107207	GC-MS	EPA 624	208	193	196	ug/L	12.7	118 to 274	1.18	ACCEPT.	7/28/17	MES
5260	Total Xylenes	10184802	GC-MS	SW-846 8260B - 1996	208	193	196	ug/L	12.7	118 to 274	1.18	ACCEPT.	7/28/17	MES
4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	42.4	37.6	39.2	ug/L	6.38	23.5 to 54.9	0.752	ACCEPT.	7/28/17	MES
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	42.4	37.6	39.2	ug/L	6.38	23.5 to 54.9	0.752	ACCEPT.	7/28/17	MES
4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	69.8	69.3	67.8	ug/L	5.46	44.1 to 91.5	0.0916	ACCEPT.	7/28/17	MES
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	69.8	69.3	67.8	ug/L	5.46	44.1 to 91.5	0.0916	ACCEPT.	7/28/17	MES
5170	Trichloroethene	10107207	GC-MS	EPA 624	52.5	48.5	50.6	ug/L	7.85	32.1 to 66.3	0.510	ACCEPT.	7/28/17	MES
5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	52.5	48.5	50.6	ug/L	7.85	32.1 to 66.3	0.510	ACCEPT.	7/28/17	MES
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	67.0	65.5	64.3	ug/L	7.27	25.7 to 103	0.206	ACCEPT.	7/28/17	MES
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	67.0	65.5	64.3	ug/L	7.27	25.7 to 103	0.206	ACCEPT.	7/28/17	MES
5225	Vinyl acetate	10107207	GC-MS	EPA 624	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	MES
5235	Vinyl chloride	10107207	GC-MS	EPA 624	64.1	62.6	64.1	ug/L	11.8	25.6 to 103	0.127	ACCEPT.	7/28/17	MES
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	64.1	62.6	64.1	ug/L	11.8	25.6 to 103	0.127	ACCEPT.	7/28/17	MES
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	128	117	158	ug/L	40.5	32.0 to 185	0.272	ACCEPT.	7/27/17	RDK
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	128	117	158	ug/L	40.5	32.0 to 185	0.272	ACCEPT.	7/27/17	RDK
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	< 6.30	0	<6.3	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	< 6.30	0	<6.3	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	54.6	46.8	72.3	ug/L	16.9	7.26 to 86.3	0.462	ACCEPT.	7/27/17	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	54.6	46.8	72.3	ug/L	16.9	7.26 to 86.3	0.462	ACCEPT.	7/27/17	RDK
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	< 5.00	0	<3.1	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	< 5.00	0	<3.1	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	68.1	59.8	92.3	ug/L	22.8	9.23 to 103	0.364	ACCEPT.	7/27/17	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	68.1	59.8	92.3	ug/L	22.8	9.23 to 103	0.364	ACCEPT.	7/27/17	RDK
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	37.8	30.8	39.2	ug/L	10.5	13.5 to 51.8	0.667	ACCEPT.	7/27/17	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	37.8	30.8	39.2	ug/L	10.5	13.5 to 51.8	0.667	ACCEPT.	7/27/17	RDK
6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	48.0	41.7	53.6	ug/L	9.95	21.8 to 84.9	0.633	ACCEPT.	7/27/17	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	48.0	41.7	53.6	ug/L	9.95	21.8 to 84.9	0.633	ACCEPT.	7/27/17	RDK
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	< 5.00	0	<2.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	< 5.00	0	<2.0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	57.7	70.6	76.8	ug/L	19.6	15.3 to 122	0.658	ACCEPT.	7/28/17	RDK
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	57.7	70.6	76.8	ug/L	19.6	15.3 to 122	0.658	ACCEPT.	7/28/17	RDK
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	169	147	193	ug/L	35.2	79.5 to 238	0.625	ACCEPT.	7/27/17	RDK
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	169	147	193	ug/L	35.2	79.5 to 238	0.625	ACCEPT.	7/27/17	RDK
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	38.1	34.9	42.6	ug/L	8.93	17.6 to 55.2	0.358	ACCEPT.	7/27/17	RDK
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	38.1	34.9	42.6	ug/L	8.93	17.6 to 55.2	0.358	ACCEPT.	7/27/17	RDK
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	< 20.0	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK
5500	Acenaphthene	10107401	GC-MS	EPA 625	85.3	75.7	95.2	ug/L	20.0	33.5 to 116	0.480	ACCEPT.	7/27/17	RDK
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	85.3	75.7	95.2	ug/L	20.0	33.5 to 116	0.480	ACCEPT.	7/27/17	RDK
5505	Acenaphthylene	10107401	GC-MS	EPA 625	82.8	80.0	94.8	ug/L	28.2	33.2 to 118	0.0993	ACCEPT.	7/27/17	RDK
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	82.8	80.0	94.8	ug/L	28.2	33.2 to 118	0.0993	ACCEPT.	7/27/17	RDK
5545	Aniline	10107401	GC-MS	EPA 625	< 4.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	< 4.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5555	Anthracene	10107401	GC-MS	EPA 625	140	126	150	ug/L	30.5	64.2 to 179	0.459	ACCEPT.	7/27/17	RDK
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	140	126	150	ug/L	30.5	64.2 to 179	0.459	ACCEPT.	7/27/17	RDK
5595	Benzidine	10107401	GC-MS	EPA 625	< 51.3	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	< 51.3	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/28/17	RDK
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	158	143	171	ug/L	42.8	82.3 to 205	0.350	ACCEPT.	7/27/17	RDK
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	158	143	171	ug/L	42.8	82.3 to 205	0.350	ACCEPT.	7/27/17	RDK
5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	116	96.0	123	ug/L	29.8	44.9 to 157	0.671	ACCEPT.	7/27/17	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	116	96.0	123	ug/L	29.8	44.9 to 157	0.671	ACCEPT.	7/27/17	RDK
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	21.4	20.8	23.0	ug/L	4.45	8.66 to 30.0	0.135	ACCEPT.	7/27/17	RDK
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	21.4	20.8	23.0	ug/L	4.45	8.66 to 30.0	0.135	ACCEPT.	7/27/17	RDK
5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	57.3	62.3	75.0	ug/L	18.8	28.4 to 98.5	0.266	ACCEPT.	7/27/17	RDK
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	57.3	62.3	75.0	ug/L	18.8	28.4 to 98.5	0.266	ACCEPT.	7/27/17	RDK
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	177	145	173	ug/L	44.8	44.3 to 245	0.714	ACCEPT.	7/27/17	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	177	145	173	ug/L	44.8	44.3 to 245	0.714	ACCEPT.	7/27/17	RDK
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	< 3.90	0	<3.9	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	< 3.90	0	<3.9	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	112	98.2	122	ug/L	26.8	31.6 to 147	0.515	ACCEPT.	7/27/17	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	112	98.2	122	ug/L	26.8	31.6 to 147	0.515	ACCEPT.	7/27/17	RDK
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	95.8	88.1	114	ug/L	25.9	31.6 to 139	0.297	ACCEPT.	7/27/17	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	95.8	88.1	114	ug/L	25.9	31.6 to 139	0.297	ACCEPT.	7/27/17	RDK
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	166	145	185	ug/L	45.4	65.0 to 238	0.463	ACCEPT.	7/27/17	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	166	145	185	ug/L	45.4	65.0 to 238	0.463	ACCEPT.	7/27/17	RDK
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	121	106	133	ug/L	35.8	39.8 to 182	0.419	ACCEPT.	7/27/17	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	121	106	133	ug/L	35.8	39.8 to 182	0.419	ACCEPT	7/27/17	RDK
5680	Carbazole	10107401	GC-MS	EPA 625	168	148	143	ug/L	50.1	14.3 to 318	0.399	ACCEPT.	7/27/17	RDK
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	168	148	143	ug/L	50.1	14.3 to 318	0.399	ACCEPT.	7/27/17	RDK
5855	Chrysene	10107401	GC-MS	EPA 625	144	140	155	ug/L	25.7	65.7 to 193	0.156	ACCEPT.	7/27/17	RDK
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	144	140	155	ug/L	25.7	65.7 to 193	0.156	ACCEPT.	7/27/17	RDK
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	175	155	184	ug/L	50.3	65.7 to 236	0.398	ACCEPT.	7/27/17	RDK
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	175	155	184	ug/L	50.3	65.7 to 236	0.398	ACCEPT.	7/27/17	RDK
5905	Dibenzofuran	10107401	GC-MS	EPA 625	55.1	50.5	63.9	ug/L	12.9	24.6 to 75.5	0.357	ACCEPT.	7/27/17	RDK
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	55.1	50.5	63.9	ug/L	12.9	24.6 to 75.5	0.357	ACCEPT.	7/27/17	RDK
6070	Diethyl phthalate	10107401	GC-MS	EPA 625	154	134	171	ug/L	40.4	32.8 to 230	0.495	ACCEPT.	7/27/17	RDK
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	154	134	171	ug/L	40.4	32.8 to 230	0.495	ACCEPT.	7/27/17	RDK
6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	76.9	69.1	95.1	ug/L	27.6	9.51 to 139	0.283	ACCEPT.	7/27/17	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	76.9	69.1	95.1	ug/L	27.6	9.51 to 139	0.283	ACCEPT.	7/27/17	RDK
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	< 15.8	0	<15.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	< 15.8	0	<15.8	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	64.7	54.2	66.1	ug/L	17.6	19.1 to 94.9	0.597	ACCEPT.	7/27/17	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	64.7	54.2	66.1	ug/L	17.6	19.1 to 94.9	0.597	ACCEPT.	7/27/17	RDK
6265	Fluoranthene	10107401	GC-MS	EPA 625	< 15.6	0	<15.6	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	< 15.6	0	<15.6	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6270	Fluorene	10107401	GC-MS	EPA 625	70.1	62.3	75.3	ug/L	16.2	31.7 to 90.5	0.481	ACCEPT.	7/27/17	RDK
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	70.1	62.3	75.3	ug/L	16.2	31.7 to 90.5	0.481	ACCEPT.	7/27/17	RDK
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	172	151	180	ug/L	37.5	80.5 to 215	0.560	ACCEPT.	7/27/17	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	172	151	180	ug/L	37.5	80.5 to 215	0.560	ACCEPT.	7/27/17	RDK
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	117	100	136	ug/L	36.0	16.5 to 160	0.472	ACCEPT.	7/27/17	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	117	100	136	ug/L	36.0	16.5 to 160	0.472	ACCEPT.	7/27/17	RDK
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	93.7	80.8	136	ug/L	41.2	13.6 to 177	0.313	ACCEPT.	7/27/17	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	93.7	80.8	136	ug/L	41.2	13.6 to 177	0.313	ACCEPT.	7/27/17	RDK
4840	Hexachloroethane	10107401	GC-MS	EPA 625	128	114	180	ug/L	38.7	18.0 to 198	0.362	ACCEPT.	7/27/17	RDK
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	128	114	180	ug/L	38.7	18.0 to 198	0.362	ACCEPT.	7/27/17	RDK
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	75.6	81.5	99.9	ug/L	26.7	29.0 to 123	0.221	ACCEPT.	7/27/17	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	75.6	81.5	99.9	ug/L	26.7	29.0 to 123	0.221	ACCEPT.	7/27/17	RDK
6320	Isophorone	10107401	GC-MS	EPA 625	< 7.10	0	<7.1	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	< 7.10	0	<7.1	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5005	Naphthalene	10107401	GC-MS	EPA 625	43.8	42.3	58.0	ug/L	14.0	13.7 to 71.6	0.107	ACCEPT.	7/27/17	RDK
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	43.8	42.3	58.0	ug/L	14.0	13.7 to 71.6	0.107	ACCEPT.	7/27/17	RDK
5015	Nitrobenzene	10107401	GC-MS	EPA 625	34.2	31.3	40.0	ug/L	9.18	12.8 to 48.9	0.316	ACCEPT.	7/27/17	RDK
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	34.2	31.3	40.0	ug/L	9.18	12.8 to 48.9	0.316	ACCEPT.	7/27/17	RDK
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	73.4	64.0	117	ug/L	26.0	11.7 to 132	0.362	ACCEPT.	7/27/17	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	73.4	64.0	117	ug/L	26.0	11.7 to 132	0.362	ACCEPT.	7/27/17	RDK
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	35.9	32.2	40.0	ug/L	9.56	12.7 to 50.5	0.387	ACCEPT.	7/27/17	RDK
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846 8270C - 1996	35.9	32.2	40.0	ug/L	9.56	12.7 to 50.5	0.387	ACCEPT.	7/27/17	RDK
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	< 5.60	0	<5.6	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846 8270C - 1996	< 5.60	0	<5.6	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6615	Phenanthrene	10107401	GC-MS	EPA 625	< 4.70	0	<4.7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6615	Phenanthrene	10185805	GC-MS	SW-846 8270C - 1996	< 4.70	0	<4.7	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6665	Pyrene	10107401	GC-MS	EPA 625	70.5	62.0	76.9	ug/L	20.4	31.7 to 101	0.417	ACCEPT.	7/27/17	RDK
6665	Pyrene	10185805	GC-MS	SW-846 8270C - 1996	70.5	62.0	76.9	ug/L	20.4	31.7 to 101	0.417	ACCEPT	7/27/17	RDK
5095	Pyridine	10107401	GC-MS	EPA 625	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
5095	Pyridine	10185805	GC-MS	SW-846 8270C - 1996	< 5.00	0	0	ug/L	0	0.00 to 0.00	n/a	ACCEPT.	7/27/17	RDK
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												
6420	1,4-Naphthoquinone	-- Not Reported --												
6425	1-Naphthylamine	-- Not Reported --												
6430	2-Naphthylamine	-- Not Reported --												
6510	4-Nitroquinoline-1-oxide	-- Not Reported --												
6555	N-Nitrosomorpholine	-- Not Reported --												
6560	N-Nitrosopiperidine	-- Not Reported --												
6565	N-Nitrosopyrrolidine	-- Not Reported --												
6570	5-Nitro-o-toluidine	-- Not Reported --												
6580	n-Octadecane	-- Not Reported --												
6590	Pentachlorobenzene	-- Not Reported --												
6595	Pentachlorohexane	-- Not Reported --												
6600	Pentachloronitrobenzene	-- Not Reported --												
6610	Phenacetin	-- Not Reported --												
6650	Pronamide	-- Not Reported --												
6685	Safrole	-- Not Reported --												
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --												
7180	Caprolactam	-- Not Reported --												
6703	1,1-Biphenyl	-- Not Reported --												
7065	Atrazine	-- Not Reported --												
5570	Benzaldehyde	-- Not Reported --												
6885	1,3,5-Trinitrobenzene	-- Not Reported --												
7260	Chlorobenzilate	-- Not Reported --												
7405	Diallate	-- Not Reported --												
7475	Dimethoate	-- Not Reported --												

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NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7580	Famphur	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												
7825	Parathion, methyl	-- Not Reported --												
7955	Parathion, ethyl	-- Not Reported --												
7985	Phorate	-- Not Reported --												
8155	Sulfotepp	-- Not Reported --												
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --												
8620	Dinoseb	-- Not Reported --												
8625	Disulfoton	-- Not Reported --												
9363	2,3-Dichloroaniline	-- Not Reported --												
9663	p-Phenylenediamine	-- Not Reported --												

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10103603	GC-ECD	EPA 608	3.53	3.31	4.40	ug/L	0.747	1.55 to 5.92	0.295	ACCEPT.	7/26/17	BDA
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	3.53	3.31	4.40	ug/L	0.747	1.55 to 5.92	0.295	ACCEPT.	7/26/17	BDA
7110	alpha-BHC	10103603	GC-ECD	EPA 608	6.14	6.71	8.27	ug/L	1.27	3.62 to 11.3	0.449	ACCEPT.	7/26/17	BDA
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	6.14	6.71	8.27	ug/L	1.27	3.62 to 11.3	0.449	ACCEPT.	7/26/17	BDA
7115	beta-BHC	10103603	GC-ECD	EPA 608	12.8	11.9	14.7	ug/L	2.39	6.98 to 19.6	0.377	ACCEPT.	7/27/17	BDA
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	12.8	11.9	14.7	ug/L	2.39	6.98 to 19.6	0.377	ACCEPT.	7/27/17	BDA
7355	4,4'-DDD	10103603	GC-ECD	EPA 608	6.52	7.99	9.06	ug/L	1.50	4.57 to 12.3	0.980	ACCEPT.	7/27/17	BDA
7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	6.52	7.99	9.06	ug/L	1.50	4.57 to 12.3	0.980	ACCEPT.	7/27/17	BDA
7360	4,4'-DDE	10103603	GC-ECD	EPA 608	2.90	3.10	3.66	ug/L	0.521	1.56 to 5.02	0.384	ACCEPT.	7/26/17	BDA
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	2.90	3.10	3.66	ug/L	0.521	1.56 to 5.02	0.384	ACCEPT.	7/26/17	BDA
7365	4,4'-DDT	10103603	GC-ECD	EPA 608	7.89	9.07	9.81	ug/L	1.64	3.88 to 14.0	0.720	ACCEPT.	7/26/17	BDA
7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	7.89	9.07	9.81	ug/L	1.64	3.88 to 14.0	0.720	ACCEPT.	7/26/17	BDA
7105	delta-BHC	10103603	GC-ECD	EPA 608	5.70	6.50	7.70	ug/L	1.07	3.33 to 10.8	0.748	ACCEPT.	7/26/17	BDA
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	5.70	6.50	7.70	ug/L	1.07	3.33 to 10.8	0.748	ACCEPT.	7/26/17	BDA
7470	Dieldrin	10103603	GC-ECD	EPA 608	1.87	1.84	2.23	ug/L	0.345	1.11 to 3.03	0.0870	ACCEPT.	7/26/17	BDA
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	1.87	1.84	2.23	ug/L	0.345	1.11 to 3.03	0.0870	ACCEPT.	7/26/17	BDA
7510	Endosulfan I	10103603	GC-ECD	EPA 608	4.18	4.34	5.07	ug/L	0.670	1.83 to 6.87	0.239	ACCEPT.	7/26/17	BDA
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	4.18	4.34	5.07	ug/L	0.670	1.83 to 6.87	0.239	ACCEPT.	7/26/17	BDA
7515	Endosulfan II	10103603	GC-ECD	EPA 608	11.5	10.8	12.6	ug/L	1.99	5.23 to 17.0	0.352	ACCEPT.	7/26/17	BDA
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	11.5	10.8	12.6	ug/L	1.99	5.23 to 17.0	0.352	ACCEPT.	7/26/17	BDA
7520	Endosulfan sulfate	10103603	GC-ECD	EPA 608	6.07	6.98	8.00	ug/L	1.20	3.67 to 11.4	0.758	ACCEPT.	7/26/17	BDA

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	6.07	6.98	8.00	ug/L	1.20	3.67 to 11.4	0.758	ACCEPT.	7/26/17	BDA
7540	Endrin	10103603	GC-ECD	EPA 608	4.22	4.85	6.02	ug/L	0.777	2.64 to 8.56	0.811	ACCEPT.	7/26/17	BDA
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	4.22	4.85	6.02	ug/L	0.777	2.64 to 8.56	0.811	ACCEPT.	7/26/17	BDA
7530	Endrin aldehyde	10103603	GC-ECD	EPA 608	5.79	6.72	8.22	ug/L	1.47	3.05 to 12.0	0.633	ACCEPT.	7/26/17	BDA
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	5.79	6.72	8.22	ug/L	1.47	3.05 to 12.0	0.633	ACCEPT.	7/26/17	BDA
7120	gamma-BHC	10103603	GC-ECD	EPA 608	11.1	10.5	12.5	ug/L	2.02	5.52 to 17.1	0.297	ACCEPT.	7/26/17	BDA
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	11.1	10.5	12.5	ug/L	2.02	5.52 to 17.1	0.297	ACCEPT.	7/26/17	BDA
7685	Heptachlor	10103603	GC-ECD	EPA 608	2.23	1.92	2.40	ug/L	0.354	0.809 to 3.35	0.876	ACCEPT.	7/26/17	BDA
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	2.23	1.92	2.40	ug/L	0.354	0.809 to 3.35	0.876	ACCEPT.	7/26/17	BDA
7690	Heptachlor epoxide	10103603	GC-ECD	EPA 608	2.62	2.72	3.25	ug/L	0.471	1.60 to 4.38	0.212	ACCEPT	7/26/17	BDA
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	2.62	2.72	3.25	ug/L	0.471	1.60 to 4.38	0.212	ACCEPT.	7/26/17	BDA
7810	Methoxychlor	10103603	GC-ECD	EPA 608	4.85	6.41	6.93	ug/L	1.09	2.86 to 10.3	1.43	ACCEPT.	7/27/17	BDA
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	4.85	6.41	6.93	ug/L	1.09	2.86 to 10.3	1.43	ACCEPT.	7/27/17	BDA
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-238

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	84.6	85.3	92.2	ng/L	10.1	71.9 to 111	0.0693	ACCEPT.	8/10/17	NRV

Assigned Values
All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity
Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability
Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits
Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Z-Scores
Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu) / \sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

Reviewed/Approved By: MRH&C Date: 9-10-17

Mark Hammersla, President

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WP-238

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 638/PAR)

Client: Fibertec WP-238 **Project/Document Control Number:** 79892

Sample Number(s): -007 **Date Initiated:** 09/11/17 **Date Due:** 10/02/17

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☒ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

Amenable Cyanide failed on the above mentioned PT sample. The reported concentration was 0.152 mg/L and the assigned concentration was 0.472 mg/L. The study mean value was 0.414 mg/L with an acceptance range of 0.295 to 0.649 mg/L. Please investigate the cause of the failure and a proposed corrective action to prevent the reoccurrence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The PT sample failure was likely due to the high percent difference between the parent sample and its dilution. There was roughly a 45% difference between the parent and its dilution. This may be due to the parent not being mixed well enough before the dilution was made. It could also have been low from errors made while making the dilution such as pipetting errors, etc.

Investigator(s): Sienna McKenna

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

In future the RPD between the parent and the dilution will be checked. If the RPD is greater than 20 % then the dilution should be reprepped and reanalyzed. A copy of the RPD calculating spreadsheet is saved to the computer to facilitate this. Pipet tips will be checked to make sure no air bubbles are present.

QA Approval: Ken Mueller

Follow-Up Required? (If required, reference this Report) **Yes** ☑ **No** ☐ The remedial PT was passed 2/14/18 KM

VI. Approvals:

Managerial: **Area Supervisor:**

Date Closed: 2/14/18

PrepMaster Batch Report

Samples and Dilutions included in this Batch

Prep Batch: **PW17G31B**

Department: **Wet Chemistry** Procedure: **Total Cyanide (ASTM D7511-09)**

Date: **07/31/17** Procedure Code: **CNT00L00**

Reagent(s)

	Description:	Lot Number/ID:
1	Lead Carbonate	29037
2	TA1-M	w-014771
3	TA2	w-014873
4	Base Carrier (0.1N)	w-014861
5	Diluent Modifier (NaOH 1N)	w-014801

Standard(s)

	Description:	Lot Number/ID:
1	CAL STD	W-014836
2	SPK [50_uL]	
3	SPK [100_uL]	W-014809

Consumables

	Description:	Lot Number/ID:
1	Potassium Iodide Test Strip	29213
2	Lead Acetate Test Strip	28854
3	pH Test Strip	34321
4	Challenge Matrix	33620

		Prep ID:	Source ID (Vial):	Initial Mass/Vol: (gram or mL)		Final Vol: (mL)	Current Prep Factor:	Overall Prep Factor*:	Wet Weight?	pH Check	Comment:
1		79892-007.01	79892-007 (1)	10	mL	10	1.00	1.00	No	N/A	CYAN-AME, CYAN-TOT ph>10 no sulfide/chl
	D	79892-007.02	79892-007.01	2	mL	10	5.00	5.00	Yes		
2		80006-001B.03	80006-001B (1)	10	mL	10	1.00	1.00	No	N/A	CYANIDE* ph>10 no sulfide/chlorine
3		80006-001B.02	80006-001B (1)	10	mL	10	1.00	1.00	No	N/A	CYANIDE* ph>10 no sulfide/chlorine
4		80006-001B.01	80006-001B (1)	10	mL	10	1.00	1.00	No	N/A	CYANIDE* ph>10 no sulfide/chlorine

*Overall prep factor based on current prep factor multiplied by the source prep factor. D - Indicates Dilution

Fibertec environmental services

FOR LABORATORY USE ONLY

Quality Control Report
Preparation Batch QC Summary
Total Cyanide - ASTM D7511-09
Aqueous

Batch ID: PW17G31
Page: 1 of 1
Date: 08/01/17

Preparation Batch: PW17G31B **Preparation Date: 07/31/17**

	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
Parameter	Result µg/L	PQL µg/L	Q	Result µg/L	Spike µg/L	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
1. Cyanide	U	5.00		92.9	100.0	93	84 - 116		93	0	12		MB-1	LCS-1	LCD-1
2. Cyanide, Amenable	U	5.00		92.9	100.0	93	84 - 116		93	0	12		MB-1	LCS-1	LCD-1
3. Cyanide, Total	U	5.00		92.9	100.0	93	84 - 116		93	0	12		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.
***:** Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	WQ17G31A	07/31/17 12:52
LCS-1	WQ17G31A	07/31/17 12:55
LCD-1	WQ17G31A	07/31/17 12:58

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

By Sierra McKenna at 8:54 AM, Aug 01, 2017

1914 Holloway Drive, Holt, MI 48842, T: (517) 699-0345, F: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116, T: (810) 220-3300, F: (810) 220-3311
8660 S. Mackinaw Trail, Cadillac, MI 49601, T: (231) 775-8368, F: (231) 775-8584
lab@fibertec.us

SEQUENCE

WQ17G31A

USEPA - CLP

FOR LABORATORY USE ONLY

5A-IN

MATRIX SPIKE SAMPLE RECOVERY

EPA SAMPLE NO.

80006-001B

Lab Name: Fibertec, Inc. Contract: NA

Lab Code: NA Case No.: NA NRAS No.: NA SDG No.: NA

Matrix: (soil/water) WATER Level: (low/med) MED

% Solids for Sample: NA

Concentration Units (ug/L or mg/kg dry weight): ug/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Cyanide, Total	64 - 136	86.5970		5.0000	U	99.97	87		

Analyte	Control Limit %R	Dup. Spiked Sample Result (Dup_SSR)	C	Spike Added (SA)	%R	Q	Control Limit RPD	%RPD	Q
Cyanide, Total	64 - 136	86.0230		99.97	86		0 - 47	1	

Comments:

Client Parent Sample ID: P4-1GMA A/C condensate

If the Spike Added is less than four times the Sample Result, the Control Limit %R field will be blank.

M: Spiked sample recovery not within control limits.

*: Duplicate analysis not within control limits.

Client Name:
Pratt & Whitney Autoair, Inc.

DataBridge Sequence Report (Elution Order)
Entered Parameters for Samples in Sequence (Sorted by Prep Batch/Project ID)
Sequence: **WQ17G31A**

Date: 08/01/17
Time: 08:54
Printed By: smckenna

PW17G31B

Total Cyanide (ASTM D7511-09)

80006

80006-001B Validation: A.P.

7/31/2017 1:17:00 PM

Prep ID:	80006-001B.01
Prep Initial (g/mL):	10
Prep Final (mL):	10
Bench/Add'l Dilution:	None
Prep Factor/Overall:	1
Temperature (deg c):	20

	Raw	Final	CRL*
Units =>	ppb	ppb	
1 Cyanide, Total	-0.3670	<5.000	5.00

80006-001B Total Concentration: -0.3670 ppb

A.P. 8/1/17

*CRL - Client Requested Reporting Limit - SUBJECT TO CHANGE!!

Client Name:
Fibertec, Inc.

DataBridge Sequence Report (Elution Order)
Entered Parameters for Samples in Sequence (Sorted by Prep Batch/Project ID)
Sequence: **WQ17G31A**

Page: 1 of 1
Date: 08/01/17
Time: 15:39
Printed By: smckenna

PW17G31B			
Total Cyanide (ASTM D7511-09)			
79892			
79892-007	Validation: A.P.		
7/31/2017 2:55:00 PM			
Prep ID:	79892-007.02		
Prep Initial (g/mL):	10		
Prep Final (mL):	10		
Bench/Add'l Dilution:	5		
Prep Factor/Overall:	5		
Temperature (deg c):	20		
	Raw	Final	CRL*
Units =>	ppb	ppb	
1 Cyanide, Amenable	137.6	688.2	20.0
79892-007 Total Concentration:	688.2		ppb

Amenable = Total CN - post chlorination CN
5(167.979446) - 5(137.644669)
= 151.673885 ppb sm 8/1/17

Amenable CN = 151.673885 ppb

A.P. 8/3/17

*CRL - Client Requested Reporting Limit - SUBJECT TO CHANGE!!

Client Name:
Fibertec, Inc.

DataBridge Sequence Report (Alpha Order)
Entered Parameters for Samples in Sequence (Sorted by Prep Batch/Project ID)
Sequence: **WQ17G31A**

Date: 08/01/17
Time: 13:49
Printed By: smckenna

PW17G31B			
Total Cyanide (ASTM D7511-09)			
79892			
79892-007	Validation:		
7/31/2017 1:54:00 PM			
Prep ID:	79892-007.02		
Prep Initial (g/mL):	10		
Prep Final (mL):	10		
Bench/Add'l Dilution:	5		
Prep Factor/Overall:	5		
Temperature (deg c):	20		

		Raw	Final	CRL*
	Units =>	ppb	ppb	
1	Cyanide, Total	168.0	839.9	65.0

79892-007 Total Concentration: 839.9 ppb

BP 8/3/17

*CRL - Client Requested Reporting Limit - SUBJECT TO CHANGE!!

Peak Table:TOTAL CN

File name: C:\FLOW_4\WQ17G31A.RST
Date: 31-Jul-17
Operator: SM

Peak	Cup	Name	R	Type	Dil	Wt	Area	Calc. (PPB)	Flags
1	909	Sync	1	SYNC	1	1	107126368	1569.667480	
2	909	Sync	2	SYNC	1	1	107642768	1577.227661	
3	909	Sync	3	SYNC	1	1	108503880	1589.834351	
4	909	Sync	4	SYNC	1	1	110782632	1623.195312	
5	900	carry over	1	CO	1	1	2583298	39.156776	
6	900	carry over	2	CO	1	1	1051651	16.733465	
B	901	rb	1	RB	1	1	-60364	0.453564	BL
8	907	Sync	1	SYNC	1	1	12940518	190.786514	
9	907	Sync	2	SYNC	1	1	13157403	193.961700	
10	907	Sync	3	SYNC	1	1	13323712	196.396469	
11	900	carry over	1	CO	1	1	-276919	-2.716797	LO
12	900	carry over	2	CO	1	1	-164204	-1.066649	LO
B	901	blank	1	RB	1	1	-14710	1.121933	BL
14	901	cal 0.00 ppb	1	C	1	1	-41497	0.729776	
15	901	cal 0.00 ppb	2	C	1	1	-116372	-0.366400	LO OL
16	901	cal 0.00 ppb	3	C	1	1	-46163	0.661472	
B	901	rb	1	RB	1	1	23522	1.681652	BL
18	902	cal 1.0 ppb	1	C	1	1	562422	9.571158	OL
19	902	cal 1.0 ppb	2	C	1	1	-502380	-6.017553	LO
20	902	cal 1.0 ppb	3	C	1	1	-265670	-2.552124	LO
B	901	rb	1	RB	1	1	20171	1.632596	BL
22	903	cal 5.0 ppb	1	C	1	1	219862	4.556077	OL
23	903	cal 5.0 ppb	2	C	1	1	146429	3.481016	
24	903	cal 5.0 ppb	3	C	1	1	169462	3.818217	
B	901	rb	1	RB	1	1	-6110	1.247842	BL
26	904	cal 25 ppb	1	C	1	1	1635215	25.276844	
27	904	cal 25 ppb	2	C	1	1	1647035	25.449890	
28	904	cal 25 ppb	3	C	1	1	1618885	25.037767	
29	905	cal 50 ppb	1	C	1	1	3156708	47.551498	
30	905	cal 50 ppb	2	C	1	1	3208610	48.311359	
31	905	cal 50 ppb	3	C	1	1	3087049	46.531696	OL
B	901	rb	1	RB	1	1	-60705	0.448579	BL
33	906	cal 100 ppb	1	C	1	1	5922686	88.045433	OL
34	906	cal 100 ppb	2	C	1	1	5758855	85.646942	
35	906	cal 100 ppb	3	C	1	1	5606516	83.416702	
36	907	cal 200 ppb	1	C	1	1	12106939	178.582916	OL
37	907	cal 200 ppb	2	C	1	1	15424744	227.155579	
38	907	cal 200 ppb	3	C	1	1	15831189	233.105942	
39	900	flush	1	BLNK	1	1	212209	4.444028	
B	901	baseline	1	RB	1	1	-21237	1.026386	BL UM
41	902	cal 1.0 ppb	1	C	1	1	88155	2.627882	OL
42	902	cal 1.0 ppb	2	C	1	1	-6699	1.239214	
43	902	cal 1.0 ppb	3	C	1	1	-12115	1.159933	
B	901	rb	1	RB	1	1	-49727	0.609296	BL
45	907	cal 200 ppb	1	C	1	1	13827830	203.776764	
46	907	cal 200 ppb	2	C	1	1	13897294	204.793716	
47	907	cal 200 ppb	3	C	1	1	14080318	207.473190	
B	901	rb	1	RB	1	1	4060	1.396725	BL
49	101	icv	1	U	1	1	7527728	111.543259	
50	102	icb	1	U	1	1	242926	4.893732	
51	103	cm	1	U	1	1	455877	8.011333	
B	901	rb	1	RB	1	1	-27479	0.935007	BL
53	101	icv	1	U	1	1	7168927	106.290405	
54	102	icb	1	U	1	1	27411	1.738589	
55	103	cm	1	U	1	1	401592	7.216594	
B	901	rb	1	RB	1	1	-61191	0.441462	BL
57	104	PW17G31B.MB*	1	U	1	1	-197167	-1.549227	LO
58	105	PW17G31B.LCS	1	U	1	1	6255209	92.913567	
59	106	PW17G31B.LCD	1	U	1	1	6292666	93.461937	
60	900	flush	1	BLNK	1	1	-70293	0.308200	
61	107	80006-001B.01	1	U	1	1	-116432	-0.367266	LO
62	108	80006-001B.02	1	U	1	1	5823743	86.596901	

flagged baseline on/c SM 7/31/17

ICV/ICB too high, rerun SM 7/31/17

Peak	Cup	Name	R	Type	Dil	Wt	Area	Calc. (PPB)	Flags
63	109	80006-001B.03	1	U	1	1	5784550	86.023117	
64	110	79892-007.01	1	U	1	1	49717024	729.194641	
65	111	79984-001 rtv	1	U	1	1	3030867	45.709198	
B	900	flush	1	BLNK	1	1	-97603	-0.091617	LO UM
67	101	ccv	1	U	1	1	6898620	102.333115	
68	102	ccb	1	U	1	1	-92092	-0.010932	LO
69	900	flush	1	BLNK	1	1	-21163	1.027460	
70	111	79984-001 rtv	1	U	1	1	2617799	39.661880	
71	112	79892-007.02	1	U	1	1	11382659	167.979446	
72	900	flush	1	BLNK	1	1	-10374	1.185423	
73	101	ccv	1	U	1	1	7127610	105.685516	
74	102	ccb	1	U	1	1	71111	2.378353	
75	900	flush	1	BLNK	1	1	-478430	-5.666930	LO
76	113	79892-007 ame	1	U	1	1	29891056	438.942413	
77	900	flush	1	BLNK	1	1	-78336	0.190452	LO UM
78	114	5x 79892-007 ame	1	U	1	1	9310612	137.644669	
B	900	flush	1	BLNK	1	1	-39497	0.759053	UM
80	101	ccv	1	U	1	1	7421260	109.984550	
81	102	ccb	1	U	1	1	23093	1.675371	
82	900	flush	1	BLNK	1	1	-23211	0.997491	UM
83	115	MDL1	1	U	1	1	143272	3.434794	
84	116	MDL2	1	U	1	1	74608	2.429553	
85	117	MDL3	1	U	1	1	44350	1.986583	
86	118	MDL4	1	U	1	1	127557	3.204722	
87	119	MDL5	1	U	1	1	101894	2.829014	
88	120	MDL6	1	U	1	1	47906	2.038638	
89	121	MDL7	1	U	1	1	108289	2.922643	
90	900	FLUSH	1	BLNK	1	1	4789	1.407400	UM
91	101	CCV	1	U	1	1	7197622	106.710487	
92	102	CCB	1	U	1	1	62364	2.250298	
93	901	RB	1	RB	1	1	50982	2.083675	BL UM
94	115	MDL1	1	U	1	1	-105063	-0.200831	LO
95	116	MDL2	1	U	1	1	-90215	0.016550	LO
96	117	MDL3	1	U	1	1	-23025	1.000208	
97	118	MDL4	1	U	1	1	-7989	1.220327	
98	119	MDL5	1	U	1	1	3579	1.389686	
99	120	MDL6	1	U	1	1	2590	1.375209	
100	121	MDL7	1	U	1	1	4775	1.407194	
101	900	FLUSH	1	BLNK	1	1	-118505	-0.397625	LO UM
102	101	CCV	1	U	1	1	7098546	105.260033	
103	102	CCB	1	U	1	1	46919	2.024187	

noisy baseline peaks not fully captured. Will rerun SM 7/31/17

* flagged baseline dtl on SM 7/31/17

TOTAL CN:Calibration 1: Peak 14-103

File name: C:\FLOW_4\WQ17G31A.RST
Date: 31-Jul-17
Operator: SM

*	Name	Conc	Area
*	cal 0.00 ppb	0.000000	-41497.031250
*	cal 0.00 ppb	0.000000	-116372.445312
*	cal 0.00 ppb	0.000000	-46162.644531
	cal 1.0 ppb	1.000000	562422.375000
	cal 1.0 ppb	1.000000	-502380.156250
	cal 1.0 ppb	1.000000	-265670.500000
*	cal 5.0 ppb	5.000000	219862.218750
*	cal 5.0 ppb	5.000000	146429.156250
*	cal 5.0 ppb	5.000000	169462.000000
*	cal 25 ppb	25.000000	1635215.000000
*	cal 25 ppb	25.000000	1647035.125000
*	cal 25 ppb	25.000000	1618884.625000
*	cal 50 ppb	50.000000	3156707.500000
*	cal 50 ppb	50.000000	3208610.500000
*	cal 50 ppb	50.000000	3087049.000000
*	cal 100 ppb	100.000000	5922686.000000
*	cal 100 ppb	100.000000	5758855.000000
*	cal 100 ppb	100.000000	5606516.500000
	cal 200 ppb	200.000000	12106939.000000
	cal 200 ppb	200.000000	15424744.000000
	cal 200 ppb	200.000000	15831189.000000
*	cal 1.0 ppb	1.000000	88154.984375
*	cal 1.0 ppb	1.000000	-6699.394531
*	cal 1.0 ppb	1.000000	-12114.750000
*	cal 200 ppb	200.000000	13827830.000000
*	cal 200 ppb	200.000000	13897294.000000
*	cal 200 ppb	200.000000	14080318.000000

Calib Coef:
y=bx+a
a: (intercept) -9.1345e+04
b: 6.8306e+04

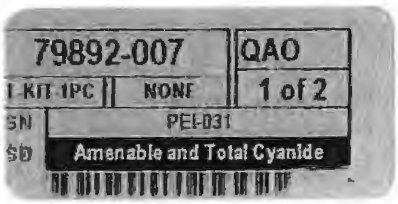
Corr Coef: 0.996498

Carryover: n/a

No Drift Peaks

Study Closes August 25, 2017

Amenable and Total Cyanide
Catalog# PEI-031
Description and Instructions



Sample Description

- This PT sample is packaged as a 21 mL concentrate and must be diluted prior to analysis.
- The sample is preserved in 0.2N NaOH.
- The unopened ampule should be stored at room temperature (15-30°C) away from light.
- When prepared according to instructions, the sample will contain Total Cyanide in the following range:

Analyte	Conc Range	NELAC PTRL
Total Cyanide	0.1 – 1 mg/L	0.065 mg/L
Amenable Cyanide	0.1 – 1 mg/L	Not Applicable

Note: Ranges refer to formulation specifications. Most analytical methods recover less than the gravimetric true value. Therefore, it is possible that your determined value might fall below this range.

Where applicable, all NSI PT samples are formulated in ranges specified in the most current NELAC standards (see www.nelac-institute.org). NELAC Proficiency Testing Reporting Limits (PTRLs) apply. **Do not report values below the NELAC PTRL.**

General Information

- This sample is formulated using a complex cyanide (Potassium Ferricyanide), as well as a free cyanide. Therefore, **distillation is required prior to analysis of total cyanide.**
- Failure to distill the prepared PT sample will result in low recovery.
- The diluted sample should be analyzed as soon as possible after preparation.

Instructions

- Fill a 1000 mL Class A Volumetric Flask with 900 mL reagent water that has been pH adjusted to pH>12 with dilute NaOH.
- Shake the concentrate ampule well and pipet exactly 10.0 mL of the concentrate into the flask.
- Bring to volume with reagent water and mix well.
- This represents the sample for distillation and analysis.
- Analysis should be performed as soon as possible after dilution.
- Report results in units of mg/L for Total Cyanide and Cyanide Amenable to Chlorination.

Added 5.0mL of Concentrate to 500mL Volumetric Flask. pH of reagent water adjusted by adding 6mL of 1N NaOH (before adding Concentrate). Sample was not distilled. SM 7/3/17

PrepMaster Batch Barcode List
Samples and Dilutions included in this Batch
Prep Batch: **PW17G31B**

Date: 07/31/17
Time: 15:15
Printed By: smckenna

Department: **Wet Chemistry** Procedure: **Total Cyanide (ASTM D7511-09)**

79892-007.01
Actual Dil.: 1 Rel. to 1st: 1

79892-007.02
Actual Dil.: 5 Rel. to 1st: 5

80006-001B.01
Actual Dil.: 1 Rel. to 1st: 1

80006-001B.02 MS
Actual Dil.: 1 Rel. to 1st: 1

80006-001B.03 MSD
Actual Dil.: 1 Rel. to 1st: 1

QC Detail:

PW17G31B*

PW17G31B.MB*

PW17G31B.DUP

PW17G31B.LCS

PW17G31B.LCD

Study Closes August 26, 2016

Amenable and Total Cyanide
Catalog# PEI-031
Description and Instructions

Sample Description

- This PT sample is packaged as a 21 mL concentrate and must be diluted prior to analysis.
- The sample is preserved in 0.2N NaOH.
- The unopened ampule should be stored at room temperature (15-30°C) away from light.
- When prepared according to instructions, the sample will contain Total Cyanide in the following range:

Analyte	Conc Range	NELAC PTRL
Total Cyanide	0.1 – 1 mg/L	0.065 mg/L
Amenable Cyanide	0.1 – 1 mg/L	Not Applicable

Note: Ranges refer to formulation specifications. Most analytical methods recover less than the gravimetric true value. Therefore, it is possible that your determined value might fall below this range.

Where applicable, all NSI PT samples are formulated in ranges specified in the most current NELAC standards (see www.nelac-institute.org). NELAC Proficiency Testing Reporting Limits (PTRLs) apply. **Do not report values below the NELAC PTRL.**

General Information

- This sample is formulated using a complex cyanide (Potassium Ferricyanide), as well as a free cyanide. Therefore, **distillation is required prior to analysis of total cyanide.**
- Failure to distill the prepared PT sample will result in low recovery.
- The diluted sample should be analyzed as soon as possible after preparation.

Instructions

- Fill a 1000 mL Class A Volumetric Flask with 900 mL reagent water that has been pH adjusted to pH>12 with dilute NaOH.
- Shake the concentrate ampule well and pipet exactly 10.0 mL of the concentrate into the flask.
- Bring to volume with reagent water and mix well.
- This represents the sample for distillation and analysis.
- Analysis should be performed as soon as possible after dilution.
- Report results in units of mg/L for Total Cyanide and Cyanide Amenable to Chlorination.

QCI-031B Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-PTX2731

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.667	0.922	mg/L	0.599 to 1.24	ACCEPT.	10/6/17	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.365	0.462	mg/L	0.289 to 0.635	ACCEPT.	10/6/17	SEM

QCI-092B Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-PTX2731

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	14.8	15.1	NTU	12.5 to 17.7	ACCEPT	10/9/17	RKP
2055	Turbidity	20048219	TURB	SM 2130 B - 2001	14.8	15.1	NTU	12.5 to 17.7	ACCEPT	10/9/17	RKP

Assigned Values
All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity
Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability
Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits
Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

639 10/4/17

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR/PAR)

Client: Fibertec WP-238 **Project/Document Control Number:** 79892

Sample Number(s): -016 **Date Initiated:** 09/11/17 **Date Due:** 10/02/17

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ **Other**_____

☒ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

Turbidity was reported on the above mentioned sample at 24.5 NTU. The assigned value was 16.5 NTU, the study mean was 16.2 NTU with an acceptance range of 13.7 to 19.4 NTU. Please investigate the cause of the error and propose a corrective action to prevent it reoccurrence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

Not enough time allowed for air bubbles to evolve and possible dust inside sample holder.

Investigator(s): Rhonda Penn

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Cleaned sample cell holder with Q-tips and Kimwipes. Reprepped sample, 79892-016, and analyzed after allowing air bubbles to evolve. Obtained a value of 16.36 NTU

A NTF has been added to the SOP

QA Approval: [signature]

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Managerial: [signature] **Area Supervisor:** [signature]

Date Closed: 10/3/17

Turbidity - Aqueous

Method:	**Not applicable**	Analysis Method:	**EPA 180.1 / SM 2130 B.**
ID	**Not applicable**	Batch Number:	**WM17G27A-TUR**
	Not applicable	Analysis Date:	**07/27/17**
	Not applicable	Analyst:	**RP**

Curve Data

RL. **0.20** NTU

Sample Identification for Matrix Dup:

79892-016 (PT)

te	Today	
17	07/27/17	OK

ality Control Sample Data

Sample dentification	Result (NTU)		Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
Duplicate	24.200	—	40.0	40	24.20		10:52	
	0.029	—	40.0	40	0.03		10:49	—

Sample dentification	Result (NTU)	2ndary std value (NTU)	Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
1-2	0.910	0.910	40.0	40.0	0.91		10:45	
1-20	15.300	15.300	40.0	40.0	15.30		10:46	
0-200	154.400	154.400	40.0	40.0	154.40		10:47	
0-2000	1348.000	1348.000	40.0	40.0	1,348.00		10:48	
-016 (PT) RPD	24.500		40.0	40.0	24.50		10:51	
0-2	1.583	1.583	40.0	40.0	1.58		10:53	
0-20	16.250	16.250	40.0	40.0	16.25		10:54	
0-200	162.600	162.600	40.0	40.0	162.60		10:55	
0-2000	1542.000	1542.000	40.0	40.0	1,542.00		10:56	
0-200	154.500	154.400	40.0	40.0	154.50		10:57	
	0.027		40.0	40.0	0.03		10:58	

ons

Recovery Exceeds control limts

Rhonda Pinn 07/31/17
Analyst Approval/Date

7-31-17
Review Approval/Date

Turbidity - Aqueous

Preparation Method:	**Not applicable**	Analysis Method:	**EPA 180.1 / SM 2130 B.**
Prep Batch ID:	**Not applicable**	Batch Number:	**WM17I20A-TUR**
Prep. Date:	**Not applicable**	Analysis Date:	**09/20/17**
Preparer:	**Not applicable**	Analyst:	**RP**

Calibration Curve Data

Cal Date	Today	
07/27/17	09/20/17	OK

RL: **0.20** NTU

Sample Identification for Matrix Dup:

80780-001A

Matrix Quality Control Sample Data

Sample Identification	Result (NTU)		Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
Matrix Duplicate	7.230	---	40.0	40	**7.23**		12:48	Expired Upon Receipt
MB	0.022	---	40.0	40	**0.02**		12:39	---

Sample Identification	Result (NTU)	2ndary std value (NTU)	Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
CCV 0-2	0.930	0.910	40.0	40.0	**0.93**		12:35	
CCV 0-20	15.760	15.300	40.0	40.0	**15.76**		12:36	
CCV 0-200	156.100	154.400	40.0	40.0	**156.10**		12:37	
CCV 0-2000	1360.000	1348.000	40.0	40.0	**1,360.00**		12:38	
80780-001A	7.350		40.0	40.0	**7.35**		12:46	Expired Upon Receipt
79892-016 (PT)	16.360		40.0	40.0	**16.36**	TV 16.2 10% TE	13:06	
LCD 0-20	16.380	16.250	40.0	40.0	**16.38**		13:07	
CCV 0-20	15.780	15.300	40.0	40.0	**15.78**		13:08	
CCB	0.023		40.0	40.0	**0.02**		13:09	

Definitions

* Recovery Exceeds control limits

Rhonda Penn 9/20/17
Analyst Approval/Date

Review Approval/Date 9/22/17

Turbidity in Aqueous Samples (Nephelometric)

Standard Operating Procedure

W-214

Revision:

0

Effective Date:

06/15/12

Retire Date:

ON-LINE VERSION (UNCONTROLLED IF PRINTED)

Laboratory Approval:

SOP Author:	Title: D.S. Specialist	Date: 5-18-12
SOP Review:	Title: Group Leader	Date: 5-18-12
Approval:	Title: DIRECTOR	Date: 5-18-12

1.0 Scope and Application

1.1 This method covers the laboratory determination of turbidity in drinking, ground, surface, and saline waters, domestic and industrial wastes.

1.2 This SOP is to be used by all personnel conducting this analysis at Fibertec, Inc. Holt, MI

1.3 Analyses using this SOP may be reported as using the following methods:

1.3.1 EPA Method 180.1

1.3.2 SM 2130 B

1.4 The applicable range is 0 – 2000 nephelometric turbidity units (NTU). Higher values may be obtained with dilution of the sample.

1.5 The reporting limit is 0.2 NTU (may vary, depending on client requirements, sample dilutions, sample size, MDL study results, PQL, etc.)

2.0 Summary of Method

2.1 The method is based upon the comparison of the intensity of light scattered by the sample under defined conditions with the intensity of light scattered by a standard reference suspension. The higher the intensity of the scattered light, the higher the turbidity. Readings, in NTUs, are made in a nephelometer.

3.0 Deviations from Method

3.1 EPA 180.1 indicates that samples over 40 NTU must be diluted because of a progressive error found in a study on turbidities in excess of 40 NTU. SM 2130 B indicates that sample dilution should be avoided whenever possible. In this SOP, samples are not diluted unless over 40 NTU as required by EPA 180.1. The turbidimeter is calibrated at the higher ranges and secondary standards are used as verification.

3.2 Samples are diluted with filtered sample per the instrument manufacturer's instructions, not with reagent water as in EPA 180.1 and SM 2130 B. SM 2130 B states: "Avoid dilution whenever possible. Particles suspended in the original sample may dissolve or otherwise change characteristics...when the sample is diluted." The manufacturer's instructions indicate that using filtered sample will reduce this effect.

4.0 Definitions

4.1 Preparation Batch (also called prep batch or extraction batch) – a group of no more than 20 environmental samples and associated QC that are prepared using the same process, personnel and same lot(s) of spikes and reagents. The prep batch must be completed within the calendar day of the preparation of the first sample in the prep batch.

4.2 Calibration

4.2.1 Initial Calibration Verification (ICV) – after a multi-point calibration, the calibration must be verified by analyzing a standard from a second source before analyzing any samples.

4.2.2 Continuing Calibration Verification (CCV or CV) – on-going verification of the calibration by analyzing a standard from the same source as the calibration.

4.2.3 In this SOP the CCV is made from a second source in accordance with the turbidimeter manufacturer's instructions.

4.3 Blanks – a sample that is a clean matrix or solvent analyzed in order to monitor possible contamination occurring during storage, preparation, or analysis.

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4.3.1 The Instrument Blank, also referred to as Calibration Blank (initial calibration blank, ICB or continuing calibration blank, CCB) – a clean sample (reagent water) processed through all instrumental steps of the measurement process and used to determine instrument contamination.

4.3.2 Method Blank (MB) – a sample of a matrix similar to the environmental samples in the prep batch that is free from the target analytes. The MB must be prepared at the same time and with the same reagents as the environmental samples in the prep batch. The MB is used to evaluate the preparation and analysis to determine that the preparation and analysis did not add to the reported results of the associated environmental samples. The MB may also be analyzed as the ICB or CCB.

4.4 Analyte Detection

4.4.1 Method Detection Limit (MDL) – the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. The MDL is determined by the method described in 40 CFR Part 136, Appendix B. No numerical values may be reported below this value.

4.4.2 Practical Quantitation Limit (PQL) – the concentration equal to the lowest acceptable concentration on the current calibration curve. The PQL must be higher than the MDL. No numerical values may be reported below this value unless accompanied with a "J" flag indicating the value is an estimate.

4.4.3 Reporting Limit (RL) – a concentration established by the laboratory in consultation with the client under which no numerical value is reported. The RL is usually above the PQL but MUST be above the MDL.

4.4.4 Limit of Detection (LOD) – a laboratory's estimate of the minimum amount of an analyte in a given matrix that an analytical process can reliably detect in their facility.

4.4.5 Limit of Quantitation (LOQ) – the minimum levels, concentrations or quantities of a target variable that can be reported with a specified degree of confidence.

4.5 Laboratory Control Sample (LCS) – sometimes referred to as Lab Fortified Blank (LFB), which is a sample of a matrix similar to the environmental samples in the prep batch that is free from the target analytes and is spiked with known amounts of the target analytes. The LCS is prepared with the environmental samples using the same procedures and reagents and is analyzed to determine the performance of the preparation and analysis. Usually the spike material is from the same source as the ICV.

4.6 Laboratory Control Duplicate (LCD) – a second aliquot of the LCS used to evaluate batch precision.

4.7 Matrix Duplicate (MD) – sometimes referred to as sample replicate, a second aliquot of a sample selected at random from the samples in the prep batch which is prepared and analyzed with the samples to assess sample precision.

4.8 Laboratory Information Management System (LIMS) - a Microsoft Access database used to store data and other pertinent information which may be compiled into reports.

4.9 Standard Operating Procedure (SOP) - A controlled document used to define the steps necessary to carry out a process and / or an analytical method. See SOP G-308.

4.10 Use of the terms "must" and "shall" are intended to communicate a mandatory requirement. Use of the terms "may" and "should" are intended to communicate a recommendation or option

5.0 Interferences

5.1 The presence of floating debris and coarse sediments that settle out rapidly will give low readings. Finely divided air bubbles can cause high readings.

5.2 The presence of true color, that is the color of water that is caused by substances that absorb light, will cause turbidities to be low.

5.3 Light absorbing materials such as activated carbon in significant concentrations can cause low readings.

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6.0 Safety

6.1 Exercise general laboratory safety practices to ensure eye, skin, and respiratory protection at all times. At a minimum, safety glasses and gloves must be worn at all times when performing this analysis.

6.2 All personnel working in the laboratory are required to follow the Laboratory Chemical Hygiene Plan.

6.3 Avoid direct contact with samples. Limited information about sample characteristics is known and samples may be hazardous.

6.4 Material Safety Data Sheets for purchased chemicals are available in Administrative Office for reference.

6.5 The primary formazin polymer turbidity standard may contain trace residual hydrazine sulfate, which is carcinogenic and should be handled with care.

7.0 Equipment and Supplies

7.1 Equipment is controlled, calibrated and checked per SOP G-350 - Equipment Control.

7.2 Specific vendors and part numbers are subject to change. Equivalents may be used provided that they meet any specific criteria listed below or criteria listed in SOP G-350.

7.3 General

7.3.1 Volumetric flasks, glass, class A, various sizes

7.3.2 Syringes, 60 mL, luer lock, BD part # 309653

7.3.3 Syringe filters, 0.45 µm, methyl cellulose ester (MCE), Fisher brand Cat. No. 09-719-2E

7.3.4 Pipets, volumetric, various sizes, with 0.1 mL graduations, may be disposable

7.3.5 Pipets, Eppendorf® or Finnpipette® type, air displacement fixed and adjustable volume, various sizes

7.3.6 Pipet tips, disposable air-displacement, for use with air displacement pipets

7.4 Instrumentation

7.4.1 Turbidimeter, nephelometric type with the following design criteria, such as Hach Ratio/XR™

7.4.1.1 Capable of measuring between 0-40 NTU, while providing detection of a turbidity difference of 0.02 NTU or less in waters having turbidities less than 1 NTU.

7.4.1.2 Tungsten lamp light source operated at a temperature between 2200 - 3000 K.

7.4.1.3 Total distance traversed by incident light and scattered light within the sample tube ≤ 10 cm

7.4.1.4 A detector centered at 90° to the incident light path and not to exceed ±30° from 90° with a spectral peak response between 400 - 600 nm.

7.4.2 Sample tubes, matched for use with the turbidimeter. Discard when tube interior or exterior becomes etched or scratched.

7.4.3 Non-conducting screwdriver for adjusting the calibration span and linearity potentiometers on the turbidimeter. Must be made of a non-conducting material or the shaft covered with a non-conducting material.

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8.0 Reagents and Standards

8.1 Unless otherwise indicated reagent grade chemicals are used. It is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

8.2 Specific vendors, part numbers, and spiking solutions are subject to change. Equivalents may be used provided that they meet the grade criteria mentioned above.

8.3 All laboratory prepared reagents and standards must be entered into the LIMS. All purchased reagents and chemicals are entered into the LIMS per SOP G-304 - Purchasing.

8.4 All chemicals, reagents and standards are stored at room temperature and purchased items have an expiration date determined by the manufacturer unless otherwise indicated.

8.5 Reagents

8.5.1 Laboratory reagent water - deionized water.

8.5.1.1 Reagent water must be turbidity free (<0.2 NTU). If necessary, pass deionized water through a 0.45 µm membrane filter.

8.5.2 Silicone oil, Canon part # S-20

8.6 Turbidity Calibration Stock Standard

8.6.1 Primary stock formazin turbidity standard, 4000 NTU, Hach Co., Cat. No. 2461-42. Mix well before use.

8.7 Turbidity Calibration Working Standards

8.7.1 Primary working formazin turbidity standard, 1800 NTU for 0 - 2000 NTU range

8.7.1.1 Pipet 22.5 mL of well mixed 4000 NTU primary stock standard into a 50 mL volumetric flask and dilute to the mark with reagent water and mix well.

8.7.2 Primary working formazin turbidity standard, 180 NTU for 0 - 200 NTU range

8.7.2.1 Pipet 9.00 mL of well mixed 4000 NTU primary stock standard into a 200 mL volumetric flask and dilute to the mark with reagent water and mix well.

8.7.3 Primary working formazin turbidity standard, 18 NTU for 0 - 20 NTU range

8.7.3.1 Pipet 0.900 mL of well mixed 4000 NTU primary stock standard into a 200 mL volumetric flask and dilute to the mark with reagent water and mix well.

8.7.4 0.2 NTU working formazin turbidity standard, for MDL study

8.7.4.1 Add 2.22 mL of the 18 NTU primary working formazin turbidity standard to a 200 mL volumetric flask. Dilute to the mark with reagent water.

8.8 LCS / LCD / ICV / CCV Working Standards

8.8.1 Secondary GELEX turbidity standards, containing 0 - 2 NTU, 0 - 20 NTU, 0 - 200 NTU, and 0 - 2000 NTU standards in 25 mL sample cells compatible with the turbidimeter used, Hach Co., Cat. No. 23287-00

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8.8.2 Standardize against the formazin primary standards each time the turbidimeter is calibrated. See Section 13.

8.9 Turbidimeter Stray Light Standard

8.9.1 GELEX stray light turbidity standard, included in Hach Co., Cat. No. 23287-00

9.0 Sample Collection, Preservation, Shipment, and Storage

9.1 Samples must be collected in pre-cleaned plastic or glass bottles.

9.2 Samples must be refrigerated at 4±2 °C following collection and must be analyzed within 48 hours.

10.0 Quality Control

10.1 The following quality control standard values are subject to change based on instrument conditions, statistical analyses (control charts) and client requirements.

10.2 The following quality control (QC) standards are prepared and analyzed according to Section 14.

10.3 Method Blank

10.3.1 Prepare and analyze at least one for every batch of 20 samples or less.

10.3.2 The method blank is turbidity-free reagent water.

10.4 LCS & LCD

10.4.1 Prepare one each for each range used on the turbidimeter with each batch of 20 samples or less.

10.4.2 The LCS and LCD are the secondary standards described in Section 8.

10.5 Matrix Duplicate

10.5.1 Prepare and analyze at least one every 20 samples.

10.5.2 Prepared by repeating the preparation of a randomly selected sample.

11.0 Initial Demonstration of Performance

11.1 Each analyst must complete an initial demonstration of capability (IDOC) prior to reporting any data using this method.

11.2 The IDOC shall be performed using an 18 NTU standard made as in Section 8.7 and prepared and analyzed as in Section 14. Four replicate readings are taken according to the procedure in Section 14.

11.2.1 The average recovery of the four samples must be within 95 - 105% of the target and the RSD must be ≤ 20%.

11.3 Continuing demonstrations of capability are completed according to SOP G-380 - Employee Training

12.0 Limit of Detection

12.1 The LOQ must be determined annually per SOP G-200 Defining Detection.

12.1.1 The LOQ study is performed by selecting 0.2 NTU as the LOQ and analyzing one blank sample matrix spiked at one to two times the PQL.

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12.1.2 If the recovery is 50 - 150% of the spiked value, the LOQ is considered to be verified.

12.1.3 If the recovery is not within this range, see SOP G-200 for further action.

12.2 As a rule, Fibertec does not report results below the PQL. In the event that the client requires reporting below this value, the lab must select an LOD and verify it. Verification requires that the analyte be recovered after being processed through the preparation and analysis. Any value reported less than the PQL and at or above the LOD must be accompanied with a "J" flag indicating the value is estimated. No values may be reported less than the LOD.

13.0 Calibration and Standardization

13.1 The turbidimeter must be calibrated every four months or when the secondary standards are out of range. It must also be recalibrated after certain maintenance and repair (see SOP G-300).

13.2 Instrument Calibration

13.2.1 Follow manufacturer instructions for calibrating the turbidimeter.

13.2.2 The following adjustments to the span and linearity controls must be done with a non-conducting screwdriver. A metal shaft could result in shorting a circuit board component in the instrument causing irreparable damage.

13.2.3 Prepare each of the primary working calibration standards in the 0-2, 0-20, 0-200 and 0-2000 NTU ranges as in Section 8.

13.2.4 Set up the instrument as in Section 14 - Instrument Set Up.

13.2.5 Remove the rubber plug from the right side of the instrument case to gain access to the calibration controls.

13.2.6 Select the 20-NTU range.

13.2.7 Make the 18-NTU formazin primary calibration standard as in Section 8.7 and prepare as in Section 14 - Sample Preparation.

13.2.8 Analyze as in Section 14 - Sample Analysis, except instead of recording the reading, adjust the 20-200 S (span) control to obtain a display of 18.00.

13.2.9 Select the 200-NTU range.

13.2.10 Make the 180-NTU formazin primary calibration standard as in Section 8.7 and prepare as in Section 14 - Sample Preparation.

13.2.11 Analyze as in Section 14 - Sample Analysis, except instead of recording the reading, adjust the 20-200 L (linearity) control to obtain a display of 180.0.

13.2.12 Repeat steps 13.2.8 through 13.2.11 until readings of 18.00 and 180.0 are achieved on each range respectively. Record the final readings in the Turbidity Logbook (W-543)

13.2.13 Select the 2000-NTU range.

13.2.14 Make the 180-NTU formazin primary calibration standard as in Section 8.7 and prepare as in Section 14 - Sample Preparation.

13.2.15 Analyze as in Section 14 - Sample Analysis, except instead of recording the reading, adjust the 2K S (span) control to obtain a display of 180.0.

13.2.16 Make the 1800-NTU formazin primary calibration standard as in Section 8.7 and prepare as in Section 14 - Sample Preparation.

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13.2.17 Analyze as in Section 14 - Sample Analysis, except instead of recording the reading, adjust the 2K L (linearity) control to obtain a display of 1600.

13.2.18 Repeat steps 13.2.15 through 13.2.17 until readings of 16.00 and 160.0 are achieved on each range respectively. Record the final readings in the Turbidity Logbook (W-543)

13.3 Standardizing the Secondary Standards (ICV)

13.3.1 The secondary standards are analyzed immediately after calibrating the turbidimeter.

13.3.2 Clean and oil the cells of each of the secondary standards in Section 8 according to Section 14 - Sample Preparation.

13.3.3 Analyze as in Section 14 - Sample Analysis.

13.3.4 Record the value in the logbook.

13.3.5 Place a label on the cap with this value and the date. This is the standardized value (true or assigned value).

13.4 Calibration Verification

13.4.1 A CCV must be analyzed before samples are analyzed, after every 10 samples and at the end of the analytical run.

13.4.2 The CCVs are the secondary standards described in Section 8 which have been standardized as in Section 13.3. The standerd used must be in the same range as the samples. NOTE: Visually inspecting the sample can help to determine the range of CCV necessary. If unsure, analyze more than one or all ranges before the sample is analyzed. The LCS may be used as the CCV.

13.4.3 The value of the CCV must be within 95 - 105% of the standardized value.

13.4.4 A CCB must be analyzed before samples are analyzed, after every 10 samples and at the end of the analytical run.

13.4.5 The CCB is turbidity-free reagent water (the MB may be used as the CCB).

13.4.6 The CCB value must be less than the reporting limit or 1/10th the sample value.

13.4.7 If any of the CCVs or CCBs are not withing range, take corrective action and reanalyze samples as appropriate (see Section 16).

14.0 Procedure

14.1 Instrument Set Up

14.1.1 Follow manufacturer instructions for setting up the turbidimeter.

14.1.2 It must be turned on at least 15 minutes prior to use.

14.1.3 Set the turbidimeter to the fast response mode (switch on the back of the turbidimeter).

14.1.4 Zero the turbidimeter by placing the light shield over the cell holder opening (the cell holder must be empty) and select the 2 range. Adjust the front panel ZERO control to a reading of 0.000.

14.1.5 Null out the stray light value of the instrument as follows:

14.1.6 Clean and dry the stray light standard sample cell, apply a thin coat of silicone oil and wipe off the excess with a Kim Wipe.

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14.1.7 Insert the sample cell into the instrument.

14.1.8 Be sure the cell is down completely and held in place by the spring clip.

14.1.9 Cover the sample cell with the light shield.

14.1.10 Adjust the front panel ZERO control to a reading of 0.034.

14.2 Sample Preparation

14.2.1 Allow samples to come to room temperature.

14.2.2 Mix the samples thoroughly to disperse the solids, but do not shake vigorously as this could cause air bubbles to be trapped in the sample.

14.2.3 Transfer an aliquot into a sample cell filling to the top mark and place the cap on the cell.

14.2.4 Thoroughly clean and dry the sample cell

14.2.5 Coat the sample cell with a thin coat of silicone oil to mask minor imperfections in the glass.

14.2.6 Wipe off any excess oil with a Kim Wipe and handle the cell by only the cap thereafter

14.3 Sample Analysis

14.3.1 Invert the sample cell several times to mix the contents, but do not shake vigorously

14.3.2 Insert the sample cell into the instrument, aligning the cell index mark with the mark on the instrument opening.

14.3.3 Be sure the cell is down completely and held in place by the spring clip.

14.3.4 Cover the sample cell with the light shield.

14.3.5 Select an appropriate range. Select the lowest range possible without having an overrange reading on the turbidimeter (as evidenced by a flashing display).

14.3.6 Wait 15 seconds and record the reading. **NOTE:** Inconsistencies (e.g., large particles) in samples can cause erratic readings and / or sudden momentary rises in the reading. The true turbidity of the sample is the lowest reading noted consistently. The response time switch (on the back of the turbidimeter) can also be set to "slow" to minimize the effects.

14.3.7 If the sample reads greater than 2000 NTU, make an appropriate dilution with sample that has been filtered with a 0.45 um filter (if sufficient sample is not available dilute with reagent water) to bring the turbidity value within instrument range. Record the diluent used in the logbook.

14.3.8 Record the reading and the dilution factor in the logbook.

14.3.9 Record the sample number, batch number, date, time, and analyst initials in the logbook.

14.3.10 Analyze a CCV and CCB after every 10 samples and at the end of the analytical run.

15.0 Data Analysis and Calculations

15.1 Multiply all diluted sample turbidity readings by the appropriate dilution factor

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15.2 dilution factor = [final volume of sample + diluent analyzed (mL)] / volume of sample aliquot used (mL)

15.3 Relative Standard Deviation = the standard deviation of a set of data points divided by the mean of those points.

15.4 Relative Percent Difference between two data points = difference between the points divided by the average of the two points.

15.5 % recovery = (analytical result / true or assigned value) x 100

16.0 Method Performance, Data Review, and Acceptance Criteria

16.1 Method Performance and Acceptance Criteria

16.1.1 The following criteria is subject to change based on statistical analyses (control charts) of analyte recoveries or client requested limits.

16.1.2 The MB concentration must be less than the reporting limit or 10% of sample results.

16.1.3 The LCS percent recovery must fall within 95 - 105% of the standardized value.

16.1.4 The RPD between the LCS and LCD must be ≤ 20%.

16.1.5 If any of the above criteria are not met, take corrective action (see below) and reanalyze samples as appropriate.

16.1.6 If the client concedes (due to time constraints, lack of sufficient sample, etc.), the data may be qualified with the appropriate flag in lieu of reanalysis. However, corrective action must be taken immediately thereafter.

16.2 Corrective Actions

16.2.1 The following are some suggested corrective actions. See also the manufacturer's operating manual (Section 18) for additional information.

16.2.2 Check the sample cells for cleanliness and reclean and re-oil.

16.2.3 Check the sample cells for scratches and replace.

16.2.4 Recalibrate the instrument.

16.2.5 Replace the lamp.

16.3 Data Review & Validation

16.3.1 The logbook includes the sample ID, result, batch number, date, time and the initials of the analyst.

16.3.2 The data is transcribed from the logbook into the Turbidity Worksheet. (W-461)

16.3.3 The worksheet is reviewed by the primary analyst who performed the measurement, signed and dated.

16.3.4 The review includes checking that the method performance criteria above, and the criteria for the CCV and CCB are met, or samples are appropriately qualified. It also includes review to ensure that data was transcribed properly from the logbook to the worksheet.

16.3.5 The worksheet is then reviewed for the same criteria as in 16.3.4 by a second person trained in the procedure or a lab manager.

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16.3.6 If no corrections are needed, the worksheet is submitted to the administrative department for inclusion into the final laboratory report.

16.3.7 If any data needs correction, the folder is returned to the analyst for correction.

17.0 Pollution Prevention and Waste Management

17.1 Laboratory hazardous wastes are managed, accumulated and stored in accordance with all federal and state laws and regulations as outlined in the laboratory Chemical Hygiene Plan.

17.2 Aqueous samples may be dumped down the drain with copious amounts of water.

17.3 The primary formazin polymer turbidity standard may contain trace residual hydrazine sulfate, which is carcinogenic and must be disposed of by a licensed waste hauler.

18.0 References

18.1 Method 180.1, Determination of Turbidity by Nephelometry, EPA Methods and Guidance for Analysis of Water, revision 2.0, August 1993.

18.2 Method 2130 B, Standard Methods for the Examination of Water and Wastewater, 21st Edition.

18.3 Hach Ratio/XR Turbidimeter Instruction Manual, Hach Co., part # 7-17-86-1ED.

19.0 Changes from the Last Revision

19.1 Original.

20.0 Tables

20.1 None.

21.0 Worksheets

21.1 Turbidity Logbook W-543

21.2 Turbidity Worksheet W-451

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Note to File Form

Use this form to modify and existing SOP. These approved changes will be incorporated in tbe next revision of the target SOP. This completed form must be stored in the folder of the current active SOP in QA office.

SOP Title Turbidity in Aqueous Samples (Nephelometric)

SOP# W-214 Rev. 0

Section Affected 13.2.18 Add ☐ Remove ☐ Change ☑ (Check one)

Change Required

Section currently states: Repeat steps 13.2.15 through 13.2.17
until readings of 18.00 and 180.0 are achieved on each range respectively.
Record the final readings in the Turbidity Logbook (W-543)
Change to: Repeat steps 13.2.15 through 13.2.17
until readings of 180.0 and 1800 are achieved on the 2000-NRU range.
Record the final readings in the Turbidity Logbook (W-543)
Change Sections 21.1, 13.2.12, & 13.2.18
The logbook number is listed as W-543, this needs to be changed to W-550. This was a typo.

Date Implemented 2/5/2013 Group Leader Lindsay La Valley

QAO Holly Law 2-5-13 Tech Manager DPS

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Note to File Form

Use this form to modify an existing Standard Operating Procedure (SOP). Approved changes must be incorporated into the next revision of the SOP. The completed and signed copy of this form must be scanned to openKM. Training documentation of approved changes to the SOP must be on record.

SOP Title: Turbidity in Aqueous Samples (Nephelometric)

SOP Number: W-214

SOP Revision: 0

Section(s) Affected: 14.1 & 14.2

Add ☐ Remove ☐ Change ☑

(Check one)

Change(s) Required

Change 14.1.2 to "Clean the sample cell holder with Q-tip and Kimwipe then turn the instrument on. It must be on for at least 15 minutes prior to use.

Change 14.2.2 to "Mix the sample thoroughly to disperse the solids but do not shake vigorously as this could cause air bubbles to be trapped in the sample. When bubble are present, allow the to dissapate prior to analysis."

Date Implemented 10/6/2017

Group Leader

QAO

Laboratory Director

DCSID: Q-503.3 (08/12/15)

Training Documentation

OBJECTIVE: W-214.0 NTF-1 Read & Understood

DATE: 10/3/17 **by whom:** [signature]

Attendance

SIGN HERE	PRINT NAME HERE
Rhonda Penn	Rhonda Penn

The above signatories agree to employ the information presented within this training.

WP-238-Remedial PT Study

WP-PTX2731

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 09/25/2017 - Closed: 10/10/2017 - Reports Printed On: 10/10/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd , Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to: State Only
EPA Lab Code: MI00129
State Lab Code: MI00129
Primary Agency: TX -- Texas CEQ
Frank Jamison
12100 Park 35 CircleBldg. A, MC-176
Austin, TX 78753
Reports to : TX

Participant Information

NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer.

Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com

This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-031B Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-PTX2731

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.667	0.922	mg/L	0.599 to 1.24	ACCEPT.	10/6/17	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.365	0.462	mg/L	0.289 to 0.635	ACCEPT.	10/6/17	SEM

QCI-092B Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-PTX2731

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	14.8	15.1	NTU	12.5 to 17.7	ACCEPT.	10/9/17	RKP
2055	Turbidity	20048219	TURB	SM 2130 B - 2001	14.8	15.1	NTU	12.5 to 17.7	ACCEPT.	10/9/17	RKP

Assigned Values
All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity
Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability
Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits
Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Reviewed/Approved By: _____ Date: 10/10/17

Mark Hammersla, President

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

SM-115

Fall, 2017

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-115 - Shipped: 10/17/2017 - Closed: 11/30/2017 - Reports Printed On: 12/19/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
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517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	16100	16972	17200	mg/kg	3379	9620 to 24900	0.258	ACCEPT.	11/6/17	JLH
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	167	131	237	mg/kg	36.4	23.7 to 323	0.989	ACCEPT.	10/31/17	JLH
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	213	226	248	mg/kg	23.7	174 to 322	0.549	ACCEPT.	10/31/17	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	371	380	413	mg/kg	41.4	310 to 516	0.217	ACCEPT.	10/31/17	JLH
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	88.8	94.7	98.2	mg/kg	8.58	73.6 to 123	0.688	ACCEPT.	11/6/17	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	136	134	164	mg/kg	14.5	101 to 180	0.138	ACCEPT.	10/31/17	JLH
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	5150	6748	6420	mg/kg	1553	4830 to 8210	1.03	ACCEPT.	10/31/17	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	271	277	275	mg/kg	25.3	194 to 360	0.237	ACCEPT.	10/31/17	JLH
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	227	246	284	mg/kg	25.2	184 to 312	0.754	ACCEPT.	10/31/17	JLH
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	258	250	275	mg/kg	25.0	187 to 313	0.320	ACCEPT.	10/31/17	JLH
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	9550	9212	9400	mg/kg	1935	1980 to 17400	0.175	ACCEPT.	10/31/17	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	252	231	278	mg/kg	29.9	170 to 292	0.702	ACCEPT.	10/31/17	JLH
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	3890	4540	5150	mg/kg	467	3160 to 5810	1.39	ACCEPT.	10/31/17	JLH
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	905	941	1090	mg/kg	92.4	732 to 1130	0.390	ACCEPT.	10/31/17	JLH
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	29.4	30.5	32.0	mg/kg	10.5	18.3 to 42.7	0.105	ACCEPT.	10/30/17	NRV
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	100	102	124	mg/kg	13.5	69.7 to 136	0.148	ACCEPT.	10/31/17	JLH
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	402	386	463	mg/kg	38.5	270 to 506	0.416	ACCEPT.	10/31/17	JLH
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	18500	18504	18490	mg/kg	1555	13300 to 23600	0.0026	ACCEPT.	10/31/17	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	90.4	95.4	108	mg/kg	10.5	61.7 to 129	0.476	ACCEPT.	10/31/17	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	64.8	64.2	100	mg/kg	20.1	10.0 to 123	0.0299	ACCEPT.	10/31/17	JLH
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	11200	12023	12010	mg/kg	1824	8000 to 15400	0.451	ACCEPT.	10/31/17	JLH

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	94.2	86.3	100	mg/kg	13.6	56.1 to 115	0.581	ACCEPT.	10/31/17	JLH
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	162	142	146	mg/kg	13.5	84.5 to 199	1.48	ACCEPT.	10/31/17	JLH
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	189	199	211	mg/kg	29.2	146 to 247	0.342	ACCEPT.	10/31/17	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	543	540	700	mg/kg	62.3	378 to 770	0.0482	ACCEPT.	10/31/17	JLH
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	142	137	169	mg/kg	18.5	47.7 to 226	0.270	ACCEPT.	11/14/17	RKP

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	34.5	36.8	38.3	mg/L	2.35	29.8 to 43.9	0.979	ACCEPT.	11/2/17	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	0.443	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	11/2/17	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	21.6	23.1	23.9	mg/L	4.78	8.76 to 37.4	0.314	ACCEPT.	11/2/17	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0400	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/2/17	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	<0.0750	0.00	<0.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	11/2/17	JLH
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	<.075	mg/L	0.00	0.00 to 0.0750	n/a	ACCEPT.	11/2/17	NRV
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	2.37	2.16	2.60	mg/L	0.702	1.80 to 3.04	0.299	ACCEPT.	11/2/17	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/2/17	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	14.9	16.4	16.4	mg/L	5.88	1.64 to 34.0	0.255	ACCEPT.	11/2/17	JLH
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	6.96	6.67	6.75	pH units	0.293	6.15 to 7.35	0.990	ACCEPT.	10/31/17	AMG

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	112	114	111	oF	9.17	94.0 to 128	0.218	ACCEPT.	11/27/17	SEM

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	74.0	76.5	92.1	mg/kg	14.0	55.8 to 103	0.179	ACCEPT.	10/30/17	RKP
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	820	811	819	mg/kg	63.2	578 to 1040	0.142	ACCEPT.	10/30/17	RKP
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	430	311	374	mg/kg	21.7	139 to 483	5.48	ACCEPT.	10/30/17	RKP
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	78.1	77.0	79.2	mg/kg	5.55	54.0 to 100	0.198	ACCEPT.	10/30/17	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	317	355	437	mg/kg	47.5	213 to 498	0.800	ACCEPT.	10/30/17	RKP
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	481	529	550	mg/kg	51.4	299 to 759	0.934	ACCEPT.	10/30/17	RKP
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	410	525	806	ug/kg	105	80.6 to 1110	1.10	ACCEPT.	11/7/17	GJP
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	525	589	875	ug/kg	146	87.5 to 1340	0.438	ACCEPT.	11/7/17	GJP
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	494	580	839	ug/kg	169	83.9 to 1770	0.509	ACCEPT.	11/7/17	GJP
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	395	508	685	ug/kg	156	68.5 to 1130	0.724	ACCEPT.	11/7/17	GJP
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	116	167	201	ug/kg	38.5	80.8 to 256	1.32	ACCEPT.	11/7/17	GJP
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	300	408	494	ug/kg	122	180 to 636	0.885	ACCEPT.	11/7/17	GJP
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	40.3	58.4	73.4	ug/kg	14.3	7.34 to 122	1.27	ACCEPT.	11/7/17	GJP
5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	65.6	83.6	103	ug/kg	19.6	26.7 to 140	0.918	ACCEPT.	11/7/17	GJP
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	120	148	177	ug/kg	29.9	74.6 to 223	0.936	ACCEPT.	11/7/17	GJP

5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	174	233	290	ug/kg	56.7	29.0 to 466	1.04	ACCEPT.	11/7/17	GJP
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	193	257	281	ug/kg	61.9	28.1 to 523	1.03	ACCEPT.	11/7/17	GJP
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	226	313	390	ug/kg	77.5	39.0 to 629	1.12	ACCEPT.	11/7/17	GJP
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	246	296	416	ug/kg	62.7	41.6 to 631	0.797	ACCEPT.	11/7/17	GJP
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	266	373	398	ug/kg	87.7	39.8 to 710	1.22	ACCEPT.	11/7/17	GJP
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	342	361	611	ug/kg	64.3	61.1 to 711	0.295	ACCEPT.	11/7/17	GJP
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	397	513	688	ug/kg	145	217 to 809	0.800	ACCEPT.	11/7/17	GJP
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	122	168	218	ug/kg	37.7	21.8 to 332	1.22	ACCEPT.	11/7/17	GJP
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	21.8	22.3	23.4	mg/kg	2.19	4.67 to 39.9	0.228	ACCEPT.	11/3/17	SEM

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B --2007	134	132	149	ug/kg	25.2	40.3 to 224	0.0794	ACCEPT.	11/10/17	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B --2007	109	112	124	ug/kg	20.0	37.3 to 185	0.150	ACCEPT.	11/10/17	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B --2007	138	133	156	ug/kg	24.0	35.3 to 229	0.208	ACCEPT.	11/10/17	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B --2007	83.2	82.4	92.1	ug/kg	14.6	26.8 to 138	0.0548	ACCEPT.	11/10/17	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B --2007	139	149	165	ug/kg	24.8	49.6 to 247	0.403	ACCEPT.	11/10/17	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B --2007	328	306	363	ug/kg	42.4	117 to 510	0.519	ACCEPT.	11/10/17	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B --2007	391	344	388	ug/kg	43.2	117 to 572	1.09	ACCEPT.	11/10/17	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B --2007	374	374	415	ug/kg	44.8	169 to 559	0	ACCEPT.	11/10/17	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B --2007	319	315	361	ug/kg	32.9	127 to 500	0.122	ACCEPT.	11/10/17	RDK

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	399	359	414	ug/kg	40.8	131 to 586	0.980	ACCEPT.	11/10/17	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	209	206	230	ug/kg	32.9	52.4 to 359	0.0912	ACCEPT.	11/2/17	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	150	158	182	ug/kg	27.2	67.6 to 245	0.294	ACCEPT.	11/10/17	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	180	167	207	ug/kg	27.3	20.7 to 312	0.476	ACCEPT.	11/10/17	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	54.3	58.4	68.7	ug/kg	9.51	6.87 to 110	0.431	ACCEPT.	11/10/17	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	247	264	305	ug/kg	35.8	104 to 421	0.475	ACCEPT.	11/10/17	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	140	145	170	ug/kg	21.0	58.7 to 226	0.238	ACCEPT.	11/10/17	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	256	234	264	ug/kg	31.9	26.4 to 438	0.690	ACCEPT.	11/10/17	RDK
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	1660	1538	1620	ug/kg	149	1090 to 1990	0.819	ACCEPT.	11/10/17	RDK

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	31.1	17.7	22.3	mg/kg	7.51	11.0 to 24.5	1.78	NOT ACCEPT.	11/1/17	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<4.86	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/1/17	TKT
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<4.86	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/1/17	TKT
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<4.86	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/1/17	TKT

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	405	266	369	ug/kg	132	36.9 to 659	1.05	ACCEPT.	11/4/17	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	270	216	183	ug/kg	84.7	18.3 to 470	0.638	ACCEPT.	11/4/17	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	602	442	667	ug/kg	137	66.7 to 853	1.17	ACCEPT.	11/13/17	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	802	488	992	ug/kg	243	99.2 to 1220	1.29	ACCEPT.	11/25/17	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	1070	652	894	ug/kg	372	89.4 to 1770	1.12	ACCEPT.	11/21/17	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/4/17	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	269	167	193	ug/kg	68.9	19.3 to 381	1.48	ACCEPT.	11/21/17	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	675	474	727	ug/kg	205	72.7 to 1090	0.980	ACCEPT.	11/21/17	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/17	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	8740	9445	13830	ug/kg	1550	1380 to 17600	0.455	ACCEPT.	10/31/17	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	8340	8576	13590	ug/kg	1469	1360 to 17300	0.161	ACCEPT.	10/31/17	GJP
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	2670	2899	4420	ug/kg	499	442 to 5810	0.459	ACCEPT.	10/30/17	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	2830	3107	3980	ug/kg	399	903 to 5320	0.694	ACCEPT.	10/30/17	GJP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5450	5781	7320	ug/kg	664	2040 to 9520	0.498	ACCEPT.	10/30/17	GJP

6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	3350	3805	5060	ug/kg	454	1210 to 6410	1.00	ACCEPT.	10/30/17	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	3950	3911	5640	ug/kg	705	1800 to 6200	0.0553	ACCEPT.	10/30/17	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	1790	3260	8430	ug/kg	1769	843 to 8550	0.831	ACCEPT.	10/30/17	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/17	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	6140	7553	8930	ug/kg	915	2070 to 13000	1.54	ACCEPT.	10/30/17	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	6780	7775	10250	ug/kg	1043	3520 to 12000	0.954	ACCEPT.	10/31/17	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	4960	5218	7200	ug/kg	647	1780 to 8660	0.399	ACCEPT.	10/30/17	GJP
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	1760	1992	2900	ug/kg	241	500 to 3480	0.963	ACCEPT.	10/30/17	GJP
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	1870	2667	3750	ug/kg	615	375 to 6510	1.30	ACCEPT.	10/30/17	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/17	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	2640	2653	3450	ug/kg	304	386 to 4910	0.0428	ACCEPT.	10/30/17	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	6880	9328	12730	ug/kg	1490	2240 to 16400	1.64	ACCEPT.	10/31/17	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	9050	10124	13440	ug/kg	1241	4140 to 16200	0.865	ACCEPT.	10/31/17	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	4850	5408	6760	ug/kg	661	2020 to 8790	0.844	ACCEPT.	10/30/17	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	6920	8091	11090	ug/kg	1020	3030 to 13100	1.15	ACCEPT.	10/31/17	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	7590	7069	10060	ug/kg	1430	2780 to 11400	0.364	ACCEPT.	10/31/17	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	7230	7676	10830	ug/kg	1606	1080 to 17300	0.278	ACCEPT.	10/31/17	GJP
5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/17	GJP
5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/17	GJP

5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	2840	0.00	<1000	ug/kg	0.00	0.00 to 1000	n/a	NOT ACCEPT.	10/31/17	GJP
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	7590	8109	10100	ug/kg	923	4520 to 11800	0.562	ACCEPT.	10/31/17	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	6510	7378	9270	ug/kg	840	3610 to 11100	1.03	ACCEPT.	10/31/17	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	8330	9380	11420	ug/kg	1203	4110 to 14600	0.873	ACCEPT.	10/31/17	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	2210	2500	3130	ug/kg	311	986 to 4030	0.932	ACCEPT.	10/30/17	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	3450	4352	5230	ug/kg	644	1720 to 7000	1.40	ACCEPT.	10/30/17	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	8120	9164	10950	ug/kg	952	3740 to 14600	1.10	ACCEPT.	10/31/17	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	2480	2632	4260	ug/kg	275	825 to 4680	0.553	ACCEPT.	10/30/17	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	7690	7825	11300	ug/kg	1059	2230 to 13400	0.127	ACCEPT.	10/31/17	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/17	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/17	GJP
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	4170	4905	5880	ug/kg	573	2420 to 7380	1.28	ACCEPT.	10/30/17	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	1560	1820	1860	ug/kg	337	528 to 3120	0.772	ACCEPT.	10/30/17	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	7480	8319	10920	ug/kg	1604	2410 to 14200	0.523	ACCEPT.	10/31/17	GJP
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	8670	9153	11370	ug/kg	1315	3780 to 14500	0.367	ACCEPT.	10/31/17	GJP
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	4880	5265	6680	ug/kg	585	2380 to 8230	0.658	ACCEPT.	10/30/17	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	6350	6293	8710	ug/kg	1124	2570 to 10000	0.0507	ACCEPT.	10/30/17	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	5900	6072	8620	ug/kg	881	3670 to 9480	0.195	ACCEPT.	10/30/17	GJP
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	1500	1667	1860	ug/kg	255	626 to 2690	0.655	ACCEPT.	10/30/17	GJP
6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	7610	8687	10890	ug/kg	1191	4070 to 13400	0.904	ACCEPT.	10/31/17	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/17	GJP

4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	7800	9703	13250	ug/kg	1310	2960 to 16400	1.45	ACCEPT.	10/31/17	GJP
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	5870	6433	9680	ug/kg	1019	968 to 12900	0.553	ACCEPT.	10/30/17	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	7970	8400	10370	ug/kg	1324	1890 to 14900	0.325	ACCEPT.	10/31/17	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	4430	4344	5570	ug/kg	313	1440 to 7240	0.275	ACCEPT.	10/30/17	GJP
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/17	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	6150	7386	10280	ug/kg	1048	1970 to 13000	1.18	ACCEPT.	10/31/17	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	5510	5700	7670	ug/kg	625	1820 to 9650	0.304	ACCEPT.	10/30/17	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	3540	3605	5030	ug/kg	789	503 to 7380	0.0824	ACCEPT.	10/30/17	GJP
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	3600	4067	5160	ug/kg	538	1860 to 6300	0.868	ACCEPT.	10/30/17	GJP
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	5690	6383	8600	ug/kg	951	1740 to 11000	0.729	ACCEPT.	10/30/17	GJP
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	1150	1395	1620	ug/kg	202	502 to 2290	1.21	ACCEPT.	10/30/17	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/17	GJP
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
4659	2,2-Oxybis(1-chloropropane)	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												
5610	Benzoic acid	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --

6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	5880	5353	5580	ug/kg	491	4070 to 7150	1.07	ACCEPT.	10/27/17	MJP
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	<530	0.00	<600	ug/kg	0.00	0.00 to 600	n/a	ACCEPT.	10/27/17	MJP
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	5600	5230	5850	ug/kg	401	3540 to 7930	0.923	ACCEPT.	10/27/17	MJP
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	<732	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/27/17	MJP
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	2080	2093	2140	ug/kg	295	1390 to 2880	0.0441	ACCEPT.	10/27/17	MJP
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	4570	4630	4480	ug/kg	973	2240 to 6720	0.0617	ACCEPT.	10/27/17	MJP
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	2370	2313	2680	ug/kg	187	1480 to 3890	0.305	ACCEPT.	10/27/17	MJP
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	7880	7340	7540	ug/kg	737	4530 to 10600	0.733	ACCEPT.	10/27/17	MJP

5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	5170	5255	5480	ug/kg	553	3290 to 7670	0.154	ACCEPT.	10/27/17	MJP
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	6470	6557	6390	ug/kg	501	3830 to 8950	0.174	ACCEPT.	10/27/17	MJP
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6160	5907	6240	ug/kg	418	4680 to 7800	0.605	ACCEPT.	10/27/17	MJP
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<663	0.00	<930	ug/kg	0.00	0.00 to 930	n/a	ACCEPT.	10/27/17	MJP
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	4520	4456	4760	ug/kg	266	3330 to 6190	0.241	ACCEPT.	10/27/17	MJP
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	9010	8510	9850	ug/kg	631	7920 to 12000	0.792	ACCEPT.	10/27/17	MJP
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	7290	6943	7150	ug/kg	511	5520 to 8670	0.679	ACCEPT.	10/27/17	MJP
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	5210	5640	6230	ug/kg	1785	1490 to 10300	0.241	ACCEPT.	10/27/17	MJP
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	15900	17900	19350	ug/kg	3406	9680 to 29000	0.587	ACCEPT.	10/27/17	MJP
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	8300	8285	8260	ug/kg	682	4130 to 12400	0.0220	ACCEPT.	10/27/17	MJP
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	9200	9968	12540	ug/kg	3899	3520 to 19200	0.197	ACCEPT.	10/27/17	MJP
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	3940	4039	3830	ug/kg	402	2870 to 4790	0.246	ACCEPT.	10/27/17	MJP
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	5530	4727	5660	ug/kg	1322	4310 to 6550	0.607	ACCEPT.	10/27/17	MJP
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	5500	5604	5820	ug/kg	421	3780 to 7860	0.247	ACCEPT.	10/27/17	MJP
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	3080	3166	2990	ug/kg	342	1790 to 4190	0.251	ACCEPT.	10/27/17	MJP
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	<480	0.00	<480	ug/kg	0.00	0.00 to 480	n/a	ACCEPT.	10/27/17	MJP
4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	7180	6890	7310	ug/kg	665	5480 to 9130	0.436	ACCEPT.	10/27/17	MJP

4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	<550	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT.	10/27/17	MJP
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	6250	6436	6780	ug/kg	635	4060 to 9490	0.293	ACCEPT.	10/27/17	MJP
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	4550	4633	5040	ug/kg	288	3020 to 7050	0.288	ACCEPT.	10/27/17	MJP
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	8040	7883	7980	ug/kg	776	5580 to 10400	0.202	ACCEPT.	10/27/17	MJP
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	3700	3942	3830	ug/kg	387	2300 to 5360	0.625	ACCEPT.	10/27/17	MJP
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	8530	8044	8860	ug/kg	626	6200 to 11500	0.776	ACCEPT.	10/27/17	MJP
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	6070	6390	5590	ug/kg	507	3920 to 7270	0.631	ACCEPT.	10/27/17	MJP
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	6840	7339	6670	ug/kg	658	4000 to 9340	0.758	ACCEPT.	10/27/17	MJP
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	4870	5058	4760	ug/kg	501	2770 to 6550	0.375	ACCEPT.	10/27/17	MJP
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	8360	7970	8610	ug/kg	717	5160 to 12100	0.544	ACCEPT.	10/27/17	MJP
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<2500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP

4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	9140	8480	9290	ug/kg	585	6280 to 12600	1.13	ACCEPT.	10/27/17	MJP
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	2860	3011	2870	ug/kg	609	2150 to 3590	0.248	ACCEPT.	10/27/17	MJP
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	6990	6989	7410	ug/kg	705	5190 to 9630	0.0014	ACCEPT.	10/27/17	MJP
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/27/17	MJP
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	5260	5497	6260	ug/kg	413	3750 to 8770	0.574	ACCEPT.	10/27/17	MJP
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	<638	0.00	<643	ug/kg	0.00	0.00 to 643	n/a	ACCEPT.	10/27/17	MJP
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/27/17	MJP
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												
4835	Hexachlorobutadiene	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												

5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	226	249	254	ug/kg	32.8	137 to 362	0.701	ACCEPT.	11/10/17	RDK

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	<0.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	11/6/17	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	3.92	4.01	12.3	mg/L	1.22	1.23 to 13.5	0.0738	ACCEPT.	11/7/17	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	7.07	8.93	13.4	mg/L	2.03	2.84 to 15.0	0.916	ACCEPT.	11/7/17	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	1.33	1.25	3.36	mg/L	0.393	0.336 to 3.70	0.204	ACCEPT.	11/7/17	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	0.673	0.924	1.34	mg/L	0.219	0.267 to 1.58	1.15	ACCEPT.	11/7/17	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	GJP
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.134	0.150	0.140	mg/L	0.0226	0.0722 to 0.218	0.708	ACCEPT.	11/21/17	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.535	0.620	0.620	mg/L	0.120	0.260 to 0.980	0.708	ACCEPT.	11/21/17	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	0.221	0.233	0.260	mg/L	0.0170	0.182 to 0.284	0.706	ACCEPT.	11/7/17	TKT
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	TKT
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/7/17	TKT
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/7/17	TKT
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/7/17	TKT
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	0.0205	0.0318	0.0600	mg/L	0.0159	0.0060 to 0.0800	0.711	ACCEPT.	11/7/17	TKT
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/6/17	TKT

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	2150	2443	2720	mg/kg	193	734 to 4150	1.52	ACCEPT.	11/1/17	SEM
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-115

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.70	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	11/3/17	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<1.70	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	11/3/17	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<1.60	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	11/3/17	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	12.8	21.2	28.1	mg/kg	9.70	4.40 to 41.2	0.866	ACCEPT.	11/3/17	TKT
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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SM-115

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 657/PAR)

Client: Fibertec (Internal) Project/Document Control Number: 81468

Sample Number(s): -005 Date Initiated: 01/02/18 Date Due: 01/16/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Inorganic (Wet Chemistry / Metals / Digestions) ☒ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The reported value for Arochlor 1248 was 31.1 mg/Kg which was above the acceptance criteria. The assigned value was 22.3 mg/Kg with a mean of 17.7 mg/Kg and an acceptance range of 11.0 to 24.5 mg/Kg. Please investigate this issue to determine the cause of the error and propose a corrective action to prevent the reoccurrence of this issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

1) The sample was re-diluted and re-run to make sure the dilution was correct, the result was 27.9 mg/kg. 2) The second vial of the PE was extracted and analyzed – the result was 29.9 mg/kg. 3) A different instrument was recalibrated (a 2nd standard for the ICV) and the second vial was re-analyzed – the result was 30.4 mg/kg. 4) An LCS/LCD were extracted and analyzed (the spike being a 3rd standard) with recoveries of 88% and 74%. 5) An old PE sample (where we still had the second vial) was extracted – we initially reported 14.9 mg/kg, the spiked amount was 27.9 mg/kg, new result was 18.5 mg/kg.

Investigator(s): Bethany DeArmett

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Based on the above investigation, we believe that the problem is not with the lab, but with the standard provided to us. Therefore, as long as the remedial PE is passed, no corrective action is necessary.

QA Approval: Ken Mueller

Follow-Up Required? (If required, reference this Report) Yes ☑ No ☐ This will be closed once the PE has been passed **

VI. Approvals:

Managerial: DS Area Supervisor: Bethany DeArmett 1.30.18

Date Closed: 3/19/18

remedial PT has passed

CSPCBA01 (PCB with Averag

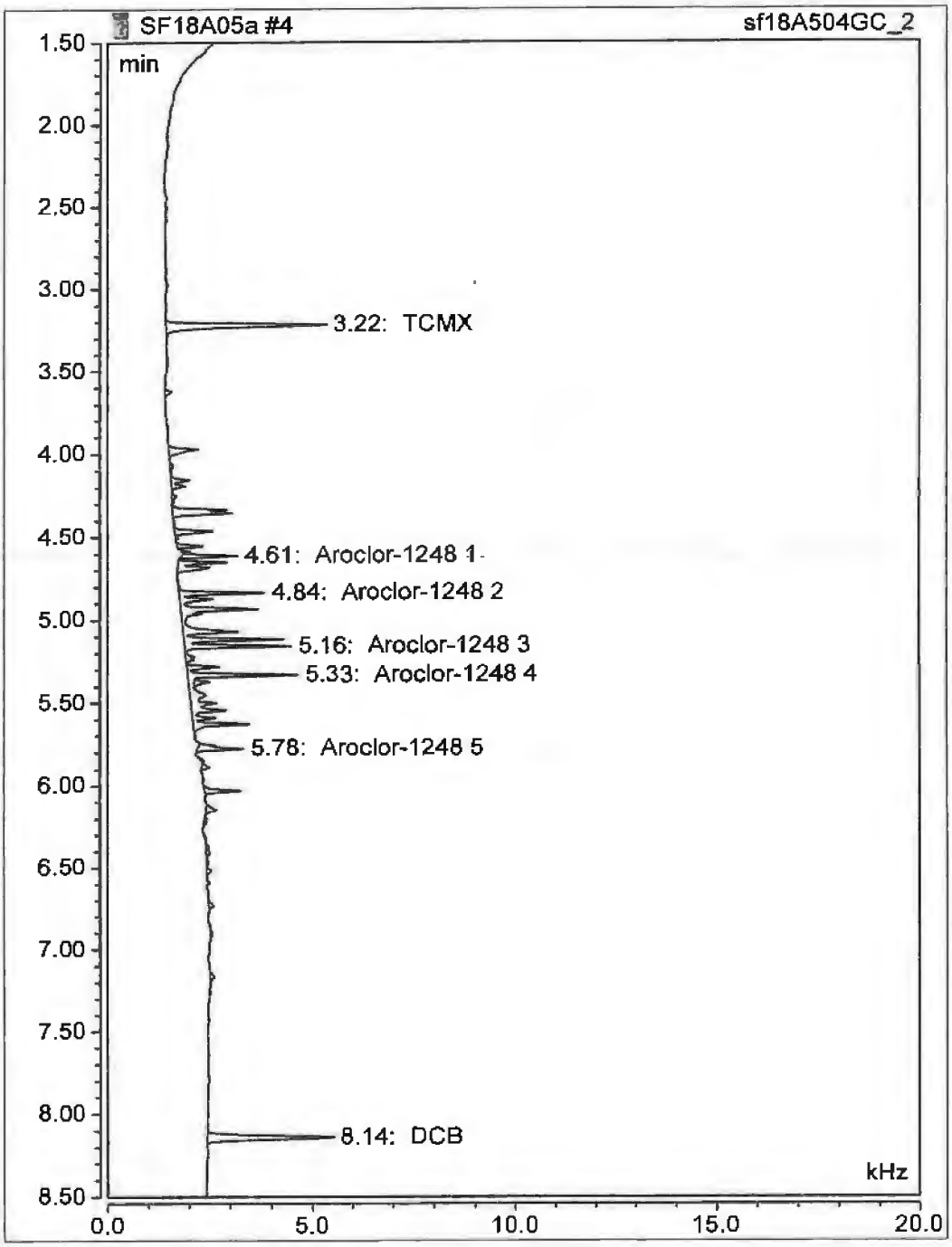
Sample Analysis Report

Sample Name:	sf18A504	**Sample ID:**	1248 1000 01/05	**Sample No.:**	4
Sequence Name:	SF18A05a	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	12:55 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
82	Aroclor-1248 1	bMb	4.61	0.021	1.357	881.4535	
85	Aroclor-1248 2	BM	4.84	0.036	2.081	1012.0265	
91	Aroclor-1248 3	M	5.16	0.044	2.590	987.8784	
95	Aroclor-1248 4	M	5.33	0.053	2.678	1017.7067	
104	Aroclor-1248 5	BMB	5.78	0.021	1.113	953.9048	970.5940
138	DCB	BMB	8.14	0.083	3.110	96.3860	96.3860
53	TCMX	BMB	3.22	0.101	3.951	72.1181	72.1181

1-30-18

Sample Name:	sf18A504	**Sample ID:**	1248 1000 01/05	**Sample No.:**	4
Sequence Name:	SF18A05a	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06			**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07	**Units:**	ug/L	**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	12:55 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000

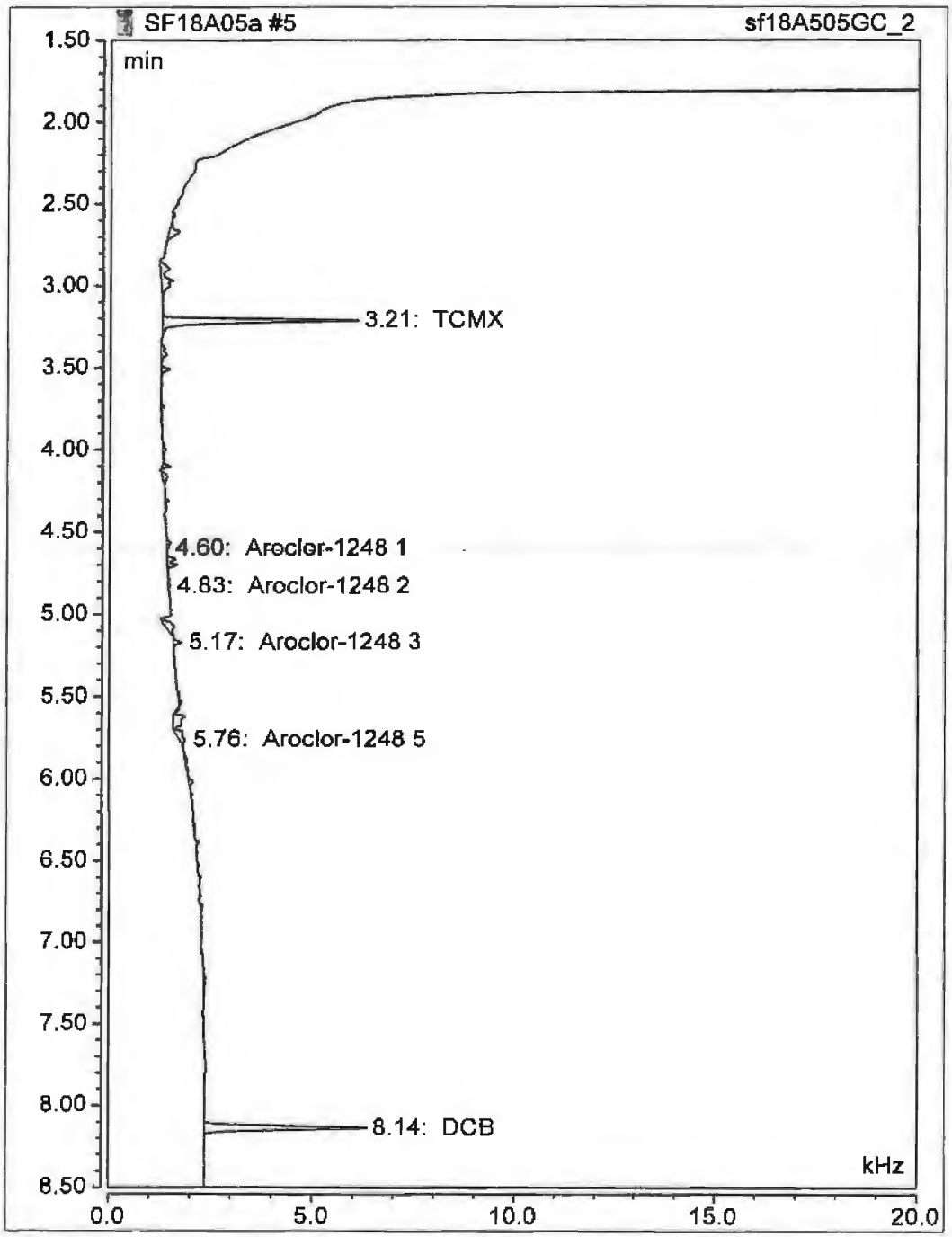


CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sf18A505	**Sample ID:**	blank	**Sample No.:**	5
Sequence Name:	SF18A05a	**Misc:**	a02b	**Sample Pos.:**	13
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	1:07 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
75	Aroclor-1248 1	MB	4.60	0.001	0.040	n.a.	
82	Aroclor-1248 2	MB	4.83	0.001	0.063	n.a.	
88	Aroclor-1248 3	bM	5.17	0.005	0.207	2.3732	
n.a.	Aroclor-1248 4	n.a.	n.a.	n.a.	n.a.	n.a.	
99	Aroclor-1248 5	MB	5.76	0.007	0.155	78.6045	40.4888
141	DCB	BMB	8.14	0.110	3.994	125.7341	125.7341
48	TCMX	M	3.21	0.124	4.826	89.3885	89.3885

Sample Name:	sf18A505	**Sample ID:**	blank	**Sample No.:**	5
Sequence Name:	SF18A05a	**Misc:**	a02b	**Sample Pos.:**	13
Program Method:	SFPCFA06			**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07	**Units:**	ug/L	**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	1:07 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

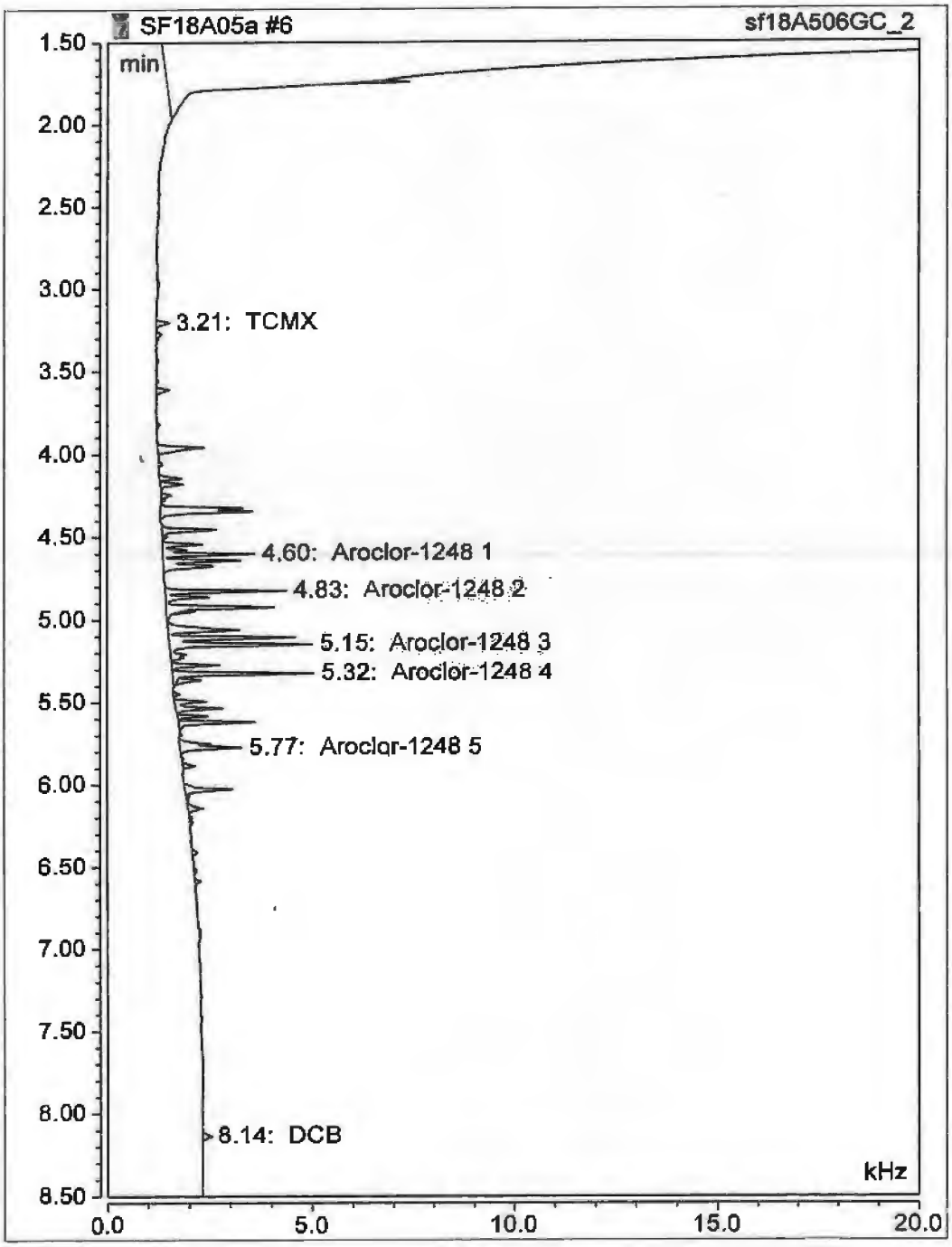
Sample Name:	sf18A506	**Sample ID:**	81468-005,06 20X	**Sample No.:**	6
Sequence Name:	SF18A05a	**Misc:**	j30a soil	**Sample Pos.:**	14
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	1:19 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
73	Aroclor-1248 1	M	4.60	0.044	2.238	1495.5400	
78	Aroclor-1248 2	BM	4.83	0.050	2.961	1469.8034	
86	Aroclor-1248 3	M	5.15	0.068	3.490	1359.9822	
90	Aroclor-1248 4	BMB	5.32	0.065	3.457	1334.3863	
99	Aroclor-1248 5	MB	5.77	0.029	1.515	1320.5703	1396.0564
143	DCB	BMB	8.14	0.006	0.245	1.1574	1.1574
48	TCMX	BMB	3.21	0.007	0.332	0.7545	0.7545

27.9 ug/kg

1-30-18

Sample Name:	sf18A506	Sample ID:	81468-005.06	Sample No.:	6
Sequence Name:	SF18A05a	Misc:	j30a soil	Sample Pos.:	14
Program Method:	SFPCFA06			Injection vol.:	0.5
Quantitation Method:	SFPCEA07	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/5/2018	1:19 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



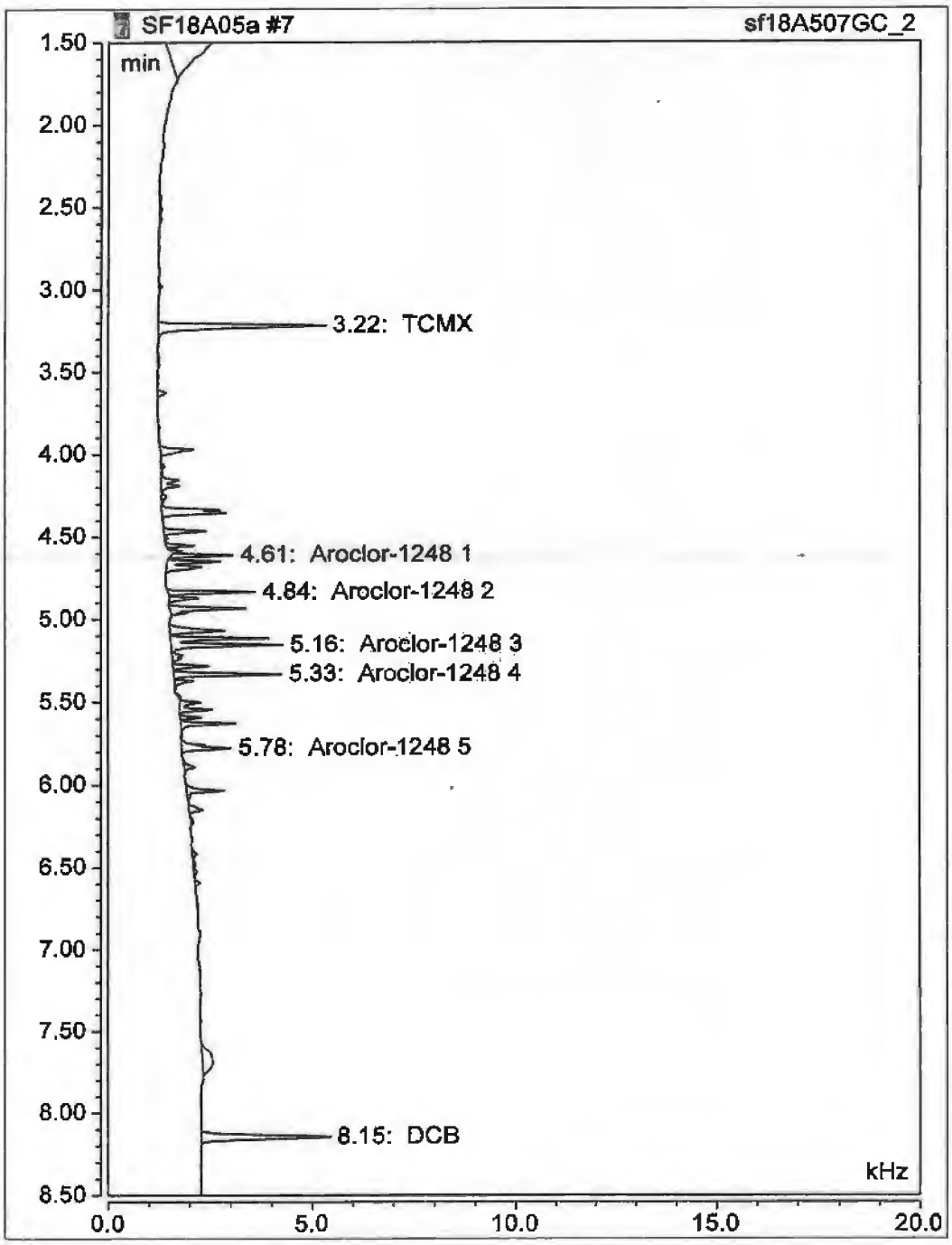
CSPCBA01 (PCB with Averag

Sample Analysis Report

Sample Name:	sf18A507	**Sample ID:**	1248 1000 01/05	**Sample No.:**	7
Sequence Name:	SF18A05a	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/5/2018	1:54 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
84	Aroclor-1248 1	bMb	4.61	0.023	1.506	985.1994	
88	Aroclor-1248 2	BMb	4.84	0.034	2.111	1027.2751	
95	Aroclor-1248 3	M	5.16	0.051	2.727	1044.3956	
99	Aroclor-1248 4	Mb	5.33	0.046	2.622	994.9069	
110	Aroclor-1248 5	BMB	5.78	0.028	1.205	1037.2435	1017.8041
150	DCB	BMB	8.15	0.086	3.176	98.5495	98.5495
58	TCMX	BMB	3.22	0.108	4.128	75.6138	75.6138

Sample Name:	sf18A507	Sample ID:	1248 1000 01/05	Sample No.:	7
Sequence Name:	SF18A05a	Misc:		Sample Pos.:	3
Program Method:	SFPCFA06			Injection vol.:	0.5
Quantitation Method:	SFPCEA07	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/5/2018	1:54 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



PCB AND PNA SOIL MICROWAVE EXTRACTION (EPA 3546)

2

PCB/PEST SURROGATE	PNA SURROGATE	PNA SPIKE
1 µg/mL	80 µg/mL	80 µg/mL
1000 µL added	1000 µL added	1000 µL added
Working # pcb/pest171227-05-1	Working # pnasurr180102-01-80	Working # pnaspk 171227-01-80

PCB SPIKE	PNA INT. STD.
10 µg/mL	2000 µg/mL
1000 µL added	20 µL added
Working # pcbspk 171227-04-10	Working # 35675

	Date	Tech Initl.		
in solvent	1/8/18	DW		
extracted	1/8/18	LT	71 °F	24 %RH
conc.	1/8/18	LT		
clean-up 400µL	1/8/18	DW	72 °F	23 %RH

PS18A08B.LCD-PNA
PNA/PCB

Initial	Sample #		PCB	PNA	Mass	Clean-up	Acid Clean-up	Comments (Final volume is 2mL unless noted.)
LT	MS		X	X	15.0	1		82624-003
LT	MSD		X	X	15.0	2		82624-003
LT	LCS		X	X	15.0	3		
LT	MB		X	X	15.0	4		
DW	82624	1	X	X	15.0	10		WET SANDY SOIL
DW		3	X	X	15.0	11		MOIST FINE SOIL MONITOR
DW		4	X	X	15.0	12		SANDY CLAY, DARK
DW		5	X	X	15.0	1		CLAY & gravel
DW		6	X	X	15.0	2		MOIST FINE SOIL
LT	82593	3	X		1.07	7		CAULK
DW		4	X		1.30	8		
DW		5	X		3.01	9		↓
DW	82581	1	X		15.0	5		SOIL GLASS PAPER
DW	82629	2		X	15.0			SANDY FINE SOIL
DW		3		X	15.0			BRICK BITS, MULTI COLORED SOIL
DW		6	X	X	15.0	3		CLAY SOIL BRICK, WOOD
DW		8		X	15.0			MOIST FINE SOIL
DW		9	X		15.0	4		MOIST FINE SOIL
DW		12		X	15.0			MUDDY WET FINE SOIL
Hold DW	82622	1	✓					CHECKING WITH CLIENT
DW	81468	5	X		10.0	6		PE-cup

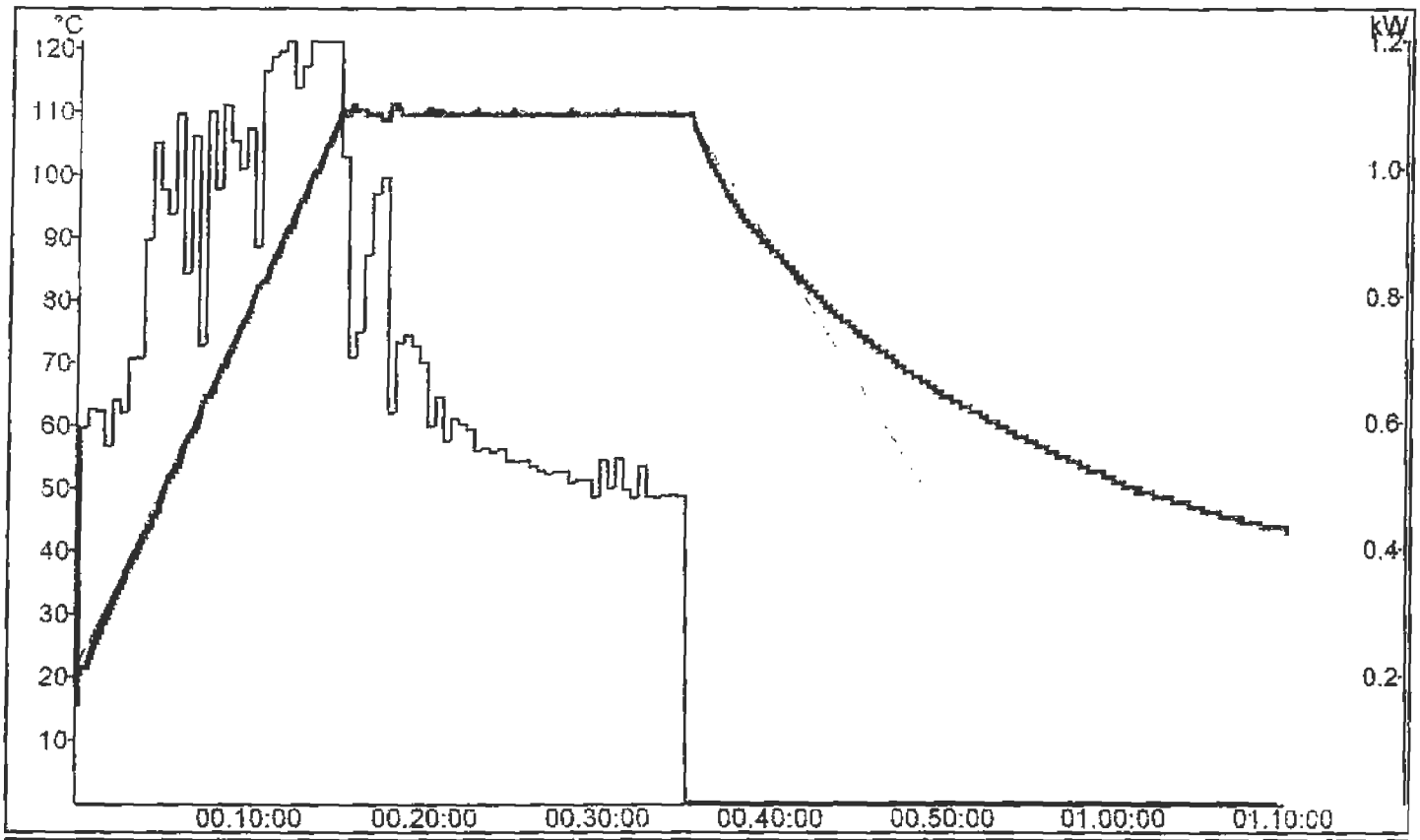
Fibertec # MeCl$_2$ 35911 Na$_2$SO$_4$ 180102 H$_2$SO$_4$ 34002

Buffer 171208 Florisil 35814 Balance ID 10002030 Sand ID 25028

Copper 35402 Hexane 35651 2mL Vials 35135

Keys to Symbols Surrogate X Spike O 1:1 MeCl$_2$:Acetone 180103 Permanganate

DCSID: S-579.5 (10/10/14)



Parameter "standard extraction.mpr"

Exhaust	:	20 min
QP-Check	:	not present
Stirrer	:	80 %
Twist	:	Off
Rotor control	:	not present
Start-Parameter	:	Current values
Control for	:	T1
System	:	*StarT*
Rotor	:	pro-rotor high throughput (24 Pos.)
Type of vessels	:	
Number of vessels	:	24
Cooling system	:	
Operating mode	:	Continuous Power

MW program "standard extraction.mpr"

Nr	t	T1	T2	P	E
1	00:15:00	110°C			1200W
2	00:20:00	110°C			1200W
3	00:15:00	45°C			0W

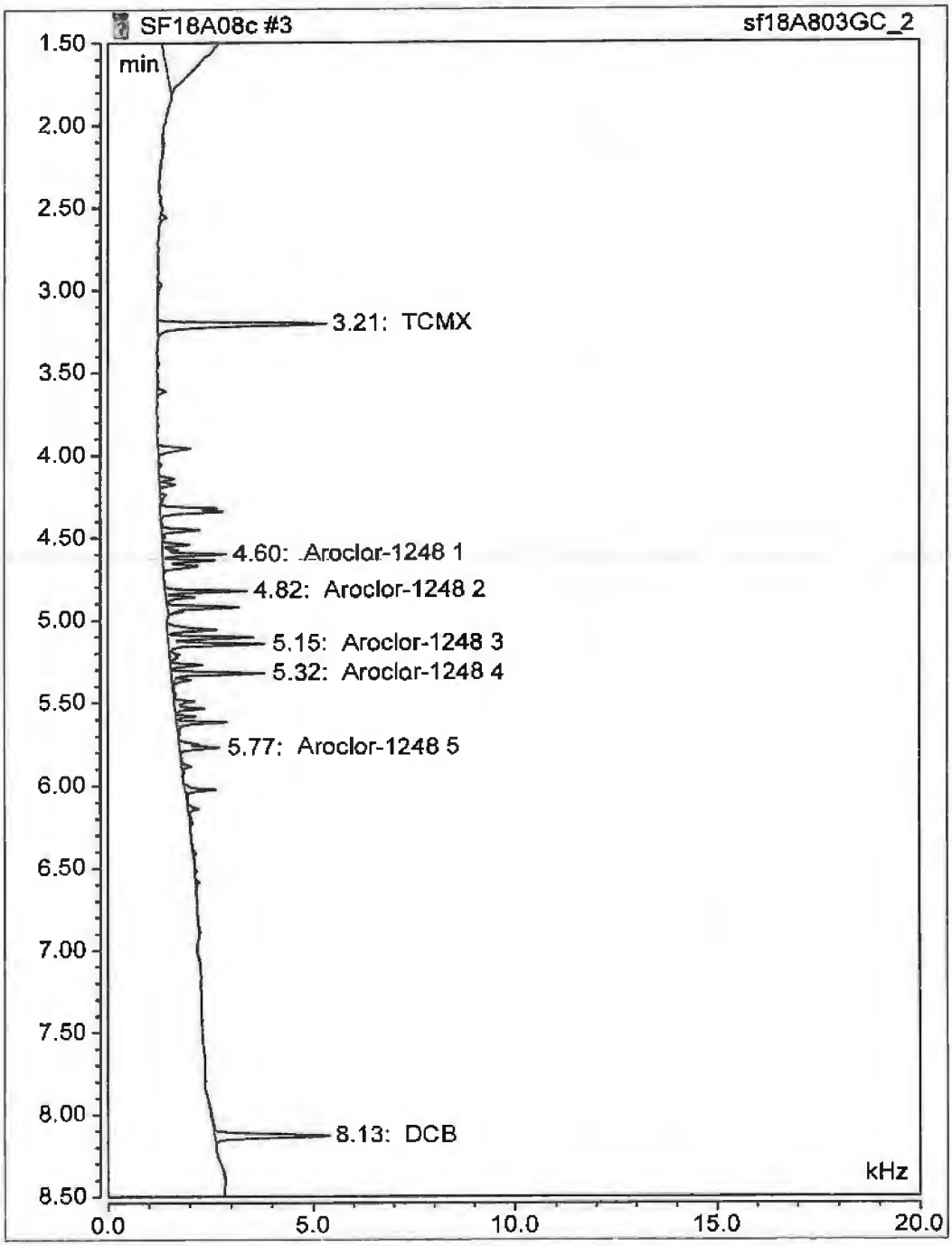
Remarks

CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sf18A803	**Sample ID:**	1248 1000 01/05	**Sample No.:**	3
Sequence Name:	SF18A08c	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/8/2018	4:22 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
89	Aroclor-1248 1	M	4.60	0.030	1.543	1010.9635	
92	Aroclor-1248 2	BM	4.82	0.034	1.989	963.7417	
99	Aroclor-1248 3	M	5.15	0.045	2.344	885.9740	
103	Aroclor-1248 4	M	5.32	0.044	2.285	858.1403	
114	Aroclor-1248 5	Mb	5.77	0.018	0.969	822.4330	908.2505
149	DCB	BMB	8.13	0.080	2.804	86.1947	86.1947
56	TCMX	BMB	3.21	0.114	4.143	75.9077	75.9077

Sample Name:	sf18A803	**Sample ID:**	1248 1000 01/05	**Sample No.:**	3
Sequence Name:	SF18A08c	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06			**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07	**Units:**	ug/L	**Dilution Factor:**	1.0000
Date Time Collected:	1/8/2018	4:22 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000

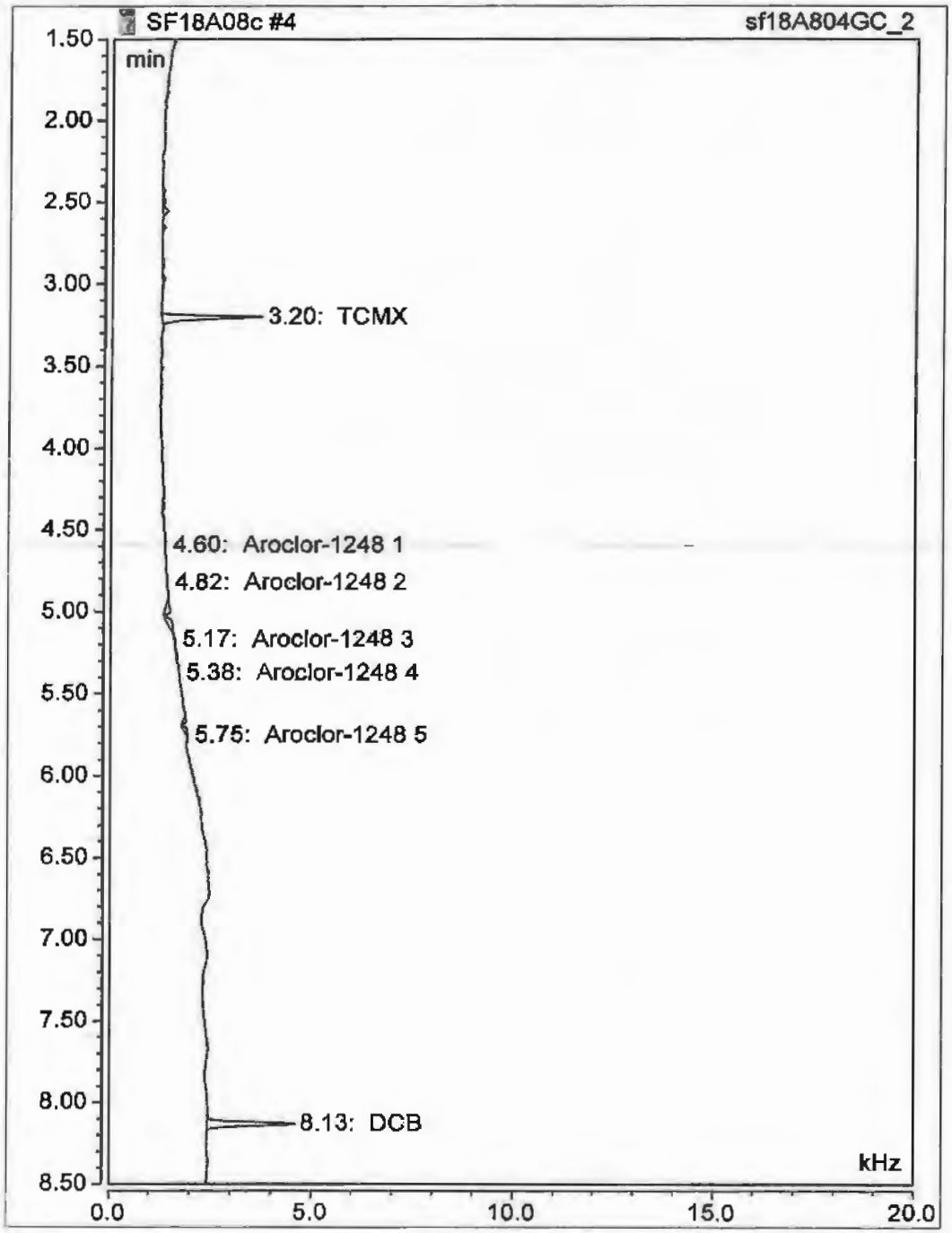


CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sf18A804	**Sample ID:**	blank	**Sample No.:**	4
Sequence Name:	SF18A08c	**Misc:**	a02a	**Sample Pos.:**	120
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/8/2018	4:34 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC 2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
108	Aroclor-1248 1	MB	4.60	0.000	0.022	n.a.	
113	Aroclor-1248 2	BMB	4.82	0.000	0.027	n.a.	
116	Aroclor-1248 3	bMB	5.17	0.001	0.031	n.a.	
118	Aroclor-1248 4	BMB	5.38	0.000	0.007	n.a.	
126	Aroclor-1248 5	MB	5.75	0.002	0.044	n.a.	n.a.
150	DCB	BMB	8.13	0.057	2.144	64.2757	64.2757
71	TCMX	BMb	3.20	0.059	2.485	43.2191	43.2191

Sample Name:	sf18A804	Sample ID:	blank	Sample No.:	4
Sequence Name:	SF18A08c	Misc:	a02a	Sample Pos.:	120
Program Method:	SFPCFA06			Injection vol.:	0.5
Quantitation Method:	SFPCEA07	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/8/2018	4:34 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



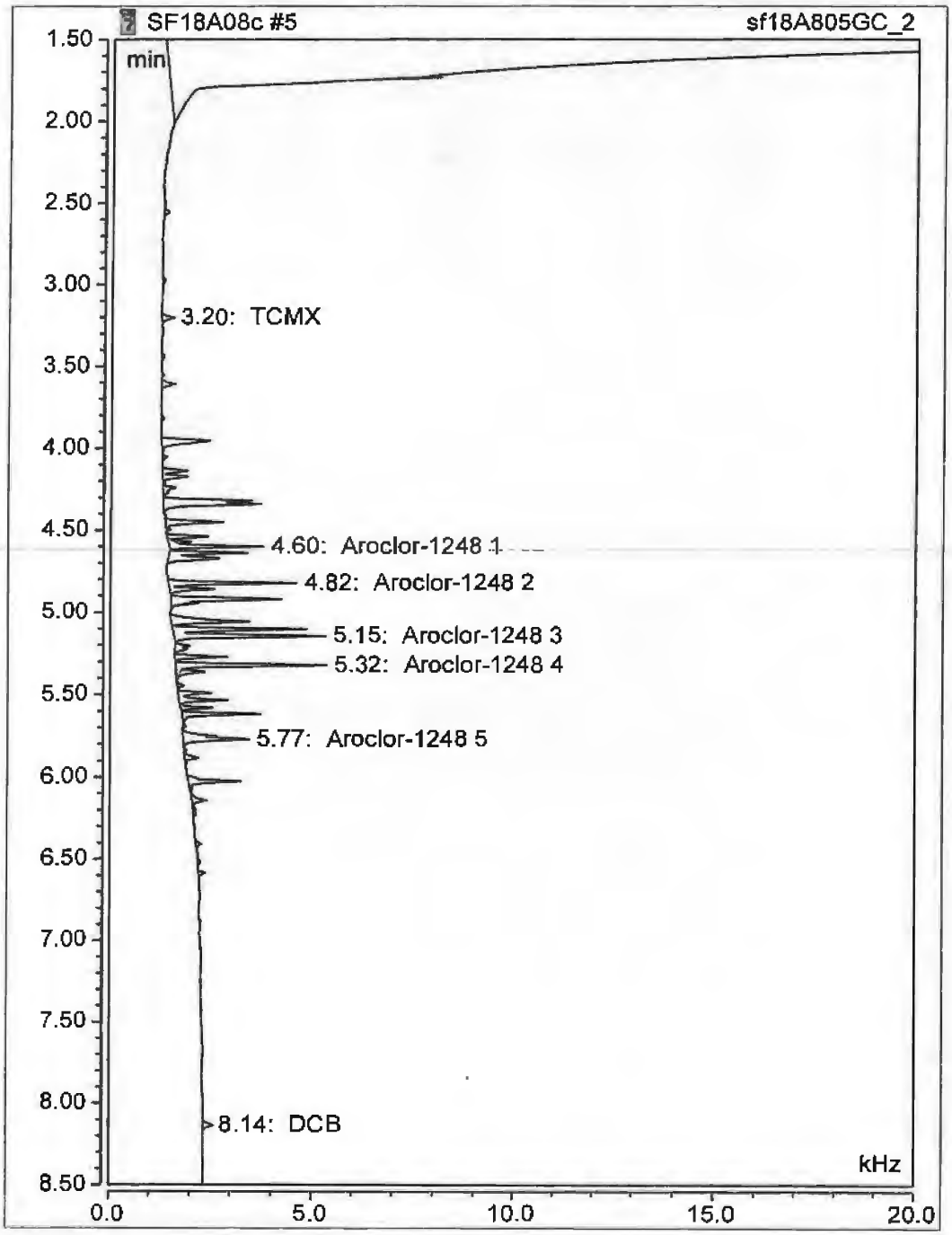
CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sf18A805	**Sample ID:**	81468-005.09	**Sample No.:**	5
Sequence Name:	SF18A08c	**Misc:**	a08b soil 20x	**Sample Pos.:**	121
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/8/2018	4:46 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
80	Aroclor-1248 1	Mb	4.60	0.043	2.337	1564.6102	
84	Aroclor-1248 2	BM	4.82	0.053	3.162	1574.4674	
92	Aroclor-1248 3	Mb	5.15	0.068	3.740	1463.2914	
96	Aroclor-1248 4	bM	5.32	0.070	3.728	1444.5324	
106	Aroclor-1248 5	Mb	5.77	0.031	1.636	1431.3774	1495.6558
154	DCB	BMB	8.14	0.007	0.262	1.7438	1.7438
53	TCMX	BMB	3.20	0.007	0.316	0.4355	0.4355

299 ug/kg

Sample Name:	sf18A805	Sample ID:	81468-005.09	Sample No.:	5
Sequence Name:	SF18A08c	Misc:	a08b soil 20x	Sample Pos.:	121
Program Method:	SFPCFA06			Injection vol.:	0.5
Quantitation Method:	SFPCEA07	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/8/2018	4:46 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



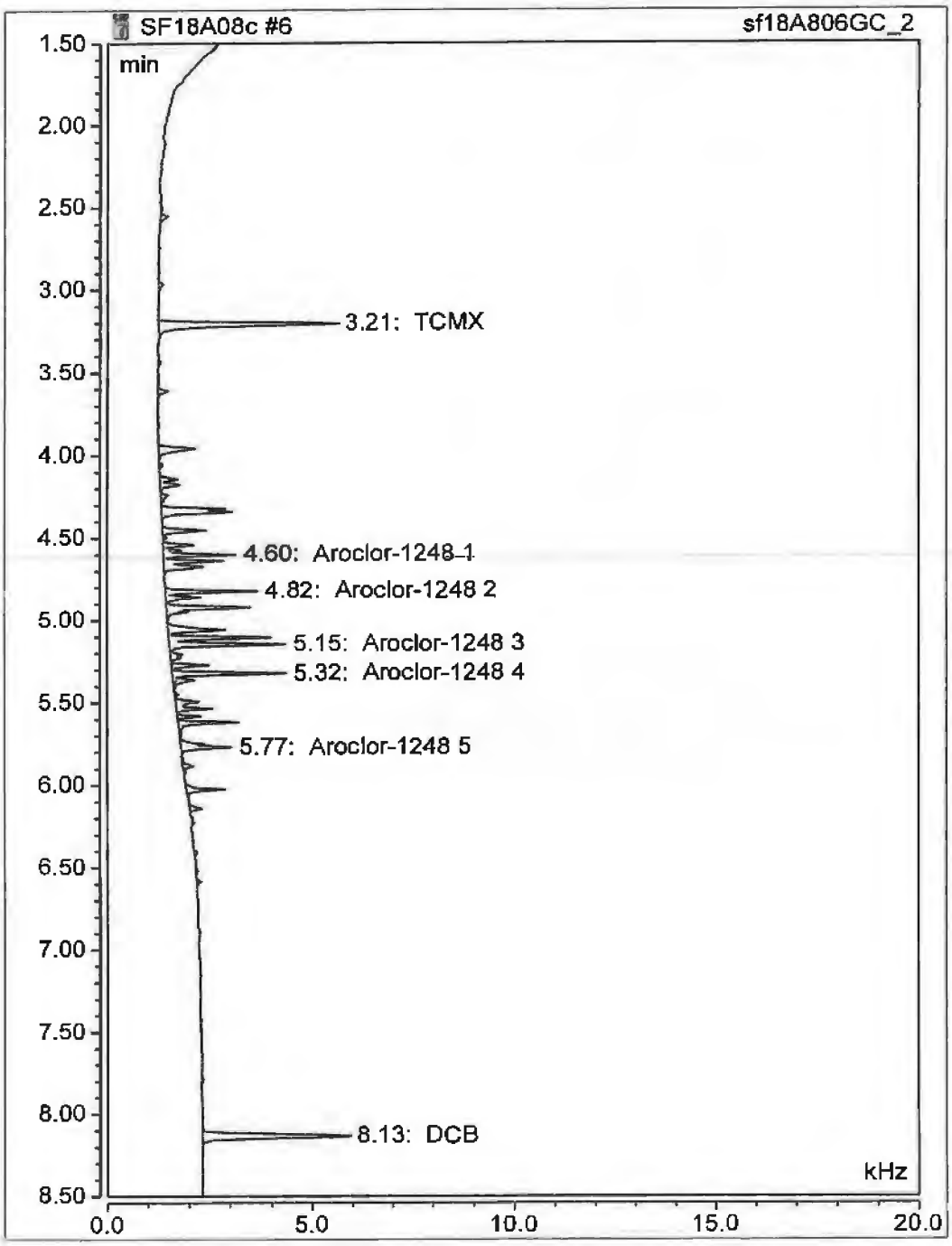
CSPCBA01 (PCB with Averag

Sample Analysis Report

Sample Name:	sf18A806	**Sample ID:**	1248 1000 01/05	**Sample No.:**	6
Sequence Name:	SF18A08c	**Misc:**		**Sample Pos.:**	3
Program Method:	SFPCFA06	**MethSav:**	01/05/18 13:03	**Injection vol.:**	0.5
Quantitation Method:	SFPCEA07			**Dilution Factor:**	1.0000
Date Time Collected:	1/8/2018	4:58 PM		**Sample Wt.:**	1.0000
Operator chemist			Chan: GC_2	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area kHz*min	Height kHz	Amount	Average ug/L
72	Aroclor-1248 1	M	4.60	0.034	1.767	1166.9713	
79	Aroclor-1248 2	BM	4.82	0.039	2.256	1102.7709	
87	Aroclor-1248 3	M	5.15	0.053	2.841	1091.7769	
91	Aroclor-1248 4	M	5.32	0.052	2.784	1060.7647	
102	Aroclor-1248 5	MB	5.77	0.022	1.234	1064.1604	1097.2888
151	DCB	MB	8.13	0.099	3.636	113.8327	113.8327
46	TCMX	BMB	3.21	0.116	4.429	81.5487	81.5487

Sample Name:	sf18A806	Sample ID:	1248 1000 01/05	Sample No.:	6
Sequence Name:	SF18A08c	Misc:		Sample Pos.:	3
Program Method:	SFPCFA06			Injection vol.:	0.5
Quantitation Method:	SFPCEA07	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/8/2018	4:58 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



PCB AND PNA SOIL MICROWAVE EXTRACTION (EPA 3546)

(3)

PCB/PEST SURROGATE
1 µg/mL
1000 µL added
Working # pcb/pebsur171227-05-1

PNA SURROGATE
80 µg/mL
1000 µL added
Working # pnasur 180102-01-80

PNA SPIKE
80 µg/mL
1000 µL added
Working # pnaspk 171227-01-80

PCB SPIKE
10 µg/mL
1000 µL added
Working # pcbspk 171227-04-10

PNA INT. STD.
2000 µg/mL
20 µL added
Working # 35625

	Date	Tech Initl.
in solvent	1/8/18	DW
extracted	1/8/18	LT
conc.	1/8/18	LT
clean-up 400µL	1/8/18	DW

71 °F 24 %RH

72 °F 23 %RH

PS18A08B.LCD-PNA
PNA/PCB

Initial	Sample #		PCB	PNA	Mass	Clean-up	Acid Clean-up	Comments
LT	MS		X	X	15.0	1		Final volume is 2mL unless noted. 82624-003
LT	MSD		X	X	15.0	2		82624-003
LT	LCS		X	X	15.0	3		
LT	MB		X	X	15.0	4		
DW	82624	1	X	X	15.0	10		WET SANDY SOIL
DW		3	X	X	15.0	11		MOIST FINE SOIL MONITOR
DW		4	X	X	15.0	12		SANDY CLAY, DARK
DW		5	X	X	15.0	1		CLAY & gravel
DW		6	X	X	15.0	2		MOIST FINE SOIL
LT	82593	3	X		1.07	7		CAULK
DW		4	X		1.30	8		↓
DW		5	X		3.01	9		↓
DW	82581	1	X		15.0	5		SOIL GLASS, PAPER
DW	82629	2		X	15.0			SANDY FINE SOIL
DW		3		X	15.0			BRICK BITS, MULTI COLORED SOIL
DW		6	X	X	15.0	3		CLAY SOIL, BRICK, WOOD
DW		8		X	15.0			MOIST FINE SOIL
DW		9	X		15.0	4		MOIST FINE SOIL
DW		12		X	15.0			MUDDY WET FINE SOIL
Take DW	82622	1						CHECKING WITH CLIENT
DW	81468	5	X		10.0	6		PE-syrup

Fibertec # MeCl$_2$ 35911 Na$_2$SO$_4$ 180102 H$_2$SO$_4$ 34002

Buffer 171208 Florisil 35814 Balance ID 10002030 Sand ID 25028

Copper 35402 Hexane 35651 2mL Vials 35135

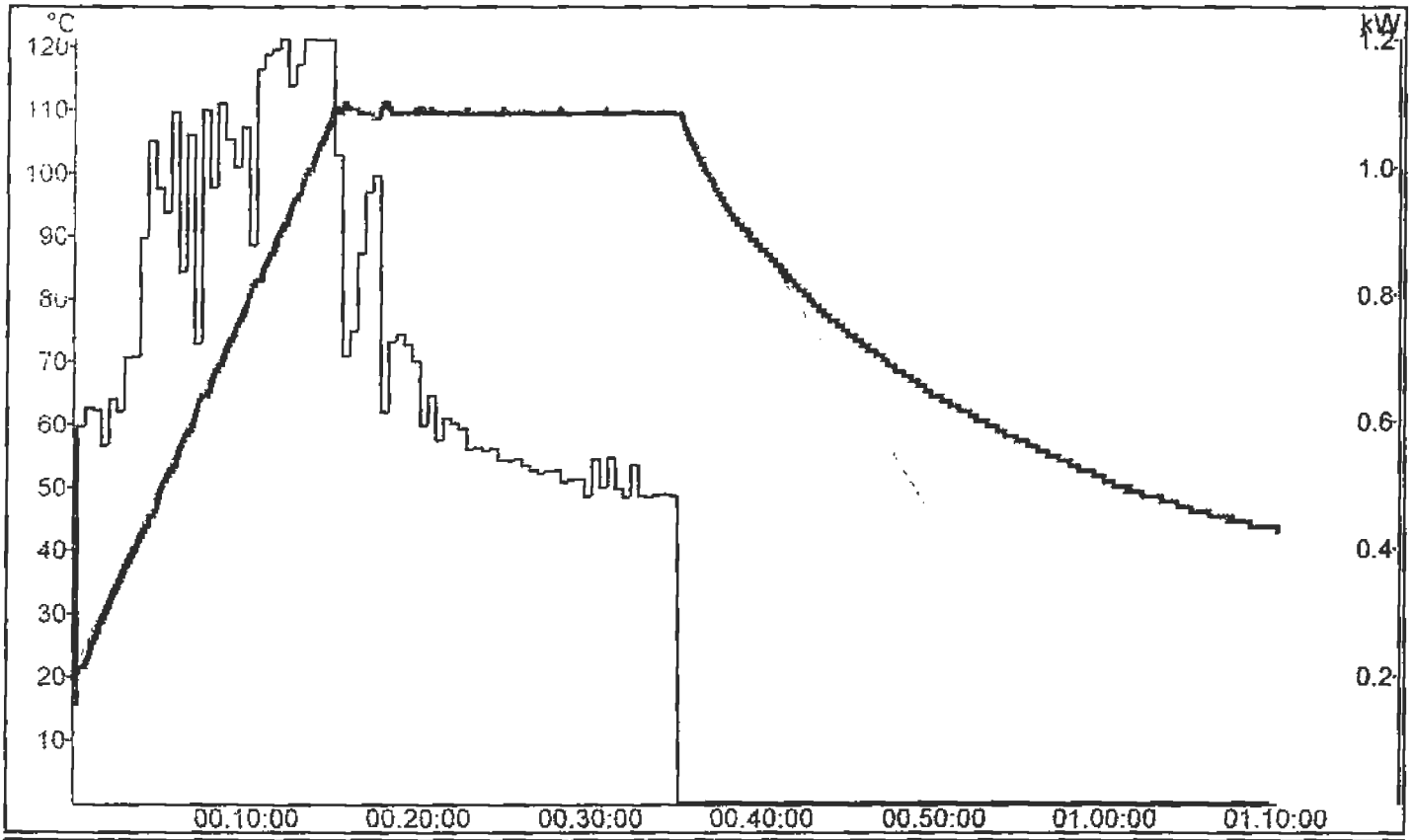
Keys to Symbols Surrogate X Spike O 1:1 MeCl$_2$:Acetone 180103 Permanganate

DCSID: S-579.5 (10/10/14)

PS18A08B LCD-PCB

PNA/PCB

Created from "User"
1/8/2018 10:38:07



Parameter "standard extraction.mpr"

Exhaust	:	20 min
QP-Check	:	not present
Stirrer	:	80 %
Twist	:	Off
Rotor control	:	not present
Start-Parameter	:	Current values
Control for	:	T1
System	:	*StarT*
Rotor	:	pro-rotor high throughput (24 Pos.)
Type of vessels	:	
Number of vessels	:	24
Cooling system	:	
Operating mode	:	Continuous Power

MW program "standard extraction.mpr"

Nr	t	T1	T2	P	E
1	00:15:00	110°C			1200W
2	00:20:00	110°C			1200W
3	00:15:00	45°C			0W

Remarks

CSPCBA01 (PCB with Averag

Sample Analysis Report

Sample Name:	sa18B02	Sample ID:	500 pcb ccv 01/0:	Sample No.:	2
Sequence Name:	SA18a11a	Misc:		Sample Pos.:	1
Program Method:	sapcdual03b	MethSav:	01/11/18 09:50	Injection vol.:	2.0
Quantitation Method:	sapcab52			Dilution Factor:	1.0000
Date Time Collected:	1/11/2018	8:37 AM		Sample Wt.:	1.0000
Operator chemist		Chan:	GC_1	Sample Amt.:	1.0000

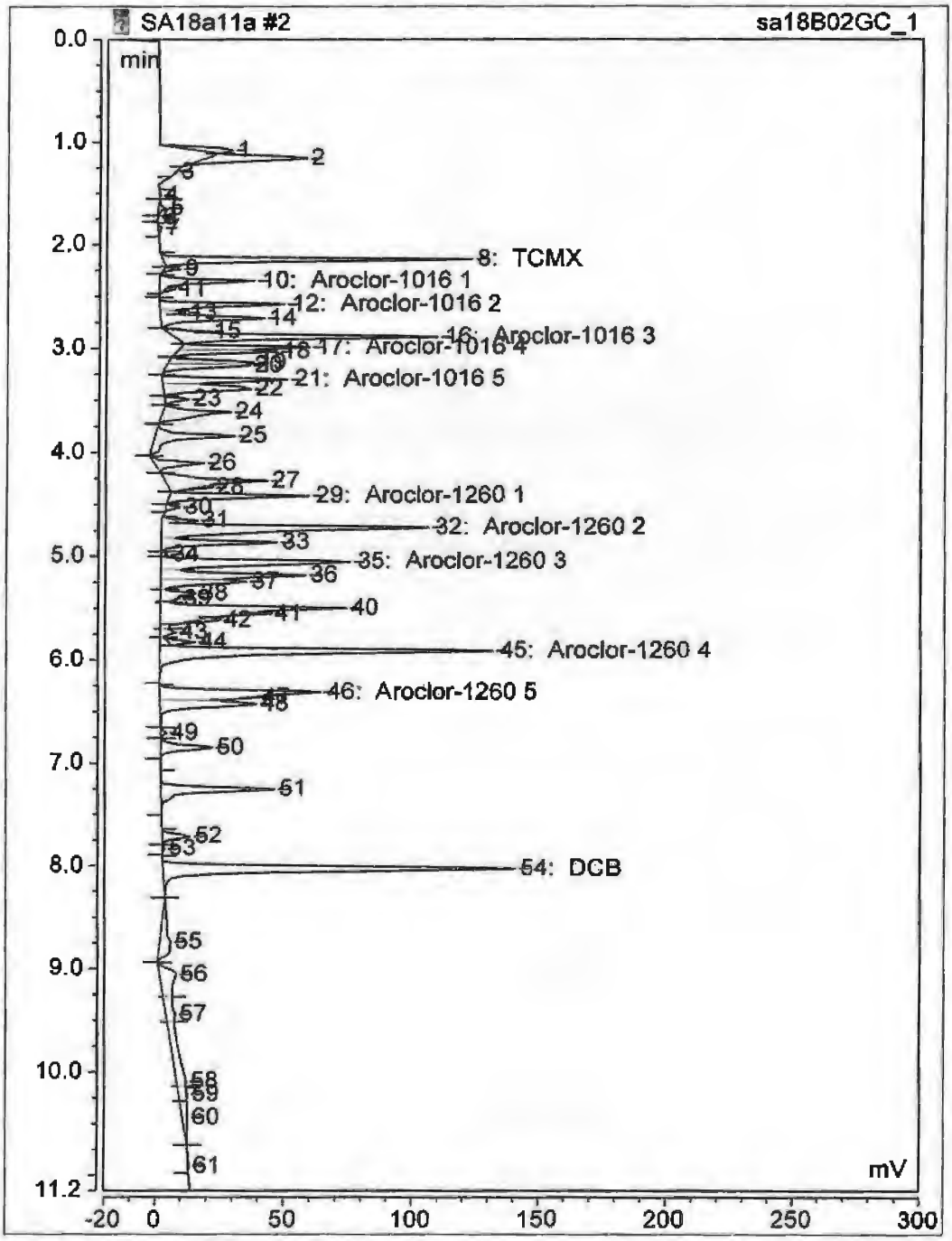
Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
10	Aroclor-1016 1	BMB	2.35	1.766	37.183	515.0834	
12	Aroclor-1016 2	BM	2.58	2.109	48.789	429.5094	
16	Aroclor-1016 3	BMb	2.89	4.983	103.233	493.8160	
17	Aroclor-1016 4	bM	2.99	1.691	49.833	513.5790	
21	Aroclor-1016 5	BM	3.30	2.223	49.044	557.2438	501.8463
29	Aroclor-1260 1	bMb	4.42	2.383	54.209	415.1179	
32	Aroclor-1260 2	BM	4.72	6.598	104.297	583.3190	
35	Aroclor-1260 3	M	5.06	4.537	73.599	453.4095	
45	Aroclor-1260 4	MB	5.92	7.918	130.636	502.0057	
46	Aroclor-1260 5	BM	6.32	4.593	62.580	453.8229	481.5350
54	DCB	BMb	8.03	8.400	138.002	63.2072	63.2072
8	TCMX	BMb	2.14	4.206	121.382	40.7354	40.7354

3

PASS

1-11-18

Sample Name:	sa18B02	Sample ID:	500 pcb ccv 01/0:	Sample No.:	2
Sequence Name:	SA18a11a	Misc:		Sample Pos.:	1
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapcab52	Units:	ug/L	Dilution Factor:	1.0000
Date Time Collected:	1/11/2018	8:37 AM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

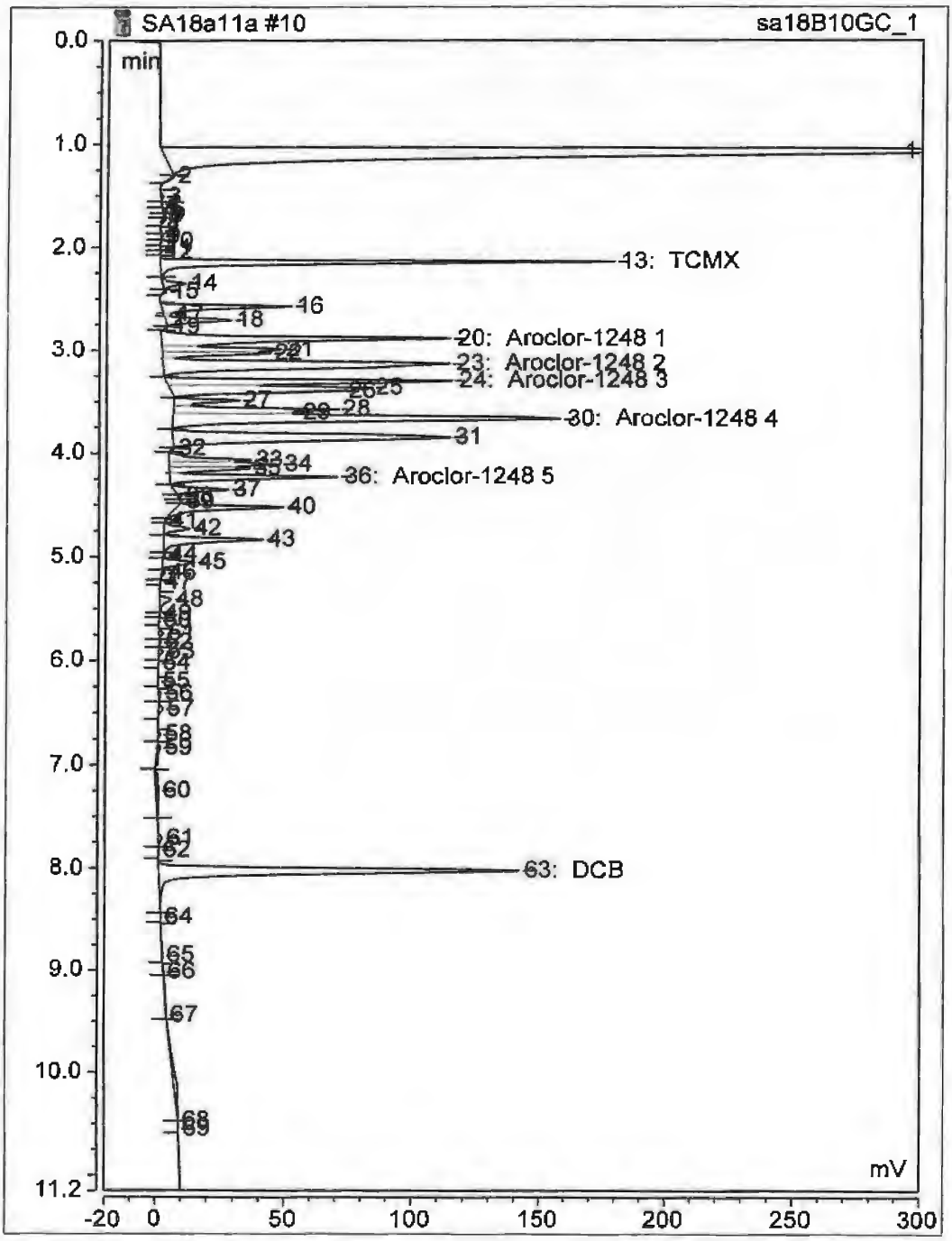
Sample Name:	sa18B10	**Sample ID:**	1248 ICV	**Sample No.:**	10
Sequence Name:	SA18a11a	**Misc:**	1/10/18	**Sample Pos.:**	23
Program Method:	sapcdual03b	**MethSav:**	01/11/18 11:32	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	11:13 AM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:** GC_1		**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
20	Aroclor-1248 1	BM	2.89	6.065	113.213	955.4730	
23	Aroclor-1248 2	MB	3.14	8.409	112.057	1036.5058	
24	Aroclor-1248 3	BM	3.30	5.138	111.836	974.8500	
30	Aroclor-1248 4	MB	3.67	9.805	152.248	1009.1088	
36	Aroclor-1248 5	MB	4.23	2.768	65.385	1060.4622	1007.2800
63	DCB	BMb	8.03	8.705	141.140	51.1171	51.1171
13	TCMX	BMB	2.14	6.341	178.857	54.7023	54.7023

PASS

TT
1.11.18

Sample Name:	sa18B10	**Sample ID:**	1248 ICV	**Sample No.:**	10
Sequence Name:	SA18a11a	**Misc:**	1/10/18	**Sample Pos.:**	23
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	11:13 AM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



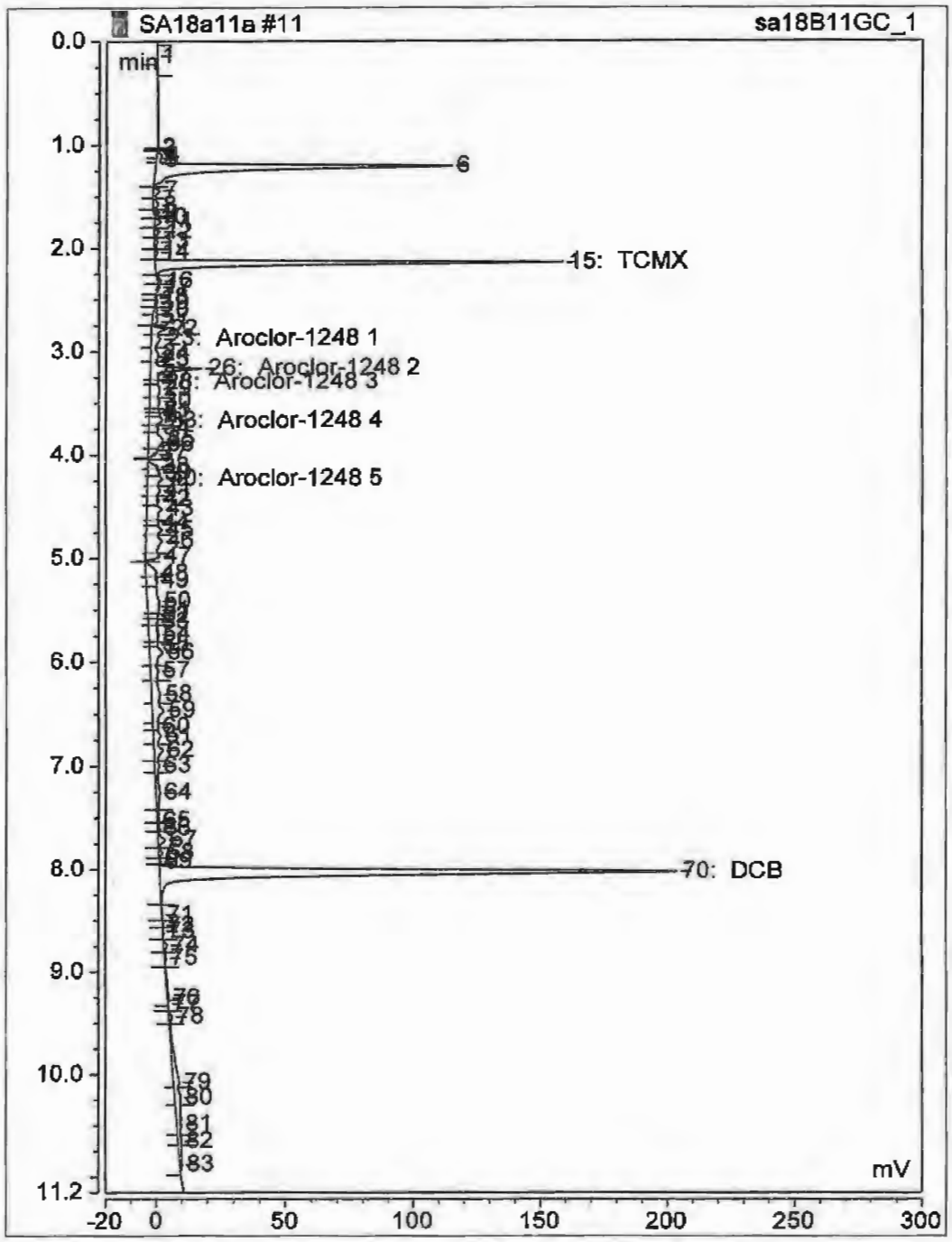
CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sa18B11	**Sample ID:**	blank	**Sample No.:**	11
Sequence Name:	SA18a11a	**Misc:**		**Sample Pos.:**	26
Program Method:	sapcdual03b	**MethSav:**	01/11/18 11:32	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	11:37 AM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
23	Aroclor-1248 1	M	2.88	0.343	3.682	2.0335	
26	Aroclor-1248 2	M	3.17	1.010	20.051	126.5295	
28	Aroclor-1248 3	Ru	3.30	0.006	0.314	n.a.	
33	Aroclor-1248 4	M	3.67	1.003	5.312	1.4768	
40	Aroclor-1248 5	M	4.23	0.727	5.930	65.7969	48.9592
70	DCB	MB	8.03	12.640	202.770	75.8402	75.8402
15	TCMX	BMB	2.14	5.729	160.229	48.6582	48.6582

1-11-18

Sample Name:	sa18B11	Sample ID:	blank	Sample No.:	11
Sequence Name:	SA18a11a	Misc:		Sample Pos.:	26
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/11/2018	11:37 AM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

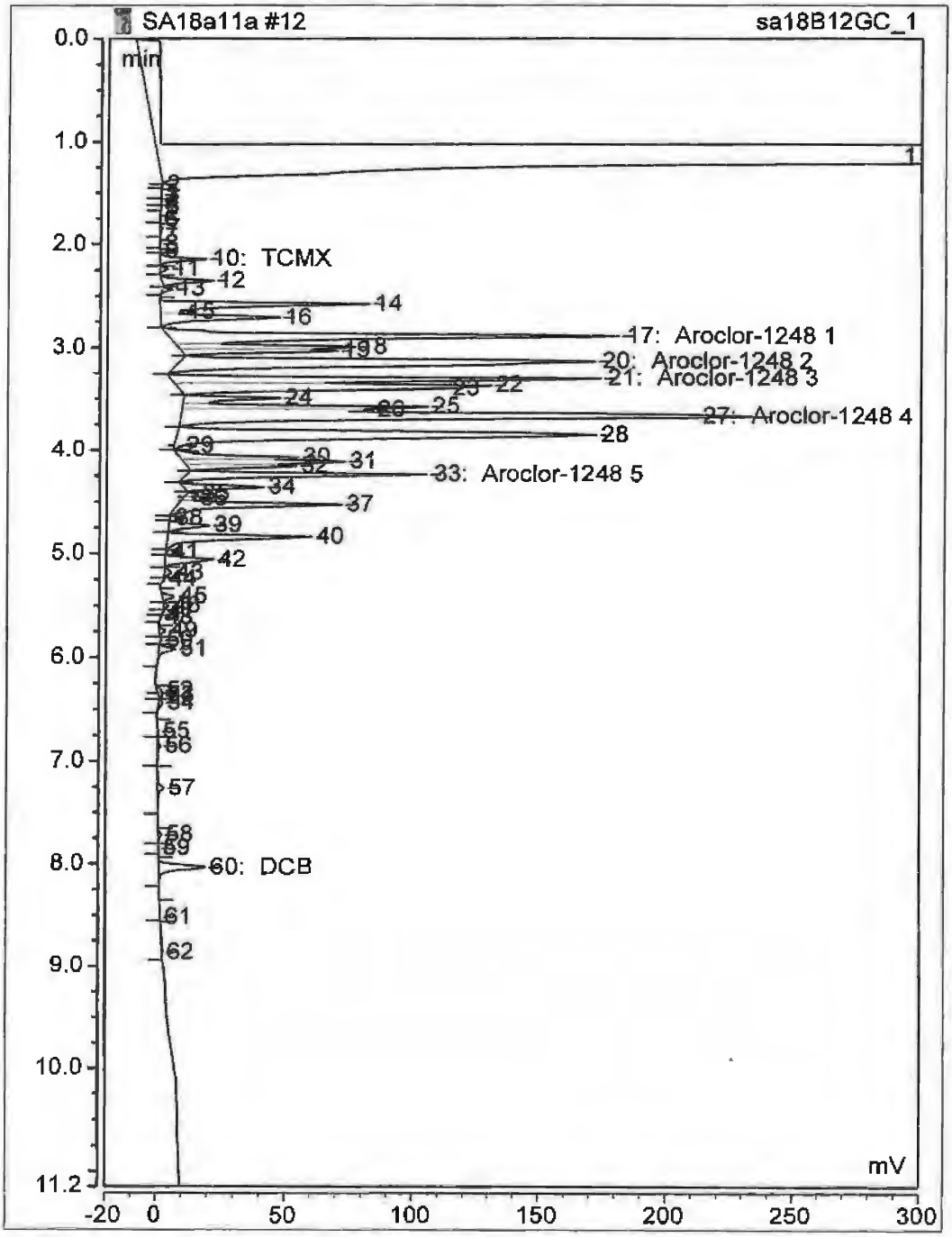
Sample Name:	sa18B12	**Sample ID:**	81468-005.10	**Sample No.:**	12
Sequence Name:	SA18a11a	**Misc:**	20x a08b soil PE	**Sample Pos.:**	27
Program Method:	sapcdual03b	**MethSav:**	01/11/18 11:32	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	11:57 AM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
17	Aroclor-1248 1	BM	2.89	9.440	177.200	1512.4580	
20	Aroclor-1248 2	bMB	3.14	11.889	163.425	1544.5572	
21	Aroclor-1248 3	BM	3.30	7.777	169.297	1496.5181	
27	Aroclor-1248 4	Mb	3.67	16.340	225.895	1514.1557	
33	Aroclor-1248 5	bMB	4.24	3.880	93.857	1536.7910	1520.8960
60	DCB	BMB	8.04	1.043	18.303	1.8398	1.8398
10	TCMX	BMB	2.14	0.622	18.122	2.5494	2.5494

TT
1-12-18

30.4 ng/kg

Sample Name:	sa18B12	**Sample ID:**	61468-005.10	**Sample No.:**	12
Sequence Name:	SA18a11a	**Misc:**	20x a08b soil PE	**Sample Pos.:**	27
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	11:57 AM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

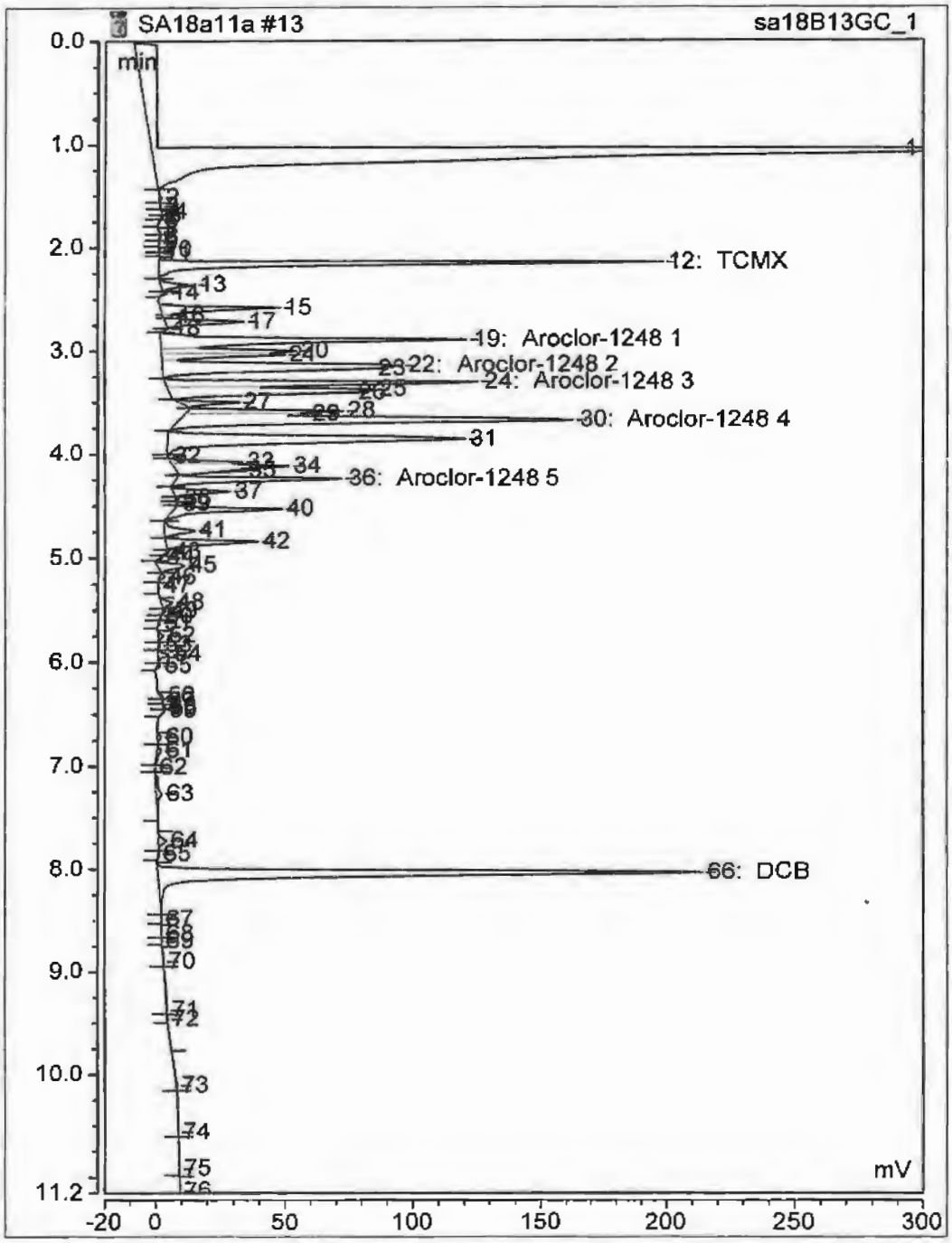
Sample Name:	sa18B13	**Sample ID:**	1248 ccv	**Sample No.:**	13
Sequence Name:	SA18a11a	**Misc:**	1/10/18	**Sample Pos.:**	18
Program Method:	sapcdual03b	**MethSav:**	01/11/18 11:32	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	12:16 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
19	Aroclor-1248 1	BM	2.90	6.505	119.279	1008.2716	
22	Aroclor-1248 2	MB	3.15	7.112	93.122	849.2326	
24	Aroclor-1248 3	BM	3.31	5.443	121.971	1066.8707	
30	Aroclor-1248 4	MB	3.68	10.790	154.378	1023.7186	
36	Aroclor-1248 5	bMB	4.24	2.618	64.172	1040.1673	997.6522
66	DCB	BMb	8.04	13.349	213.350	80.0845	80.0845
12	TCMX	BMB	2.15	7.473	197.617	60.7893	60.7893

pass

1-12-18

Sample Name:	sa18B13	**Sample ID:**	1248 ccv	**Sample No.:**	13
Sequence Name:	SA18a11a	**Misc:**	1/10/18	**Sample Pos.:**	18
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	12:16 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



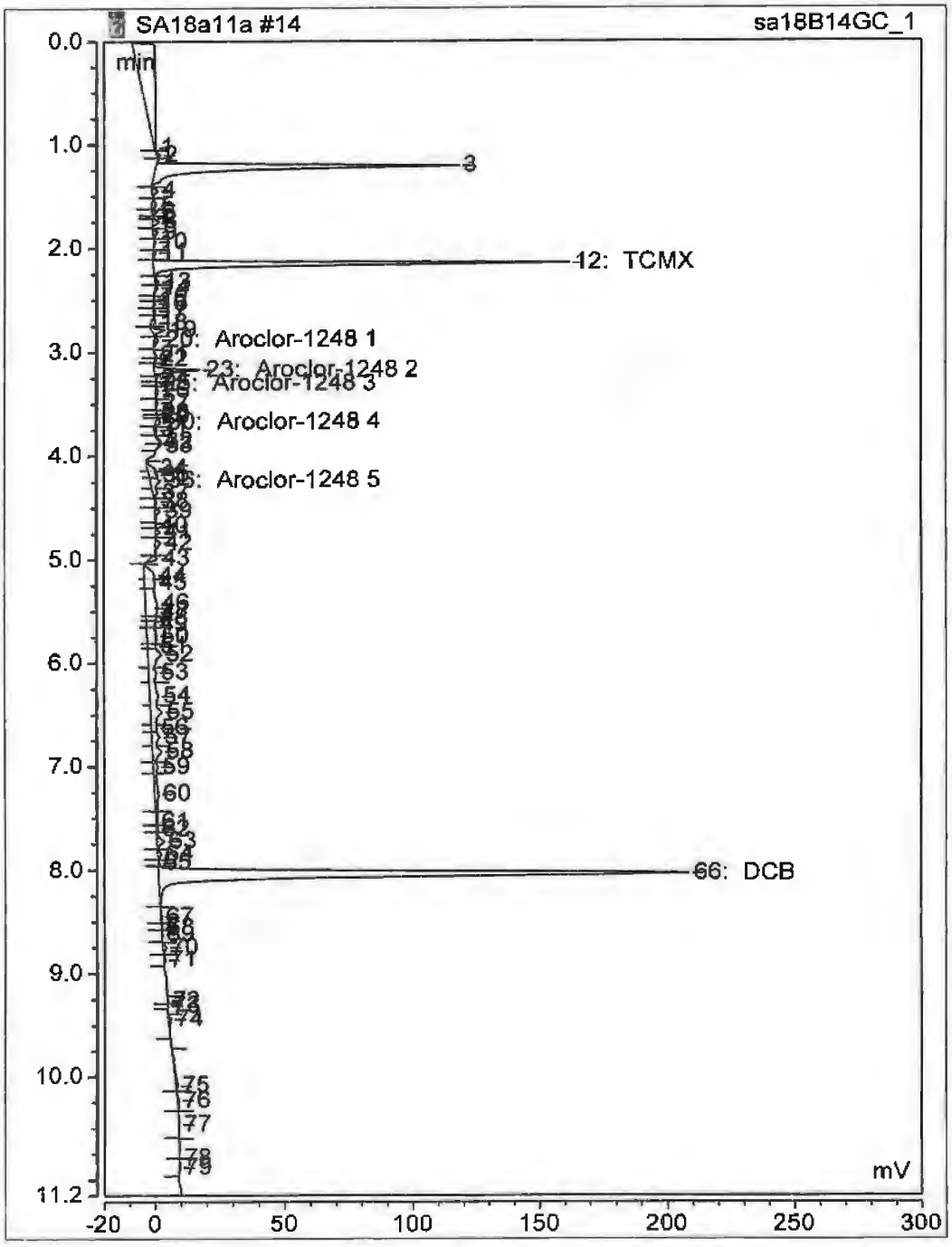
CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sa18B14	**Sample ID:**	blank	**Sample No.:**	14
Sequence Name:	SA18a11a	**Misc:**		**Sample Pos.:**	26
Program Method:	sapcdual03b	**MethSav:**	01/11/18 11:32	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/11/2018	12:36 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
20	Aroclor-1248 1	bMB	2.88	0.087	1.442	n.a.	
23	Aroclor-1248 2	BMB	3.17	0.569	17.432	100.6333	
25	Aroclor-1248 3	BMB	3.30	0.006	0.304	n.a.	
30	Aroclor-1248 4	bMB	3.68	0.090	1.928	n.a.	
36	Aroclor-1248 5	M	4.24	0.442	3.970	32.9947	66.8140
66	DCB	MB	8.04	12.868	207.333	77.6708	77.6708
12	TCMX	bMb	2.14	5.824	162.973	49.5485	49.5485

TT
1-12-18

Sample Name:	sa18B14	Sample ID:	blank	Sample No.:	14
Sequence Name:	SA18a11a	Misc:		Sample Pos.:	26
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/11/2018	12:36 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



PCB AND PNA SOIL MICROWAVE EXTRACTION (EPA 3546)

(4)

PCB/PEST SURROGATE
1 µg/mL
1000 µL added
Working # pcb/pest171227-05-1

PNA SURROGATE
80 µg/mL
1000 µL added
Working # pnaSur180110-01-SD

PNA SPIKE
80 µg/mL
1000 µL added
Working # pnaSpk 180109-01

PCB SPIKE
10 µg/mL
1000 µL added
Working # pcbSpk171227-04-10

PNA INT. STD.
2000 µg/mL
20 µL added
Working # 35674

PS18A12A.LCD-PNA
PNA/PCB

	Date	Tech Initl.		
in solvent	1/12/18	DW		
extracted	↓	TT	70 °F	22 %RH
conc.		DW		
clean-up 400µL	↓	BMT	71 °F	15 %RH

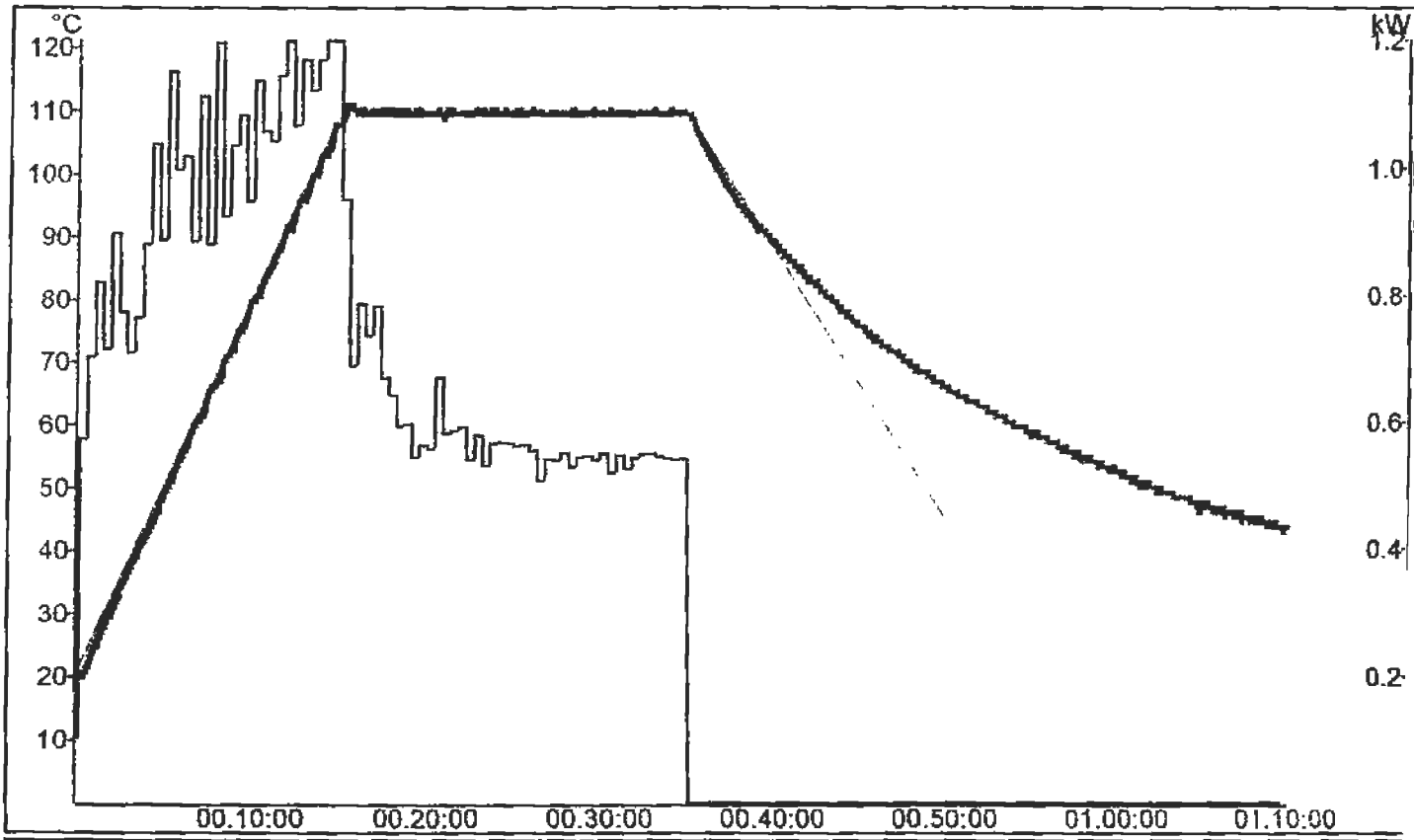
Initial	Sample #		PCB	PNA	Mass	Clean-up	Acid Clean-up	Comments
BMT	MS		X	X	15.0	1		82672-003
	MSD		X	X	15.0	2		82672-003
	LCS		X	X	15.0	3		
	MB		X	X	15.0	4		
	82672	1		X	15.1			WET [illegible] STRONG FUEL [illegible]
		3	X	X	15.0	5		CREAMY CLAY, MONITOR
BMT		4		X	15.0			CLAY SOIL
BMT		5		X	15.0			CLAY, SOIL
DW	82698	1	X		15.0	6		WET, WET MUSHY GREY SAM
DW	82668	1		X	15.0			SOFT CLAY & SOIL
BMT		2		X	15.0			HARD CLAY
DW		3		X	15.0			CLAY, SOIL
DW	82670	1		X	15.0			MOIST SOIL, LOTS OF ROC
BMT	82677	1		X	15.0			1 of 2 MOIST SOIL
		2		X	15.0			
		3		X	15.0			
BMT		4		X	15.0			
DW		5		X	15.0			
BMT	82620	6		X	15.0			up up
DW	82657	14		X	15.0			
DW								
BMT	1248 LCS		X		15.0	7		
DW	LCD		X		15.0	8		

Fibertec # MeCl$_2$ 35915 Na$_2$SO$_4$ 180201 H$_2$SO$_4$ 34002

Buffer 180104 Florisil 35814 Balance ID 10002030 Sand ID 25028

Copper 35408 Hexane 35651 2mL Vials 35135

Keys to Symbols Surrogate X Spike O 1:1 MeCl$_2$:Acetone 180109 Permanganate



Parameter "standard extraction.mpr"

Exhaust	:	20 min
QP-Check	:	not present
Stirrer	:	80 %
Twist	:	Off
Rotor control	:	not present
Start-Parameter:		Current values
Control for	:	T1
System	:	*StarT*
Rotor	:	pro-rotor high throughput (24 Pos.)
Type of vessels	:	
Number of vessels	:	24
Cooling system	:	
Operating mode	:	Continuous Power

MW program "standard extraction.mpr"

Nr	t	T1	T2	P	E
1	00:15:00	110°C			1200W
2	00:20:00	110°C			1200W
3	00:15:00	45°C			0W

Remarks

CSPCBA01 (PCB with Averag **Sample Analysis Report**

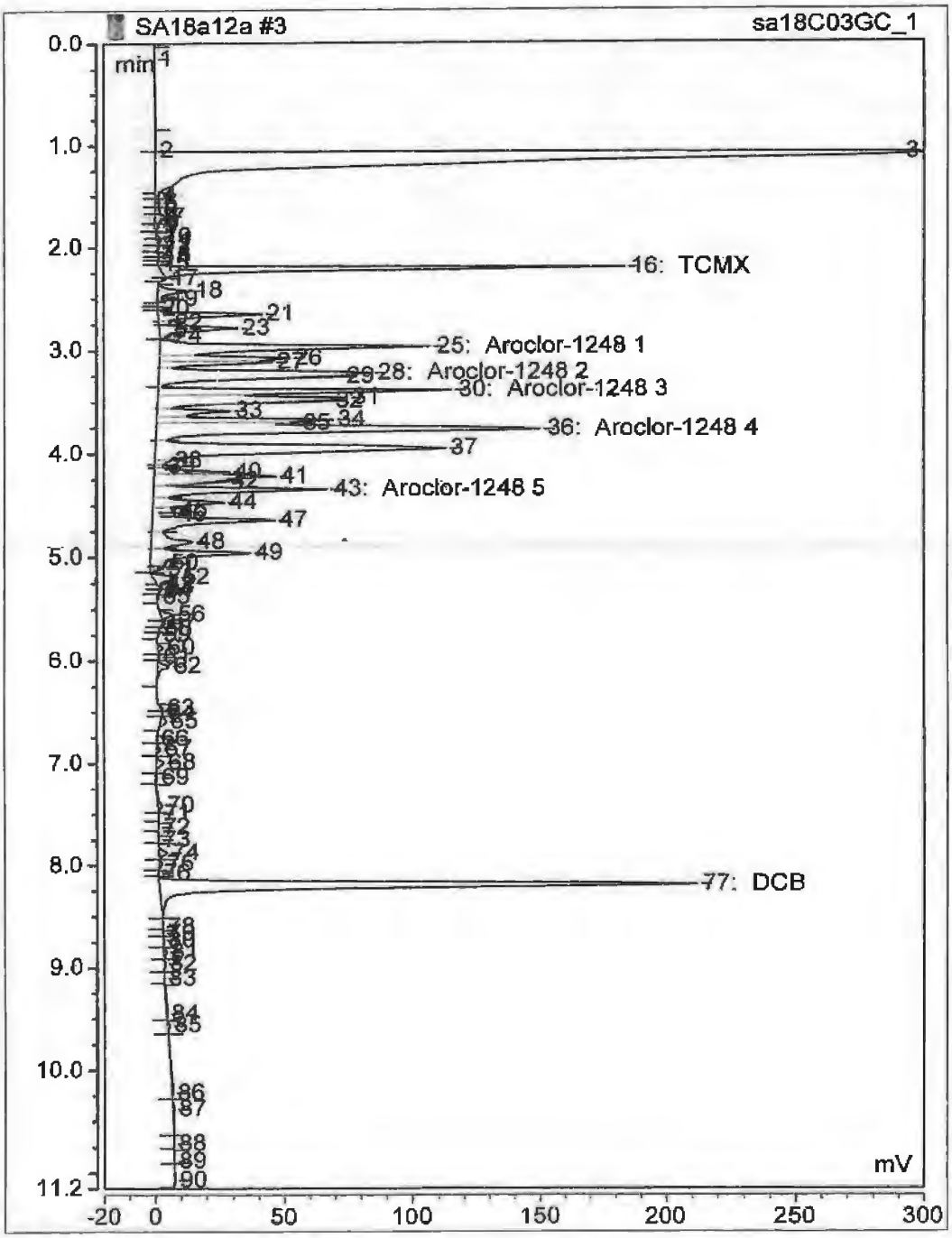
Sample Name:	sa18C03	Sample ID:	1248 ccv 1/10	Sample No.:	3
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	3
Program Method:	sapcdual03b	MethSav:	01/12/18 15:01	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	2:25 PM		Sample Wt.:	1.0000
Operator:	chemist	Chan:	GC_1	Sample Amt.:	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
25	Aroclor-1248 1	BM	2.97	5.861	105.086	884.7294	
28	Aroclor-1248 2	M	3.23	6.353	82.582	744.9883	
30	Aroclor-1248 3	M	3.39	5.085	114.404	998.1716	
36	Aroclor-1248 4	M	3.77	11.049	149.949	993.3441	
43	Aroclor-1248 5	M	4.35	3.256	67.464	1095.2402	943.2947
77	DCB	BMb	8.19	12.999	210.591	78.9777	78.9777
16	TCMX	BMb	2.21	6.549	182.130	55.7641	55.7641

1.12.18

1.15.18

Sample Name:	sa18C03	Sample ID:	1248 ccv 1/10	Sample No.:	3
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	3
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	2:25 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag

Sample Analysis Report

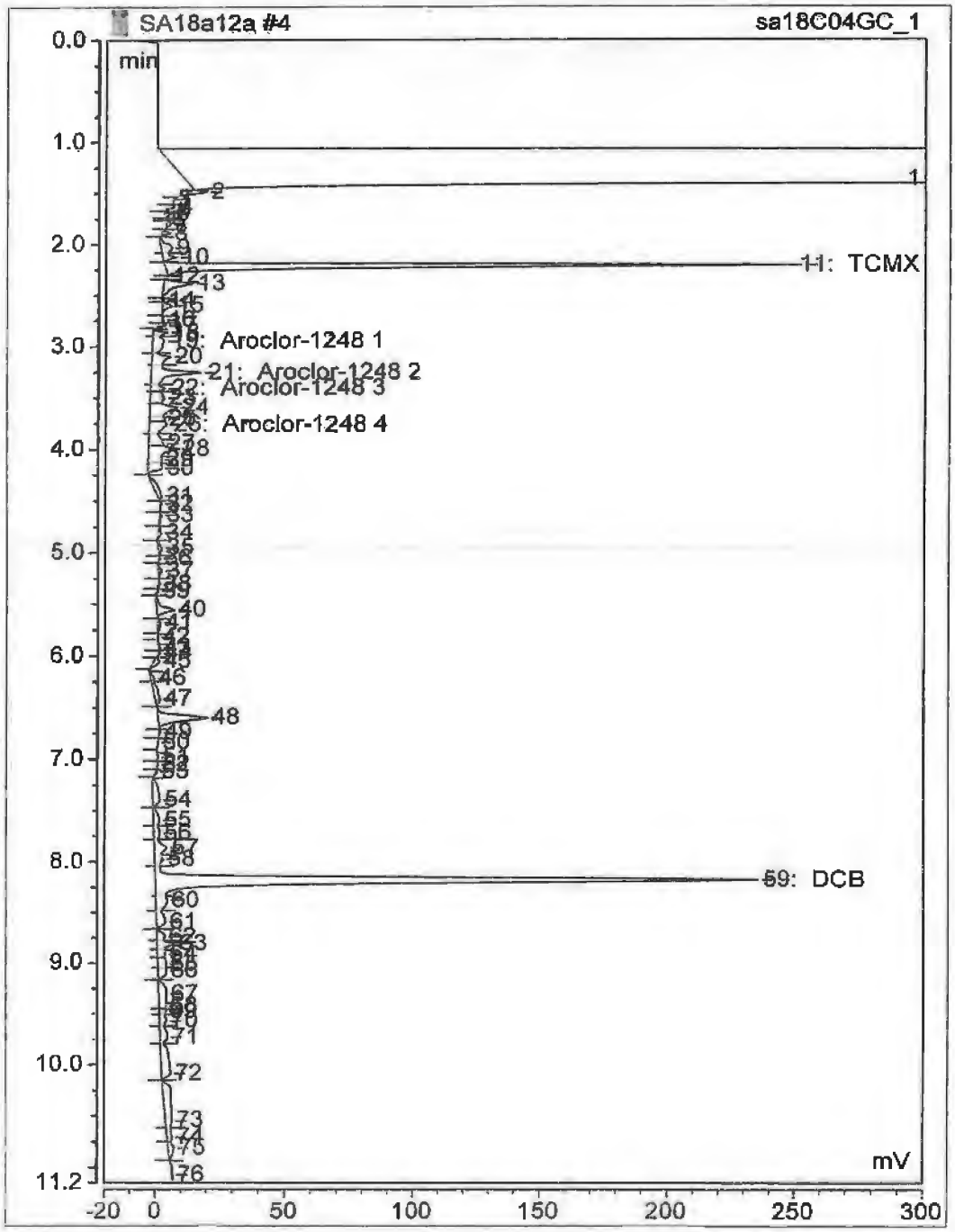
Sample Name:	sa18C04	Sample ID:	ps18a12a.mb*-pc	Sample No.:	4
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	11
Program Method:	sapcdual03b	MethSav:	01/12/18 16:07	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	2:44 PM		Sample Wt.:	1.0000
Operator chemist		Chan:	GC_1	Sample Amt.:	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
19	Aroclor-1248 1	M	2.95	0.581	4.518	9.3106	
21	Aroclor-1248 2	M	3.26	1.344	19.384	119.9350	
22	Aroclor-1248 3	Ru	3.41	0.065	2.051	n.a.	
26	Aroclor-1248 4	M	3.76	0.876	6.843	11.9745	
n.a.	Aroclor-1248 5	n.a.	n.a.	n.a.	n.a.	n.a.	47.0733
59	DCB	M	8.18	14.487	235.564	88.9962	88.9962
11	TCMX	bMb	2.21	8.732	249.038	77.4736	77.4736

1.12.18

1.15.18

Sample Name:	sa18C04	Sample ID:	ps18a12a.mb*-pc	Sample No.:	4
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	11
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	2:44 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

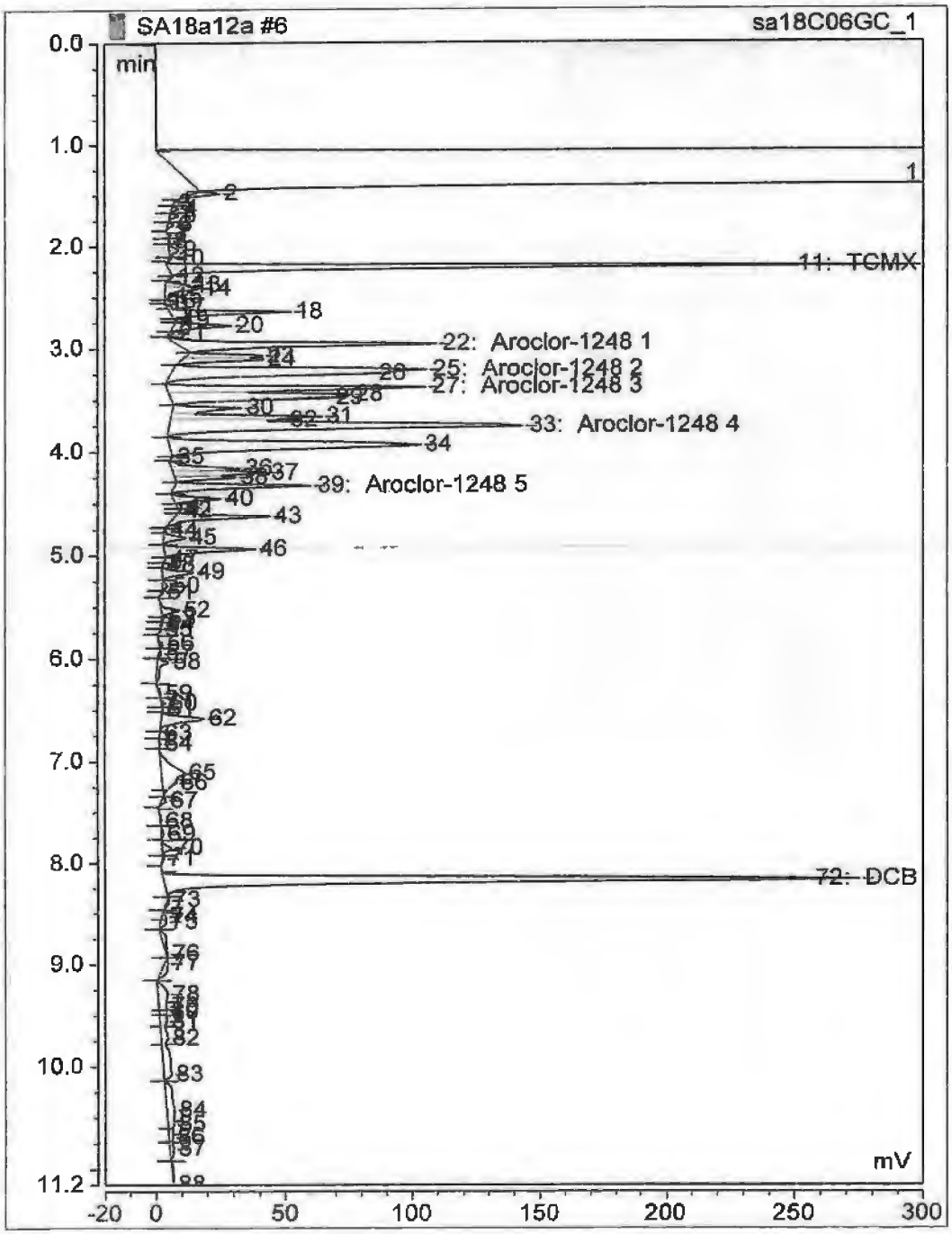
Sample Name:	sa18C06	Sample ID:	a12a lcs 1248	Sample No.:	6
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	13
Program Method:	sapcdual03b	MethSav:	01/12/18 15:01	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	3:23 PM		Sample Wt.:	1.0000
Operator: chemist			Chan: GC_1	Sample Amt.:	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
22	Aroclor-1248 1	BMb	2.96	4.890	100.965	848.8578	
25	Aroclor-1248 2	BMB	3.21	7.245	99.217	909.5133	
27	Aroclor-1248 3	BM	3.38	4.645	101.203	878.3185	
33	Aroclor-1248 4	Mb	3.76	9.960	138.297	913.4348	
39	Aroclor-1248 5	BMB	4.33	2.145	52.674	847.8059	879.5861
72	DCB	BMb	8.16	16.126	271.920	103.5805	103.5805
11	TCMX	BMb	2.20	10.415	294.370	92.1822	92.1822

1-12-18

1-15-18

Sample Name:	sa18C06	Sample ID:	a12a lcs 1248	Sample No.:	6
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	13
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	3:23 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

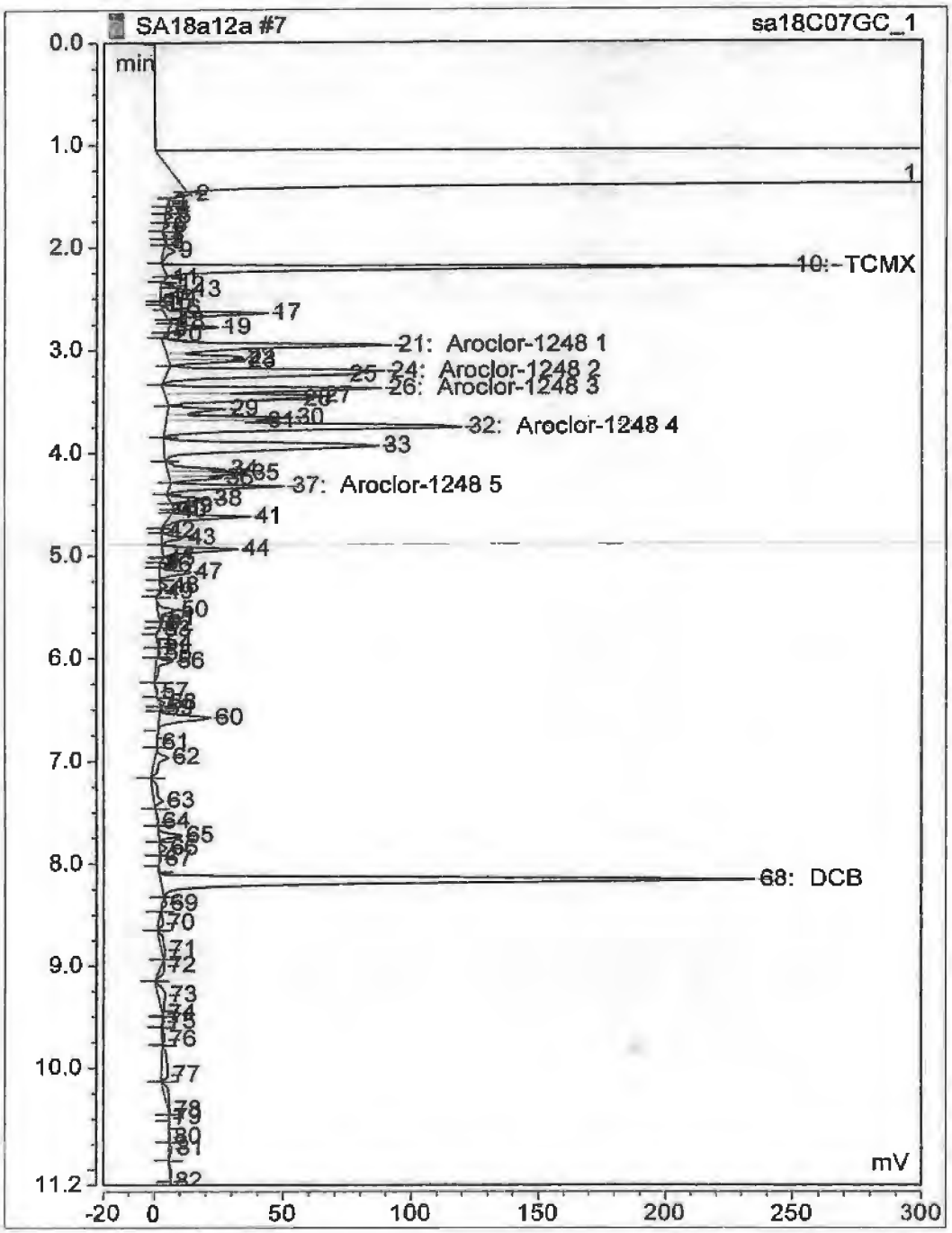
Sample Name:	sa18C07	Sample ID:	a12a lcd 1248	Sample No.:	7
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	14
Program Method:	sapcdual03b	MethSav:	01/12/18 15:01	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	3:43 PM		Sample Wt.:	1.0000
Operator:	chemist		Chan: GC_1	Sample Amt.:	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
21	Aroclor-1248 1	BM	2.96	4.655	88.533	740.6416	
24	Aroclor-1248 2	bMB	3.21	6.136	84.193	760.9200	
26	Aroclor-1248 3	BM	3.38	3.919	85.227	733.2852	
32	Aroclor-1248 4	MB	3.76	8.342	115.915	759.9536	
37	Aroclor-1248 5	bMB	4.33	1.824	44.532	711.5897	741.2780
68	DCB	BMb	8.16	13.637	233.067	87.9943	87.9943
10	TCMX	BMb	2.20	9.166	259.930	81.0076	81.0076

TT 1.12.18

1-15-18

Sample Name:	sa18C07	Sample ID:	a12a lcd 1248	Sample No.:	7
Sequence Name:	SA18a12a	Misc:	a12a soil	Sample Pos.:	14
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	3:43 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sa18C13	Sample ID:	1248 ccv 1/10	Sample No.:	13
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	3
Program Method:	sapcdual03b	MethSav:	01/12/18 16:07	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	5:40 PM		Sample Wt.:	1.0000
Operator chemist		Chan:	GC_1	Sample Amt.:	1.0000

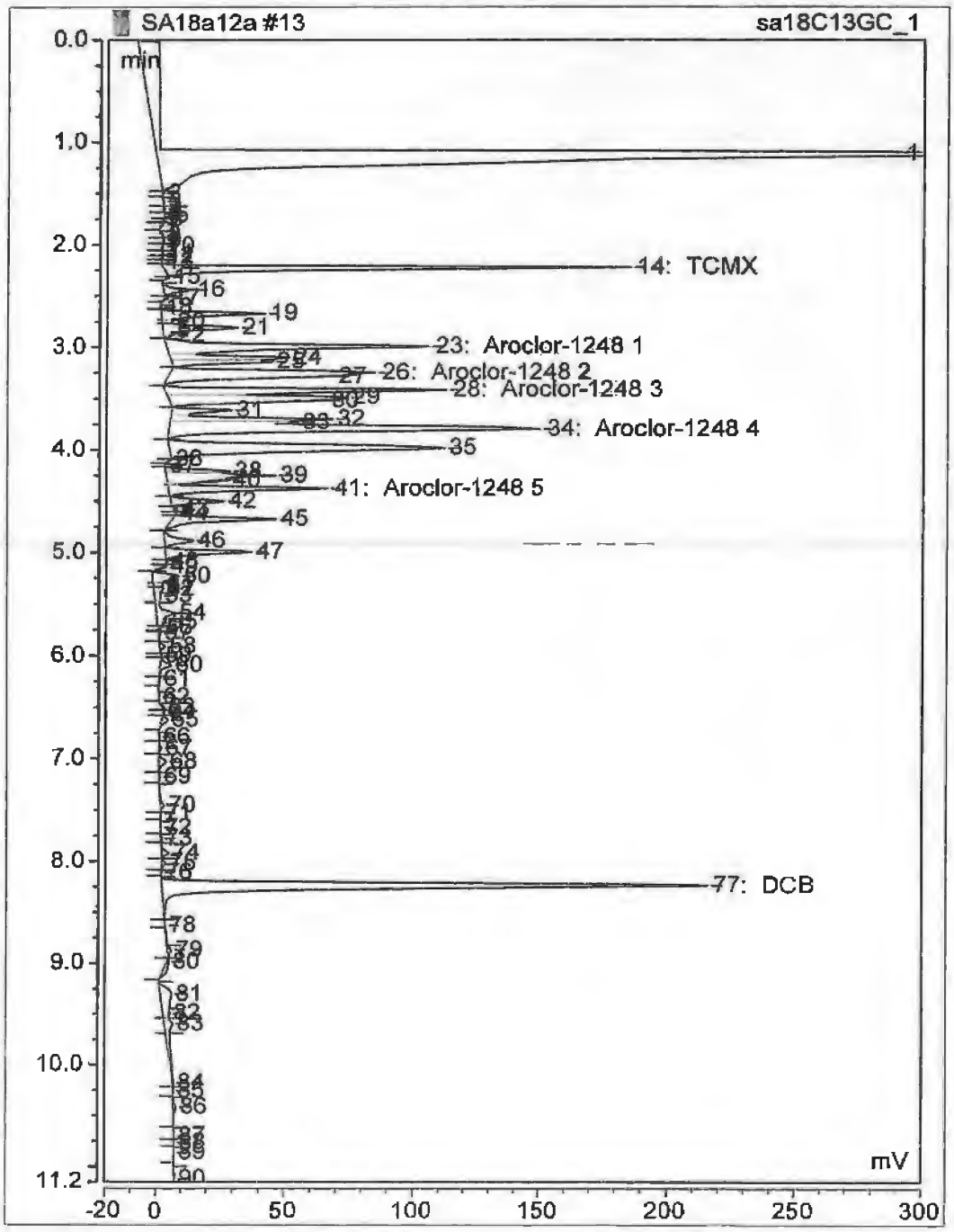
Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
23	Aroclor-1248 1	BM	3.00	5.635	102.402	861.3589	
26	Aroclor-1248 2	BMB	3.25	5.942	79.858	718.0507	
28	Aroclor-1248 3	BM	3.42	4.868	110.058	958.7095	
34	Aroclor-1248 4	MB	3.80	10.306	145.748	964.5331	
41	Aroclor-1248 5	MB	4.38	2.683	61.975	1003.4120	901.2128
77	DCB	BMb	8.24	13.144	213.946	80.3236	80.3236
14	TCMX	BMb	2.22	6.662	183.926	56.3469	56.3469

pass

TT 1-15-18

1-15-18

Sample Name:	sa18C13	Sample ID:	1248 ccv 1/10	Sample No.:	13
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	3
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	5:40 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag

Sample Analysis Report

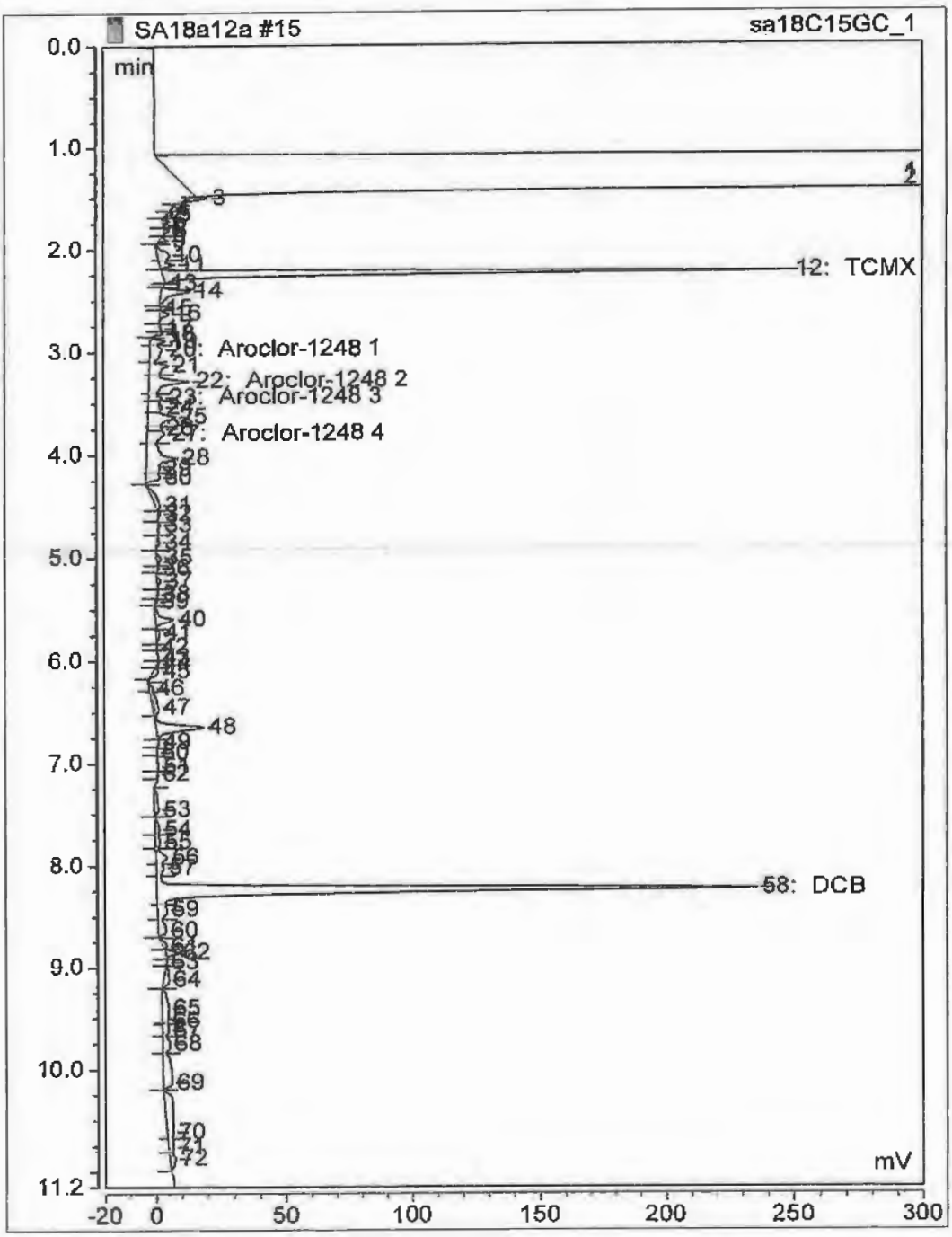
Sample Name:	sa18C15	Sample ID:	blank	Sample No.:	15
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	11
Program Method:	sapcdual03b	MethSav:	01/12/18 16:07	Injection vol.:	2.0
Quantitation Method:	sapceb16			Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	6:19 PM		Sample Wt.:	1.0000
Operator:	chemist		Chan: GC_1	Sample Amt.:	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
20	Aroclor-1248 1	M	2.97	0.583	4.658	10.5313	
22	Aroclor-1248 2	M	3.29	1.195	15.637	82.8719	
23	Aroclor-1248 3	Ru	3.44	0.062	1.963	n.a.	
27	Aroclor-1248 4	M	3.80	0.868	6.834	11.9153	
n.a.	Aroclor-1248 5	n.a.	n.a.	n.a.	n.a.	n.a.	35.1062
58	DCB	M	8.23	14.440	236.346	88.9086	88.9086
12	TCMX	bMb	2.23	8.910	249.085	77.4887	77.4887

TT 1.12.18

DA 1.15.18

Sample Name:	sa18C15	Sample ID:	blank	Sample No.:	15
Sequence Name:	SA18a12a	Misc:		Sample Pos.:	11
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/12/2018	6:19 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



5

PCB AND PNA AND PEST SOIL MICROWAVE EXTRACTION (EPA 3546)

PCB/PEST SURROGATE	PNA SURROGATE	PNA SPIKE
1 µg/mL	80 µg/mL	80 µg/mL
1000 µL added	1000 µL added	1000 µL added
Working # pcb/pstsur 171227-05-1	Working # pnasur 180110-01-80	Working # pnaspk 180109-01
PCB SPIKE	**PNA INT. STD.**	**PEST SPIKE**
10 µg/mL	2000 µg/mL	1 µg/mL
1000 µL added	20 µL added	1000 µL added
Working # pcbspk 171227-04-10	Working # 35674	Working # pstspk 171024-01-1

PS18A16B.MB*-PCB PNA/PCB+PST

	Date	Type	Tech Initl.		
in solvent	1/16/18		DW		
extracted	1/16/18		DW FOR CB	70 °F	11 %RH
conc.	1/16/18		DW		
clean-up 400µL	1/16/18		DW	69 °F	12 %RH

Initial	Sample #		Pest	PCB	PNA	Mass	Clean-up	Acid Clean-up	Comments
									Final volume is 2mL unless noted
lls	MS pnapcb			⊗	⊗	15.0	1		82691-009
lls	MSD ↓			⊗	⊗	15.0	2		82691-009
lls	LCS ↓			⊗	⊗	15.0	3		
lls	MB		X	X	X	15.0	4 4		
lls	MS pst		⊗			15.0	1		82691-024
lls	MSD ↓		⊗			15.0	2		82691-024
lls	LCS ↓		⊗			15.0	3		
lls	82691	7			X	15.0	5		CREAMY WET SOIL & CLAY
lls		9		X	X	15.0	6		WET CREAMY CLAY
DW		11		X	X	15.0	7		MOIST PEAT/MOSS, WOOD CHI
DW		23	X	X	X	15.0	5 8		WET MUSHY SOIL
		24	X	X	X	15.0	6 9		SANDY SOIL, MONITOR
↓	old PE			X		10.10	10		78324-005
↓	82711	1			X	15.0			CLAY
		3			X	15.0			MOIST CREAMY CLAY
lls		4			X	15.0			↓
DW		8			X	15.0			CLAY
		9			X	15.0			CREAMY CLAY
		11			X	15.0			SANDY CLAY
		13			X	15.0			SANDY clay FUEL SMELL
		14			X	15.0			CREAMY CLAY
		15			X	15.0			SANDY CLAY
↓		17			X	15.0			SANDY SOIL
DW		18			X	15.0			CLAY

Fibertec # | $MeCl_2$ 35937 | Na_2SO_4 180103 | H_2SO_4 34002

Buffer 180104 | Sand ID 33640 | Balance ID 10002030 | 2mL Vials 35135

Florisil 35814 | Copper 35402 | Hexane 35416

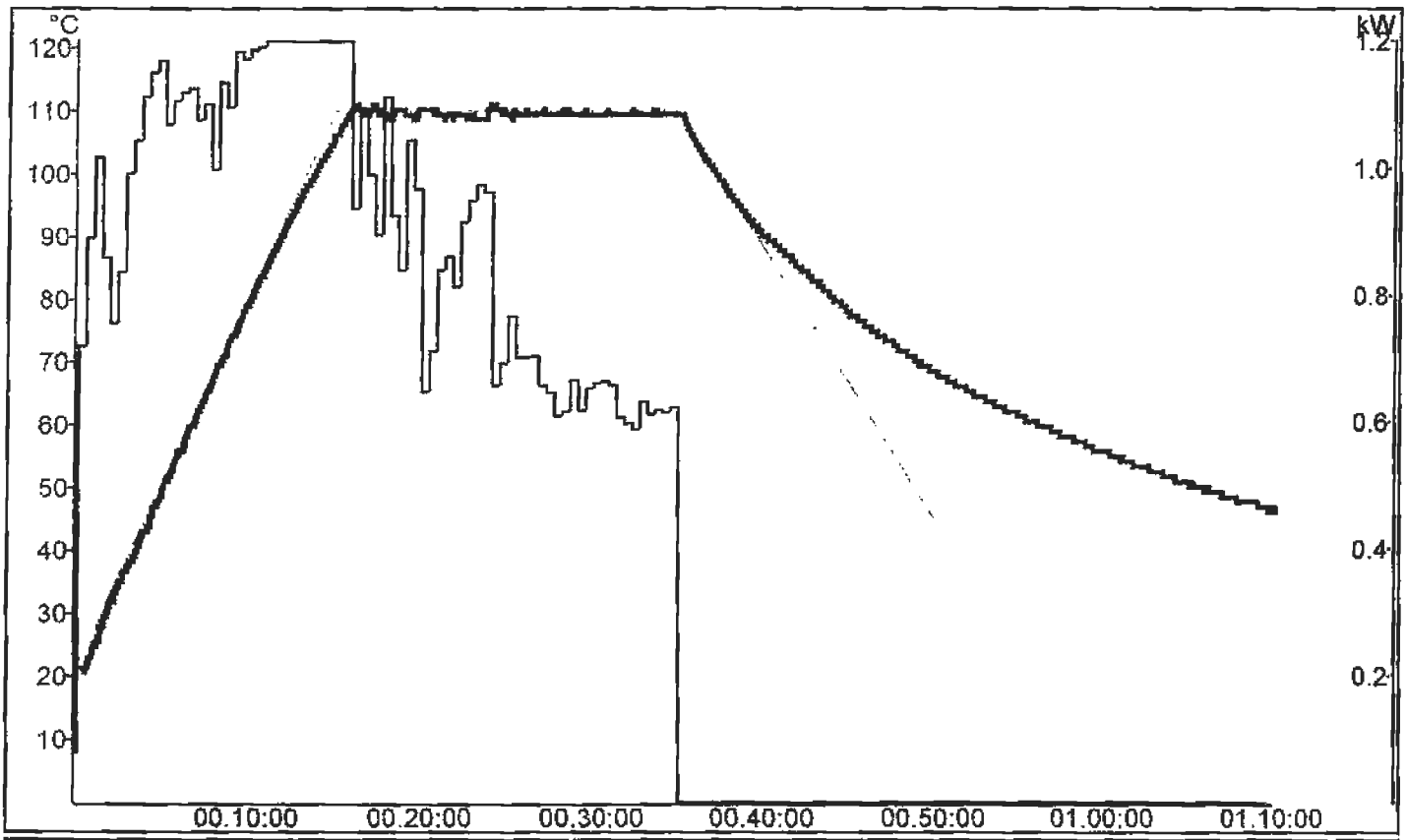
1:1 $MeCl_2$:Acetone 180116 | Permanganate | 90:10 Hexane: Acetone 180109

Keys to Symbols Surrogate X Spike O

PS18A16B.MB*-PST

PHA/PCB+PST

Created from "User"
1/16/2018 11:24:24



Parameter "standard extraction.mpr"

Exhaust	:	20 min
QP-Check	:	not present
Stirrer	:	80 %
Twist	:	Off
Rotor control	:	not present
Start-Parameter	:	Current values
Control for	:	T1
System	:	*StarT*
Rotor	:	pro-rotor high throughput (24 Pos.)
Type of vessels	:	
Number of vessels	:	24
Cooling system	:	
Operating mode	:	Continuous Power

MW program "standard extraction.mpr"

Nr	t	T1	T2	P	E
1	00:15:00	110°C			1200W
2	00:20:00	110°C			1200W
3	00:15:00	45°C			0W

Remarks

6/1/17

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	14.9	23.0	27.9	mg/kg	6.78	6.44 to 35.0	0.923	ACCEPT.	5/2/17	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	< 1.33	0	<0.1	mg/kg	0	0.00 to 0.100	n/a	ACCEPT.	5/2/17	TKT
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	< 1.33	0	0	mg/kg	0	0.00 to 0.00	n/a	ACCEPT.	5/2/17	TKT
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	< 1.33	0	0	mg/kg	0	0.00 to 0.00	n/a	ACCEPT.	5/2/17	TKT

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-113

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	588	535	836	ug/kg	54.4	371 to 920	0.974	ACCEPT.	5/12/17	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	362	304	281	ug/kg	118	28.1 to 658	0.492	ACCEPT.	5/12/17	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	566	396	657	ug/kg	151	65.7 to 848	1.13	ACCEPT.	5/12/17	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	< 50.0	0	0	ug/kg	0	0.00 to 0.00	n/a	ACCEPT.	5/12/17	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	741	573	801	ug/kg	207	80.1 to 1190	0.812	ACCEPT.	5/12/17	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	< 50.0	0	0	ug/kg	0	0.00 to 0.00	n/a	ACCEPT.	5/12/17	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	426	242	462	ug/kg	99.3	46.2 to 539	1.85	ACCEPT.	5/12/17	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	645	490	717	ug/kg	154	71.7 to 952	1.01	ACCEPT.	5/12/17	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

CSPCBA01 (PCB with Averag

Sample Analysis Report

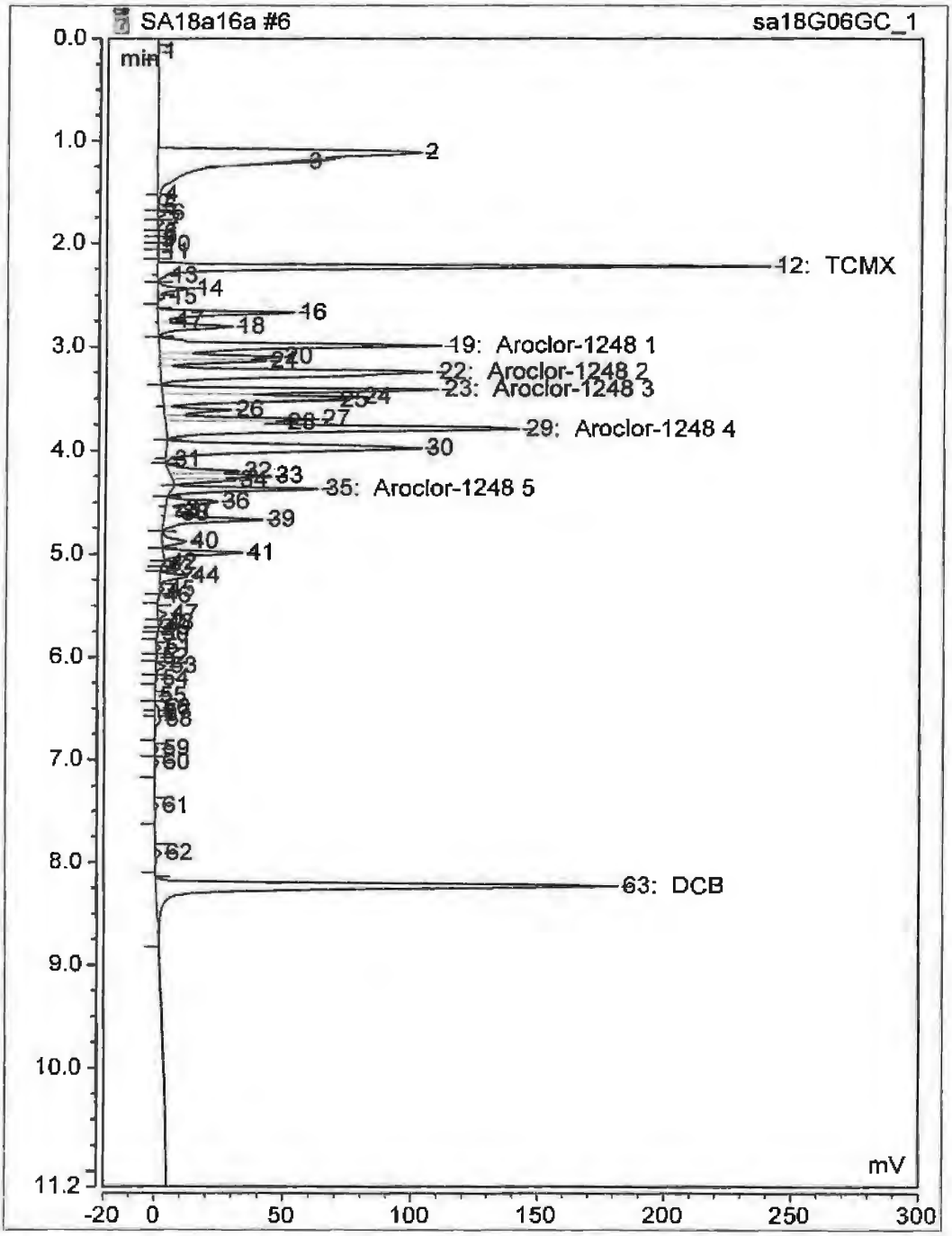
Sample Name:	sa18G06	**Sample ID:**	1248 ccv 01/16	**Sample No.:**	6
Sequence Name:	SA18a16a	**Misc:**		**Sample Pos.:**	3
Program Method:	sapcdual03b	**MethSav:**	01/12/18 16:07	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	3:27 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
19	Aroclor-1248 1	M	2.99	6.095	110.340	930.4597	
22	Aroclor-1248 2	MB	3.25	8.030	106.367	980.2359	
23	Aroclor-1248 3	BM	3.41	5.096	108.097	940.9063	
29	Aroclor-1248 4	Mb	3.80	10.129	138.390	914.0773	
35	Aroclor-1248 5	bMB	4.37	2.323	56.579	913.1385	935.7635
63	DCB	BMB	8.23	11.580	181.484	67.3015	67.3015
12	TCMX	M	2.22	8.739	240.930	74.8430	74.8430

pass

1-19-18

Sample Name:	sa18G06	Sample ID:	1248 ccv 01/16	Sample No.:	6
Sequence Name:	SA18a16a	Misc:		Sample Pos.:	3
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/16/2018	3:27 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag

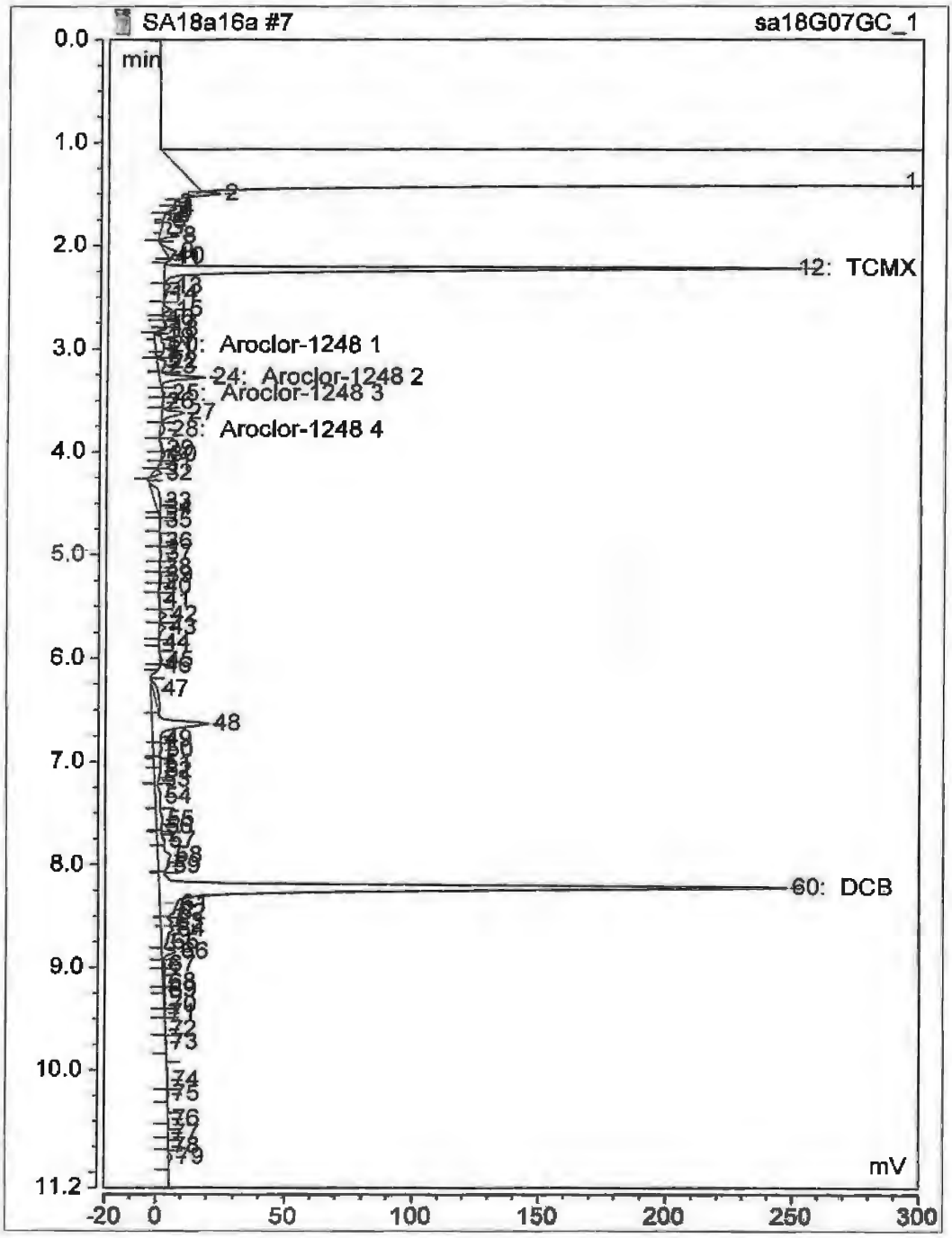
Sample Analysis Report

Sample Name:	sa18G07	**Sample ID:**	ps18a16b.mb*-pc	**Sample No.:**	7
Sequence Name:	SA18a16a	**Misc:**	a16b soil	**Sample Pos.:**	13
Program Method:	sapcdual03b	**MethSav:**	01/12/18 16:07	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	3:47 PM		**Sample Wt.:**	1.0000
Operator	chemist	**Chan:**	GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
20	Aroclor-1248 1	MB	2.97	0.462	3.532	0.7309	
24	Aroclor-1248 2	M	3.28	0.776	17.969	105.9353	
25	Aroclor-1248 3	Mb	3.44	0.048	1.203	n.a.	
28	Aroclor-1248 4	BMB	3.79	0.145	1.767	n.a.	
n.a.	Aroclor-1248 5	n.a.	n.a.	n.a.	n.a.	n.a.	53.3331
60	DCB	M	8.22	15.870	246.832	93.5162	93.5162
12	TCMX	BM	2.22	9.234	250.981	78.1041	78.1041

1-19-18

Sample Name:	sa18G07	Sample ID:	ps18a16b.mb*-pc	Sample No.:	7
Sequence Name:	SA18a16a	Misc:	a16b soil	Sample Pos.:	13
Program Method:	sapcdual03b			Injection vol.:	2.0
Quantitation Method:	sapceb16	Units:	ppb	Dilution Factor:	1.0000
Date Time Collected:	1/16/2018	3:47 PM		Sample Wt.:	1.0000
System Operator:	n.a.			Sample Amt.:	1.0000



CSPCBA01 (PCB with Averag

Sample Analysis Report

Sample Name:	sa18G09	**Sample ID:**	pe 1248	**Sample No.:**	9
Sequence Name:	SA18a16a	**Misc:**	a16b soil 20x	**Sample Pos.:**	15
Program Method:	sapcdual03b	**MethSav:**	01/12/18 16:07	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	4:34 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

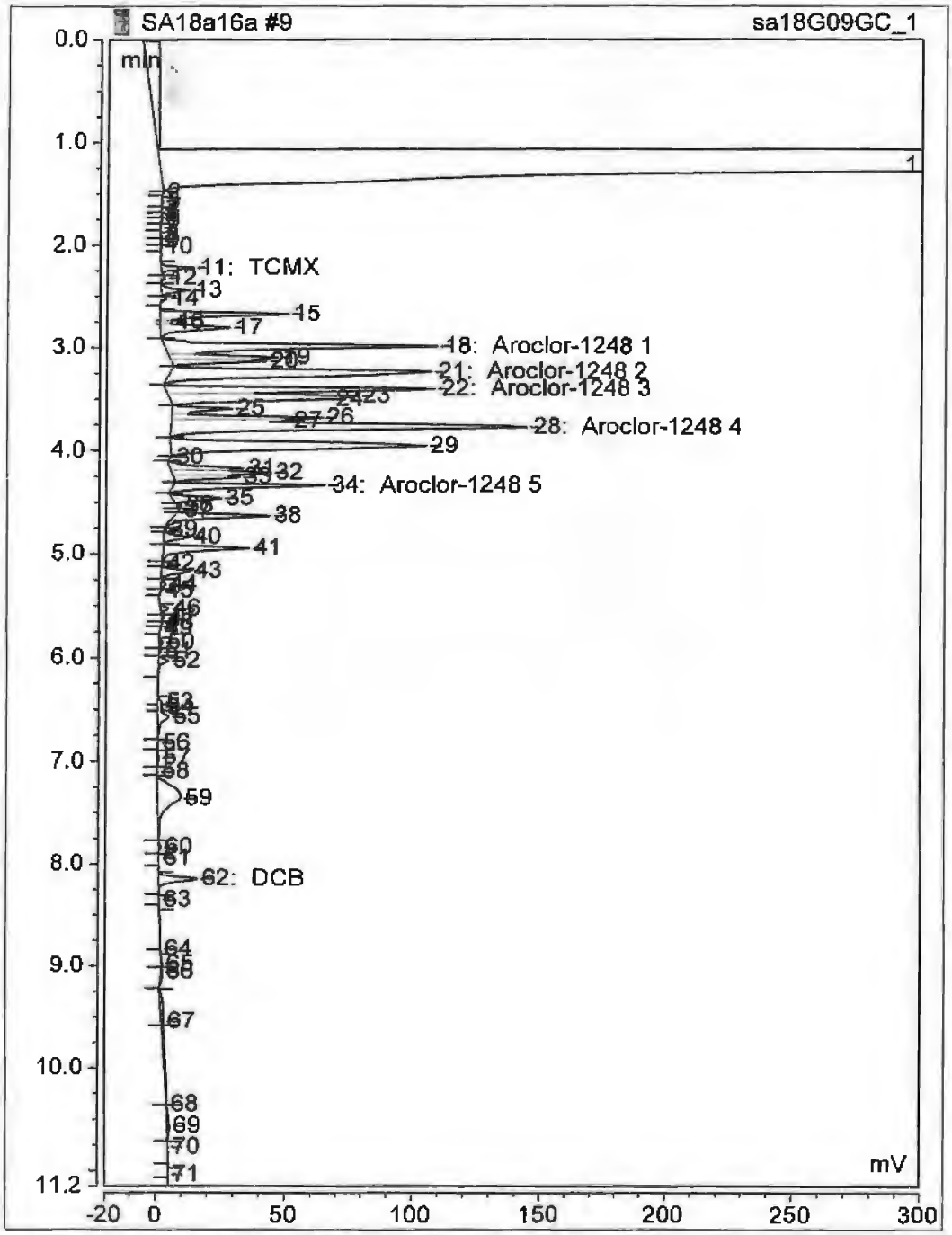
Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
18	Aroclor-1248 1	BM	2.99	5.685	106.723	898.9756	
21	Aroclor-1248 2	bMB	3.24	7.510	102.244	939.4578	
22	Aroclor-1248 3	BM	3.40	4.817	105.662	918.8046	
28	Aroclor-1248 4	Mb	3.78	10.067	139.484	921.5757	
34	Aroclor-1248 5	bMB	4.34	2.385	58.946	952.7461	926.3124
62	DCB	BMB	8.15	0.619	15.006	0.5170	0.5170
11	TCMX	BMb	2.22	0.425	12.802	0.8230	0.8230

T
1-19 LR

18.5 mg/kg

study mean 23.0
assigned value - 27.9.
we originally reported 14.9

Sample Name:	sa18G09	**Sample ID:**	pe 1248	**Sample No.:**	9
Sequence Name:	SA18a16a	**Misc:**	a16b soil 20x	**Sample Pos.:**	15
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	4:34 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



CSPCBA01 (PCB with Averag

Sample Analysis Report

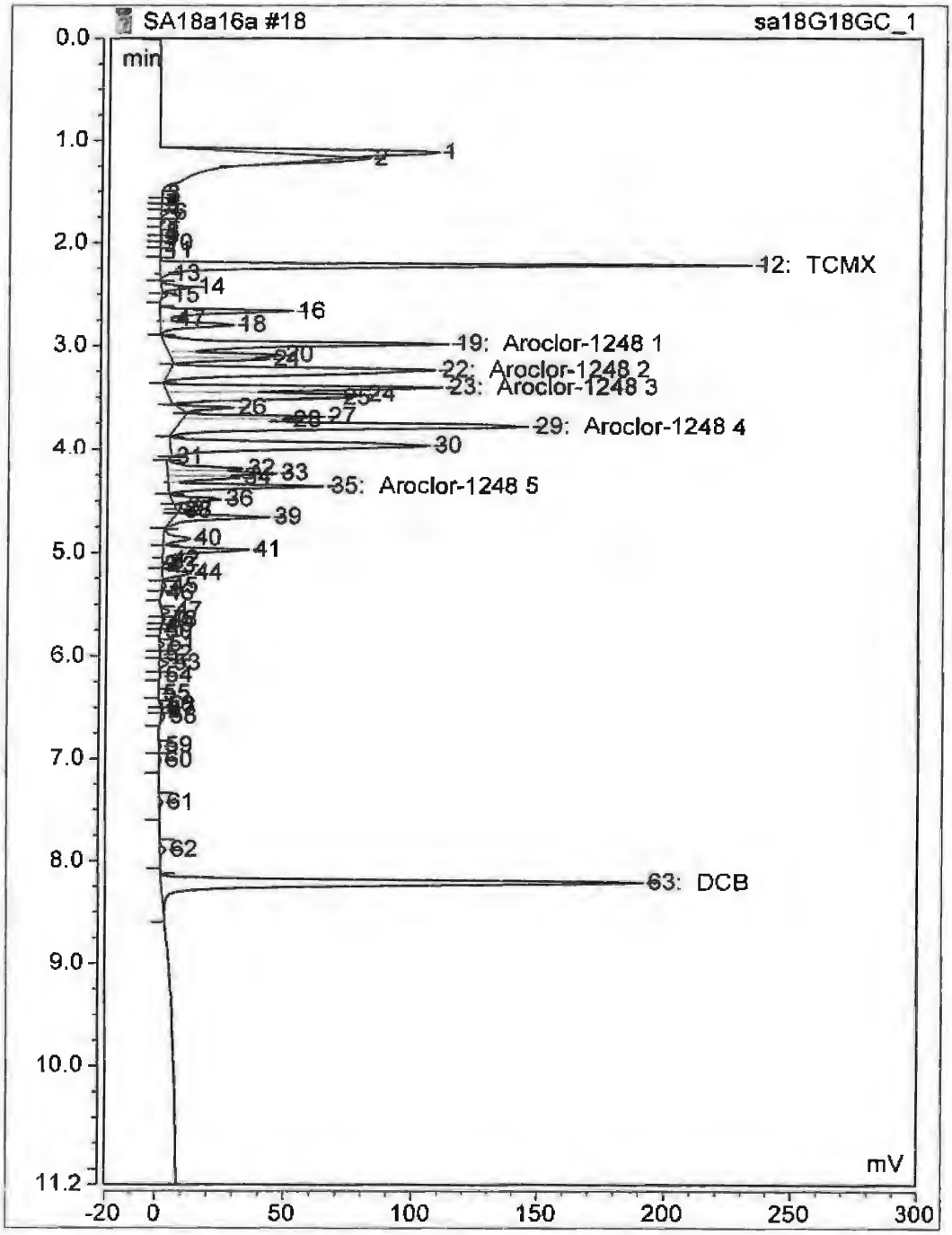
Sample Name:	sa18G18	**Sample ID:**	1248 ccv 01/16	**Sample No.:**	18
Sequence Name:	SA18a16a	**Misc:**		**Sample Pos.:**	3
Program Method:	sapcdual03b	**MethSav:**	01/12/18 16:07	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	7:29 PM		**Sample Wt.:**	1.0000
Operator	chemist		**Chan:** GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
19	Aroclor-1248 1	BM	2.98	5.991	111.246	938.3465	
22	Aroclor-1248 2	bMB	3.24	7.640	103.679	953.6417	
23	Aroclor-1248 3	BM	3.40	5.065	108.658	945.9993	
29	Aroclor-1248 4	MB	3.78	9.960	138.566	915.2854	
35	Aroclor-1248 5	MB	4.36	2.595	60.207	973.8409	945.4227
63	DCB	BMB	8.21	11.772	189.520	70.5250	70.5250
12	TCMX	BM	2.22	8.589	233.033	72.2806	72.2806

pass

TT 1-19-18

Sample Name:	sa18G18	**Sample ID:**	1248 ccv 01/16	**Sample No.:**	18
Sequence Name:	SA18a16a	**Misc:**		**Sample Pos.:**	3
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	7:29 PM		**Sample Wt.:**	1.0000
System Operator:	n.a			**Sample Amt.:**	1.0000



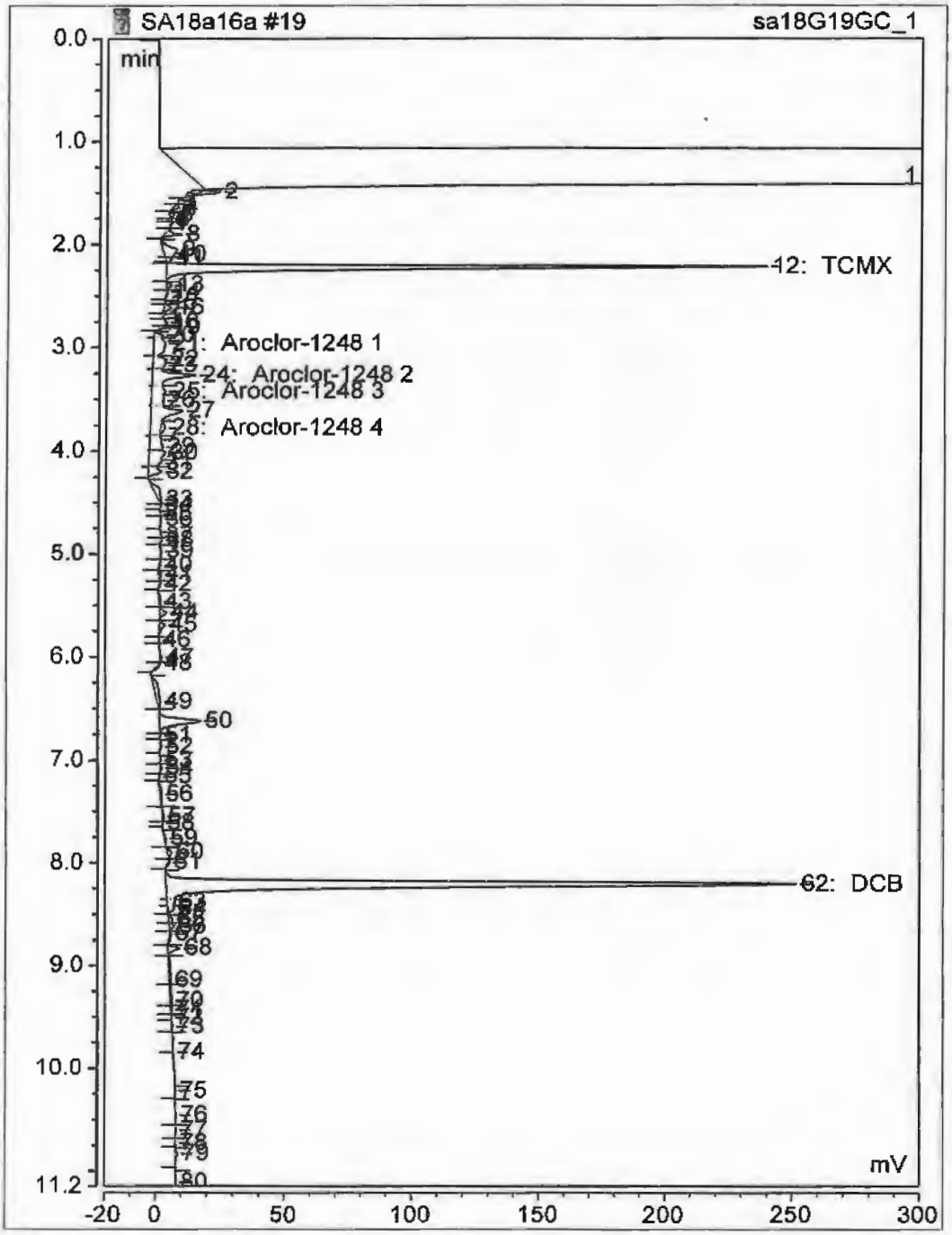
CSPCBA01 (PCB with Averag **Sample Analysis Report**

Sample Name:	sa18G19	**Sample ID:**	blank	**Sample No.:**	19
Sequence Name:	SA18a16a	**Misc:**	a16b soil	**Sample Pos.:**	13
Program Method:	sapcdual03b	**MethSav:**	01/12/18 16:07	**Injection vol.:**	2.0
Quantitation Method:	sapceb16			**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	7:49 PM		**Sample Wt.:**	1.0000
Operator chemist		**Chan:**	GC_1	**Sample Amt.:**	1.0000

Peak No.	Component Name	Type	Retention Time	Area mV*min	Height mV	Amount	Average ug/L
21	Aroclor-1248 1	M	2.96	0.670	4.589	9.9296	
24	Aroclor-1248 2	M	3.27	1.139	16.991	96.2675	
25	Aroclor-1248 3	M	3.43	0.919	5.441	8.9401	
28	Aroclor-1248 4	Rd	3.78	0.140	1.800	n.a.	
n.a.	Aroclor-1248 5	n.a.	n.a.	n.a.	n.a.	n.a.	38.3791
62	DCB	BM	8.21	15.409	247.967	93.9715	93.9715
12	TCMX	bMB	2.22	6.874	236.397	73.3721	73.3721

1-19-18

Sample Name:	sa18G19	**Sample ID:**	blank	**Sample No.:**	19
Sequence Name:	SA18a16a	**Misc:**	a16b soil	**Sample Pos.:**	13
Program Method:	sapcdual03b			**Injection vol.:**	2.0
Quantitation Method:	sapceb16	**Units:**	ppb	**Dilution Factor:**	1.0000
Date Time Collected:	1/16/2018	7:49 PM		**Sample Wt.:**	1.0000
System Operator:	n.a.			**Sample Amt.:**	1.0000



SM-PTX490

SM-115 remedial PT for PCBs
83430

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 02/26/2018 - Closed: 03/14/2018 - Reports Printed On: 03/14/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd , Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to: State Only
EPA Lab Code: MI00129
State Lab Code: MI00129
Primary Agency: TX -- Texas CEQ
Frank Jamison
12100 Park 35 CircleBldg. A, MC-176
Austin, TX 78753
Reports to : TX

Participant Information

NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer.

Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com

This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCO-005B PCBs in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX490

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	< 1.91	<0.1	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	8.08	15.0	mg/kg	3.74 to 21.3	ACCEPT	3/9/18	TKT
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	< 1.91	0	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	< 1.91	0	mg/kg	0.00 to 0.00	ACCEPT.	3/9/18	TKT

Assigned Values
All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits
Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Reviewed/Approved By: MRHS Date: 3/15/18

Mark Hammersla, President

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 658/PAR)

Client: Fibertec (Internal) **Project/Document Control Number:** 81468

Sample Number(s): -007 **Date Initiated:** 01/02/18 **Date Due:** 01/16/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Inorganic (Wet Chemistry / Metals / Digestions) ☒ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The reported value for Aniline was 2840 ug/Kg which was above the acceptance criteria. The assigned value was ND at <1000 ug/Kg with a mean of 0.0 and an acceptance range of 0.00 to 1000. Please investigate this issue to determine the cause of the error and propose a corrective action to prevent the reoccurrence of this issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The sample was first analyzed on S6 and aniline was ND, but the CCV failed low for aniline, so it was not reported. The sample was then analyzed on SJ and aniline was reported. After reviewing the data, the secondary ion percentage did not match, and a library search indicated that the peak was phenol (which was reported from S6 already).

We have 2 different columns in use on our GC/MS systems. One type (on S6) has good separation between aniline and phenol. The other type (on SJ and S3) does not. Because of this, S3 uses different ions for aniline than the other instruments. When SJ was implemented, the method was copied over from SG (the other Thermo instrument) and the same ions for aniline were used.

Investigator(s): Bethany D Arnett

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

The ions used on SJ for quantification of aniline will be changed to match those on S3. Any other differences between the two instruments regarding the ions being used will also be looked into and changed if necessary.

QA Approval:_____

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☑

VI. Approvals:

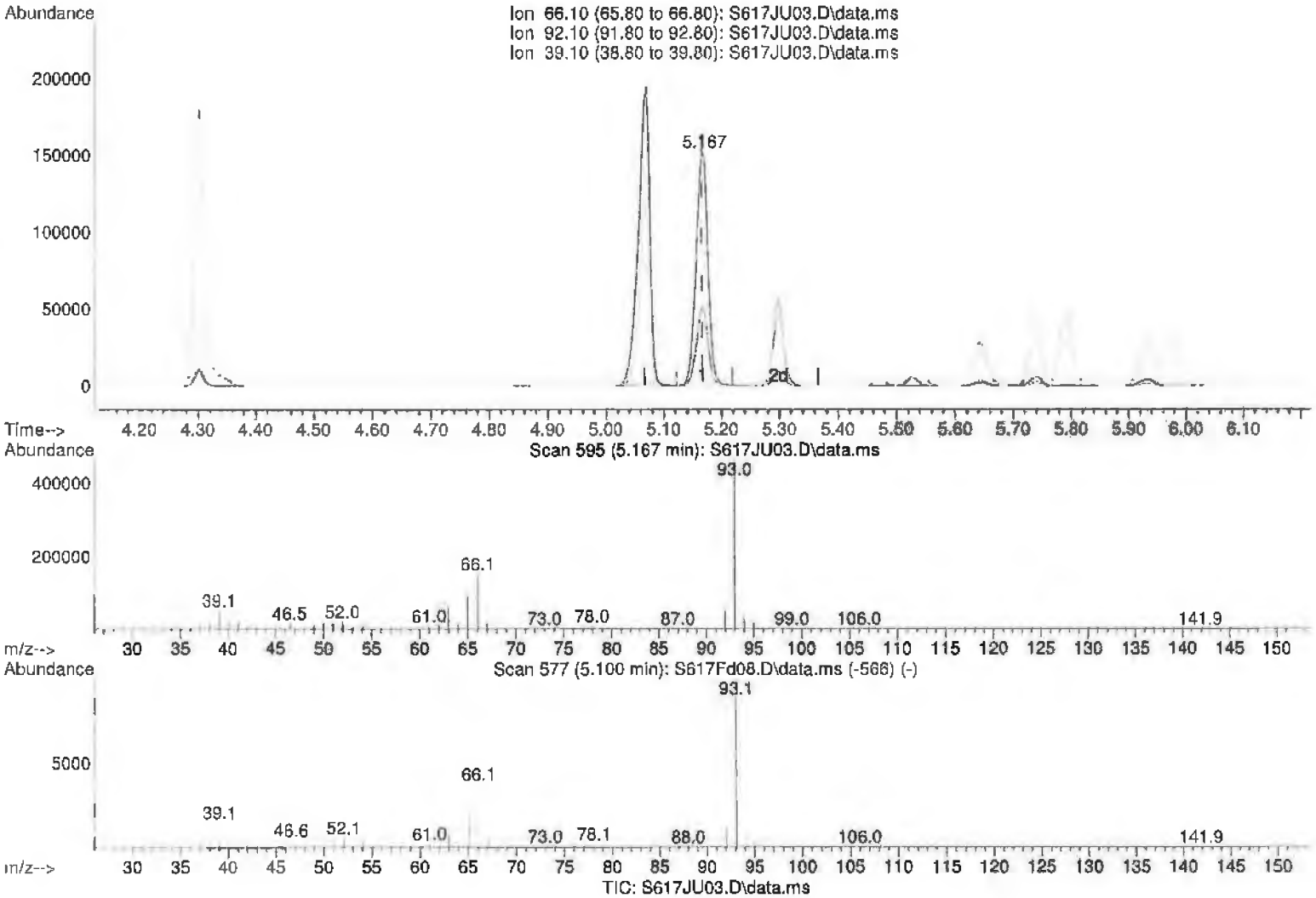
Managerial: 1/30/18 **Area Supervisor:** Bethany D Arnett 1-30-18

Date Closed: 1/31/18

Quantitation Report (Qedit)

Data Path : C:\S6\S6_DATA\S617J30b\
Data File : S617JU03.D
Acq On : 30 Oct 2017 4:00 pm
Operator :
Sample : ccv01
Misc : 10/23
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 30 15:36:36 2017
Quant Method : C:\S6\S6_METHOD\S6BNAA92.M
Quant Title :
QLast Update : Tue Oct 24 09:10:30 2017
Response via : Initial Calibration



(5) Aniline (T)

5.167min (+ 0.000) 19.27 mg/L

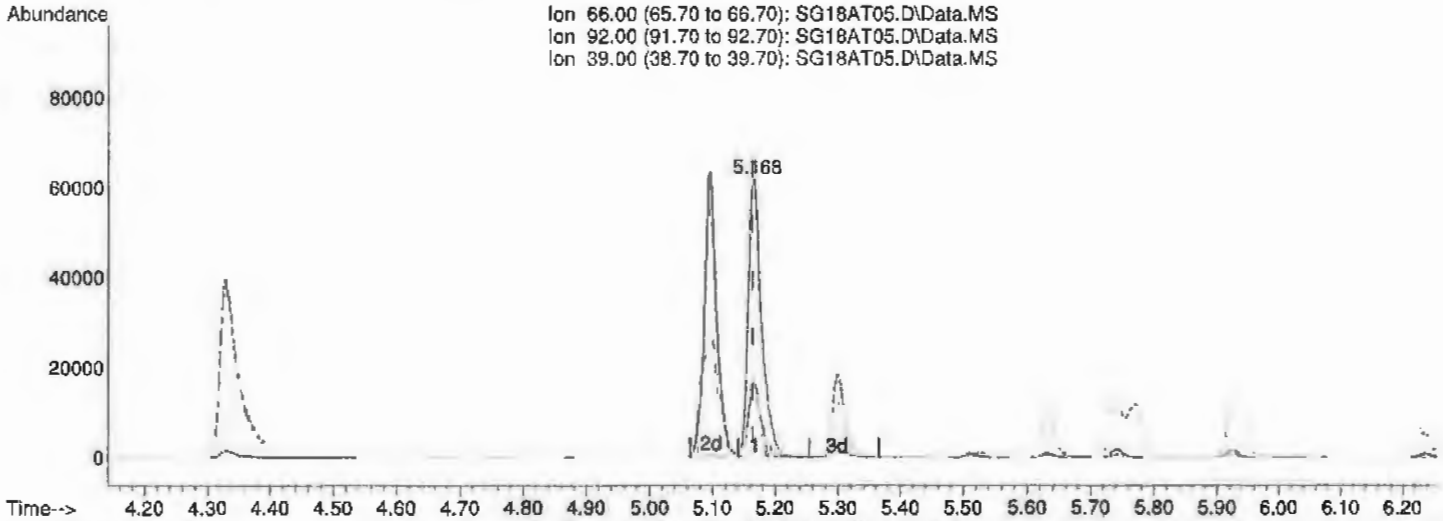
response 217957

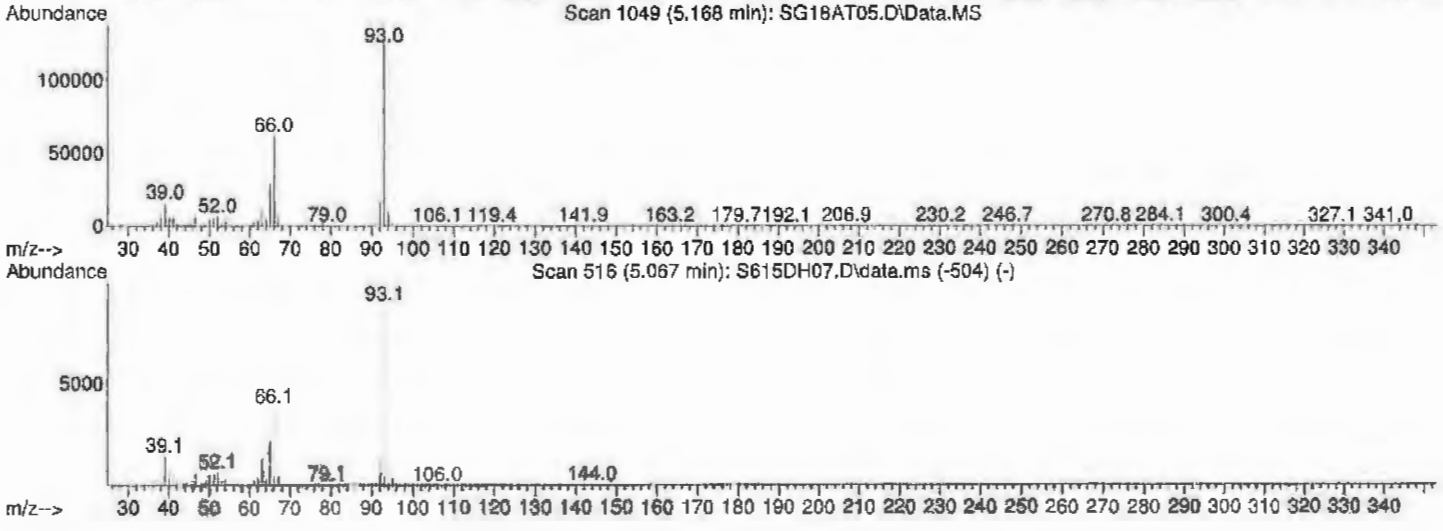
Ion	Exp%	Act%
66.10	100.00	100.00
92.10	30.80	32.97
39.10	39.70	34.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\SG\SG_DATA\SG18A29a\
Data File : SG18AT05.D
Acq On : 29 Jan 18 14:18
Operator :
Sample : ccv01
Misc : 1/22 b
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 29 15:05:09 2018
Quant Method : C:\SG\SG_METHOD\SGBNAA27.M
Quant Title :
QLast Update : Sun Jan 07 13:17:53 2018
Response via : Initial Calibration





TIC: SG18AT05.D\Data.MS

(5) Aniline (T)

5.168min (+ 0.003) 21.55 mg/L

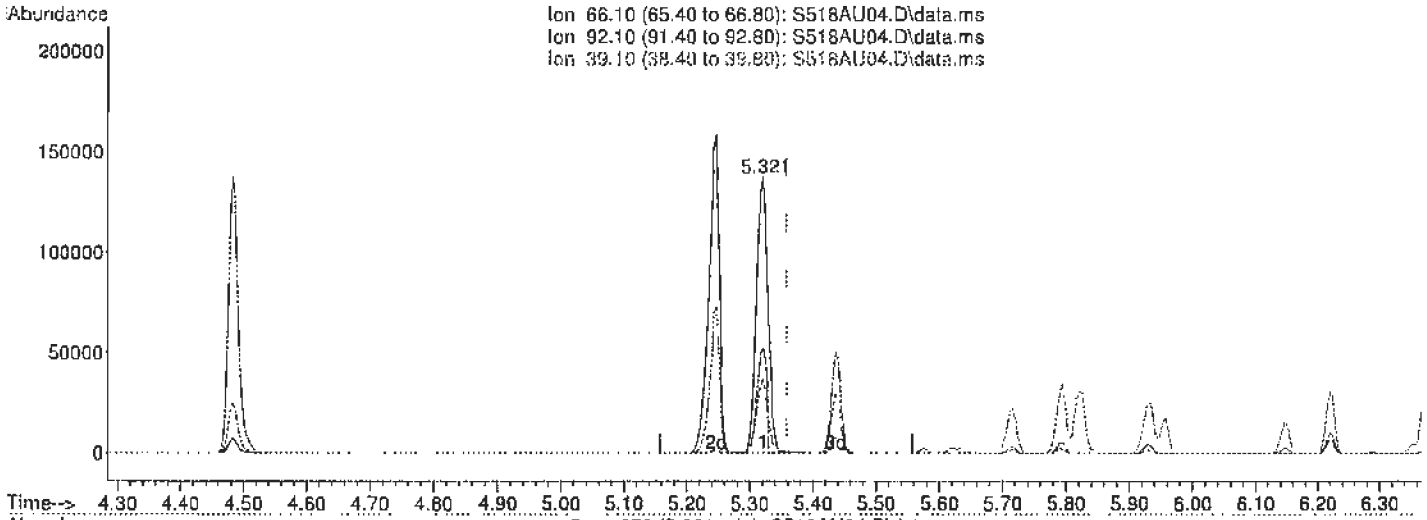
response 91103

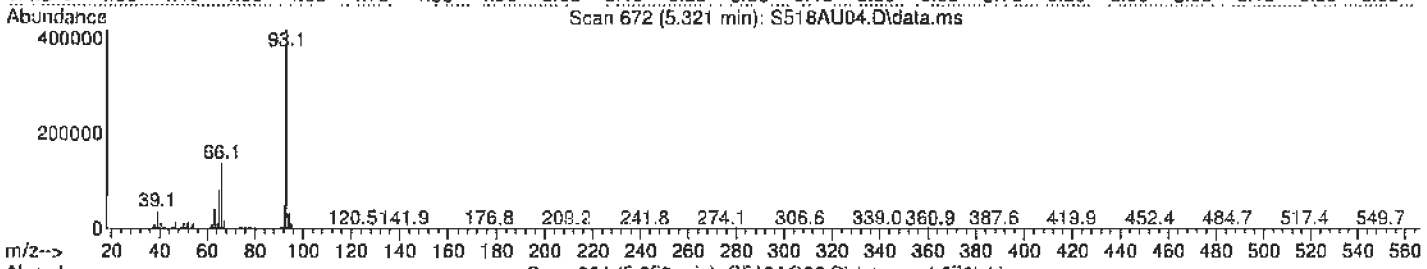
Ion	Exp%	Act%
66.00	100.00	100.00
92.00	21.70	23.97
39.00	16.10	26.30#
0.00	0.00	0.00

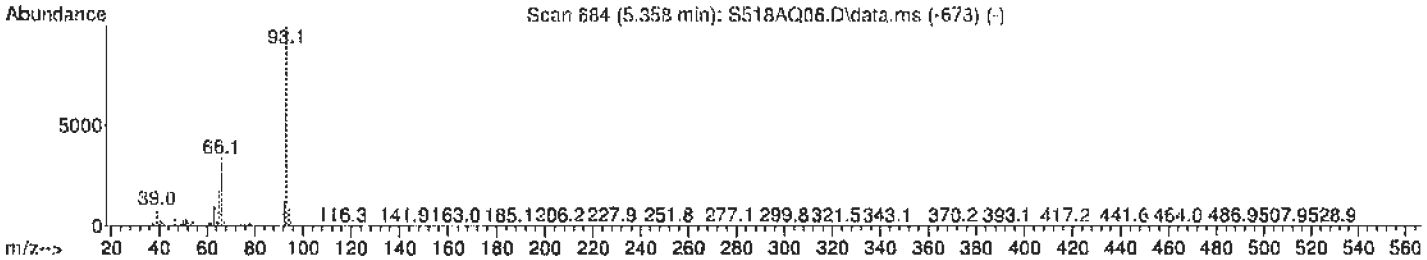
Quantitation Report (Qedit)

Data Path : C:\S5\S5_DATA\S518A30a\
Data File : S518AU04.D
Acq On : 30 Jan 2018 12:30 pm
Operator : chemist
Sample : ccv01
Misc : 1/22 a
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 30 12:55:05 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB23.M
Quant Title : EPA 8270C
QLast Update : Sun Jan 28 16:57:33 2018
Response via : Initial Calibration







TIC: S518AU04.D\data.ms

(5) Aniline (T)

5.321min (-0.037) 24.03 mg/L

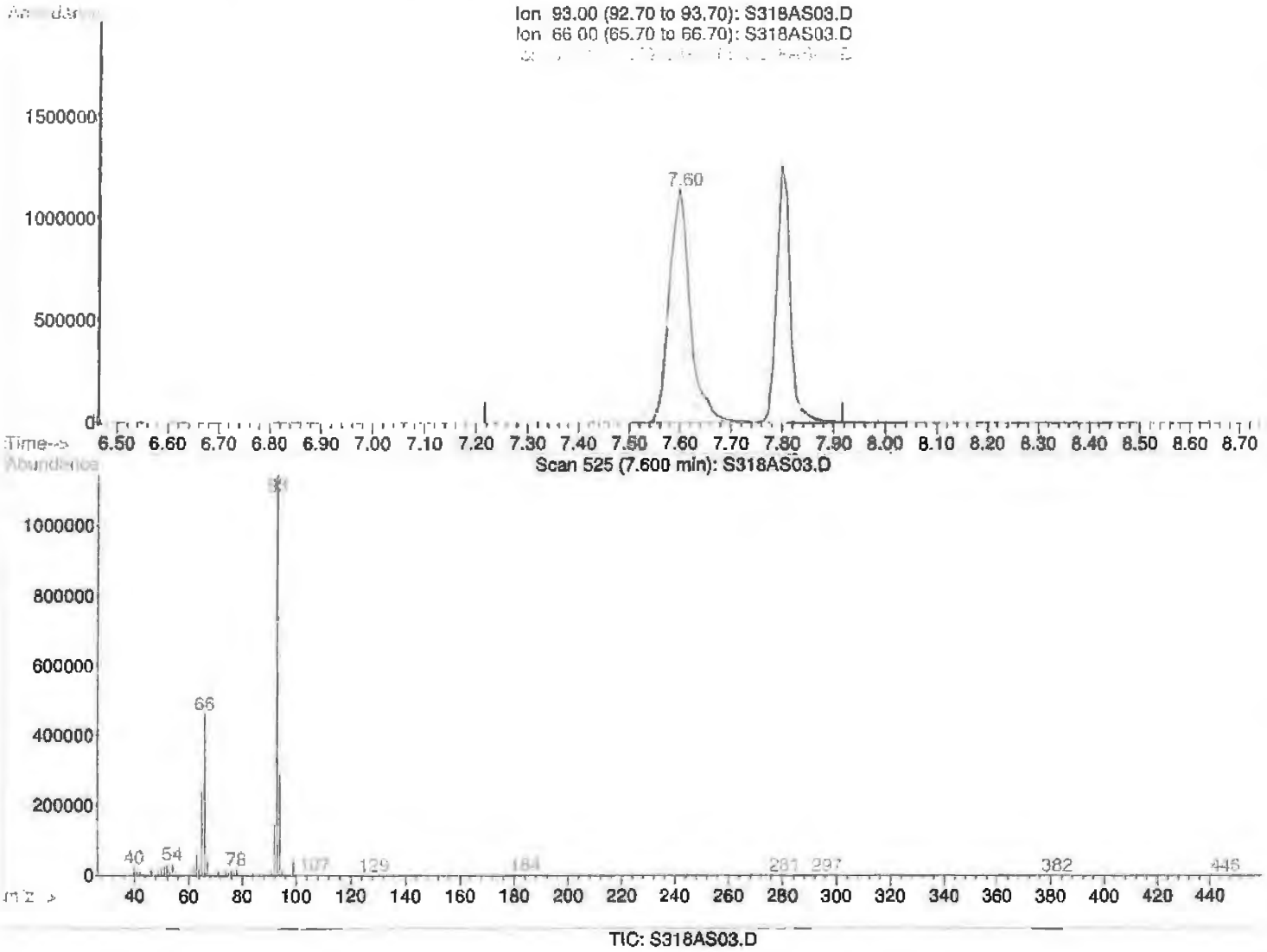
response 173979

Ion	Exp%	Act%
66.10	100.00	100.00
92.10	30.10	32.66
39.10	25.90	26.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : C:\S3\S3_DATA\S318A28B\S318AS03.D Vial: 3
Acq On : 28 Jan 2018 3:39 pm Operator: chemist
Sample : ccv01 Inst : S3
Misc : 1/25 b Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 29 14:25 2018 Quant Results File: temp.res

Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Multiple Level Calibration



(5) Aniline (T)

7.60min 23.32mg/L

response 3271350

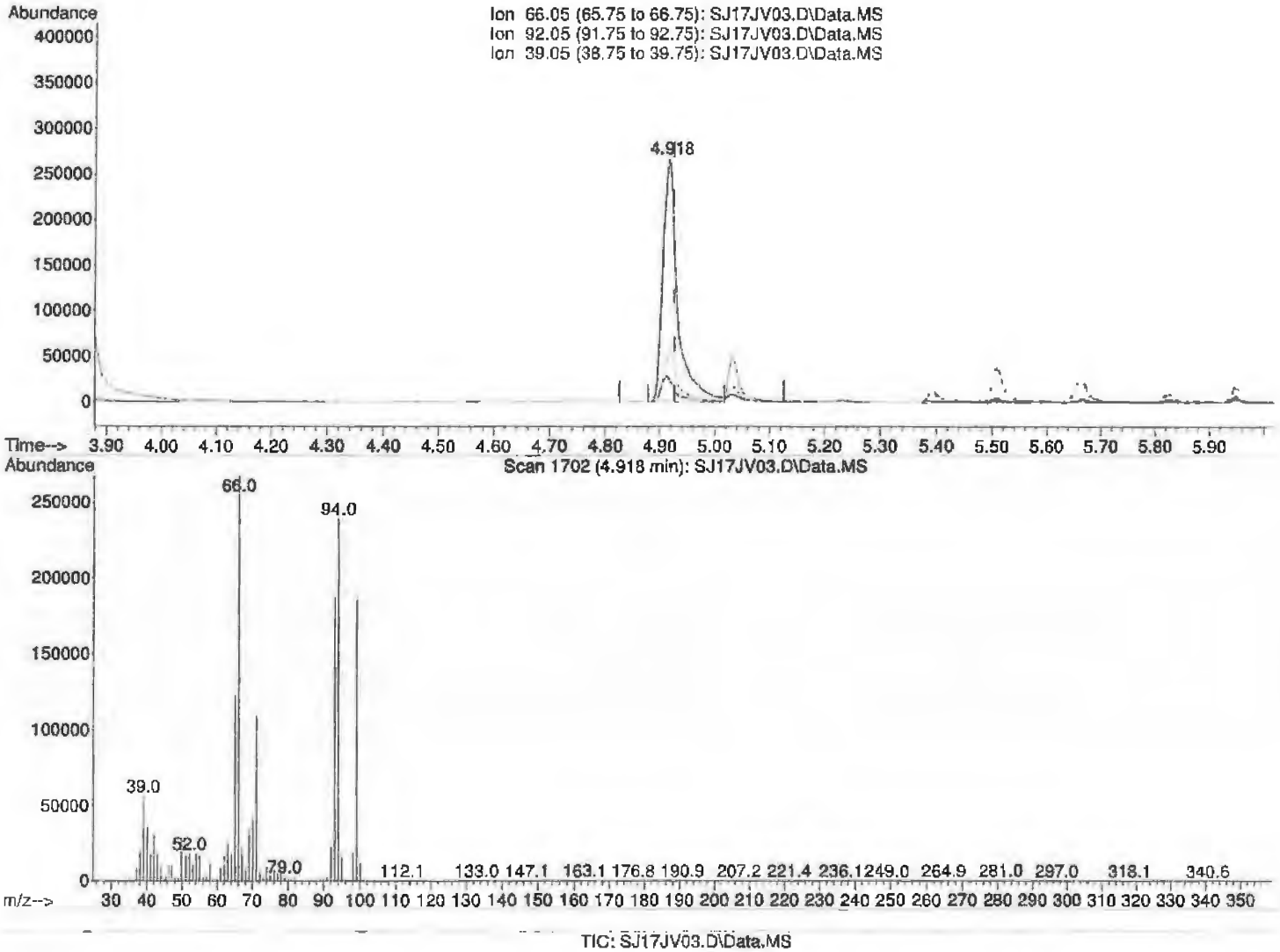
Ion	Exp%	Act%
93.00	100	100
66.00	59.20	61.56
92.00	12.90	13.31
0.00	0.00	0.00

S318AS03.D S3BNAB01.M Tue Jan 30 13:35:21 2018

Quantitation Report (Qedit)

Data Path : C:\SJ\SJ DATA\SJ17J31a\
Data File : SJ17JV03.D
Acq On : 31 Oct 2017 09:35
Operator :
Sample : ccv01
Misc : 9/26 B
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Oct 31 09:24:27 2017
Quant Method : C:\SJ\SJ METHODS\SJBNAA06.M
Quant Title :
QLast Update : Tue Oct 10 12:36:49 2017
Response via : Initial Calibration



TIC: SJ17JV03.D\Data.MS

(5) Aniline (T)

4.918min (-0.008) 26.50 mg/L

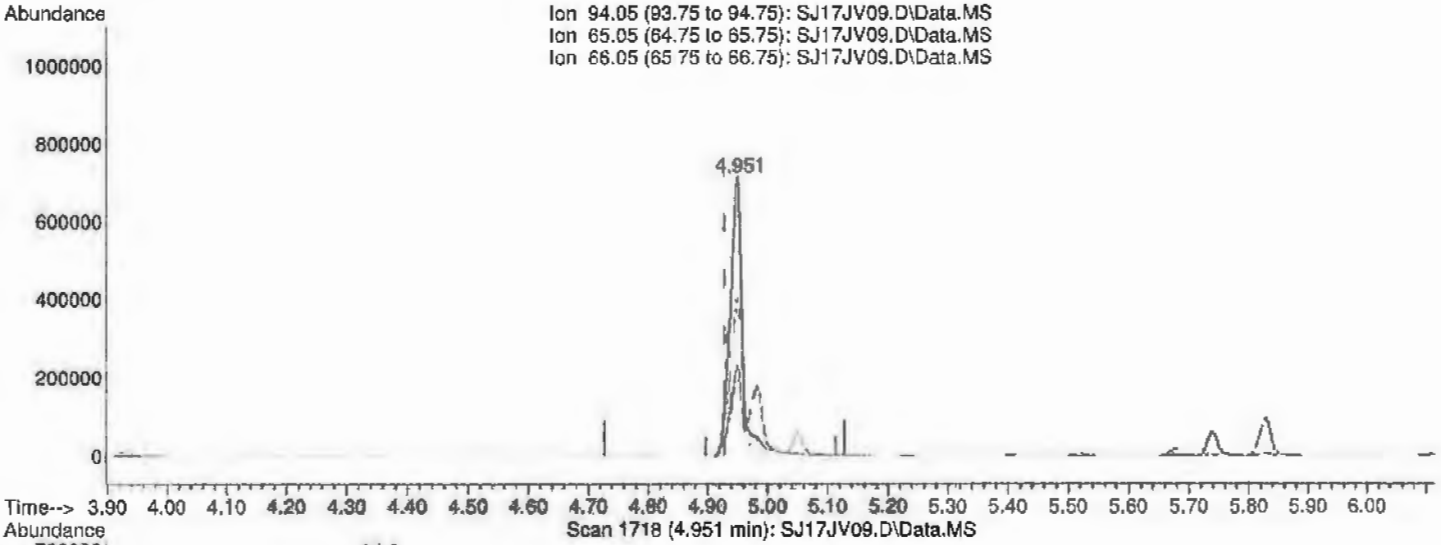
response 497133

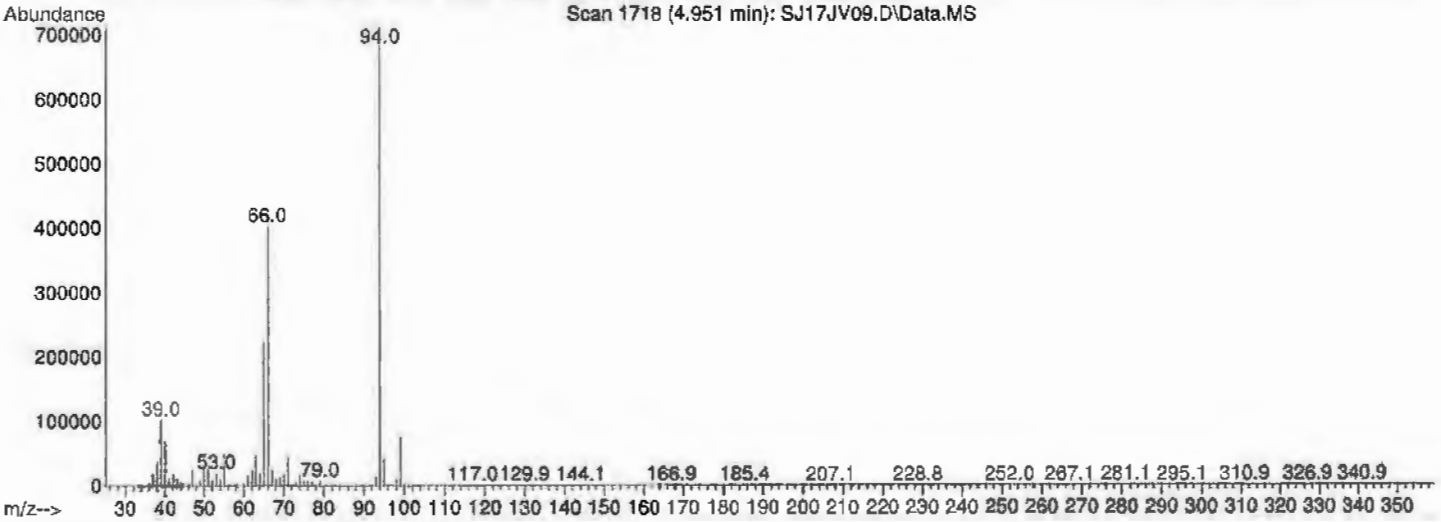
Ion	Exp%	Act%
66.05	100.00	100.00
92.05	10.50	9.57
39.05	34.70	19.65#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\SJ\SJ DATA\SJ17J31a\
Data File : SJ17JV09.D
Acq On : 31 Oct 17 13:43
Operator :
Sample : 81468-007.01
Misc : j30b bna soil
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Oct 31 13:29:41 2017
Quant Method : C:\SJ\SJ METHODS\SJBNAA06.M
Quant Title :
QLast Update : Tue Oct 10 12:36:49 2017
Response via : Initial Calibration





TIC: SJ17JV09.D\Data.MS

(7) Phenol (MC)

4.951min (+ 0.023) 98.48 mg/L

response 1037492

Ion	Exp%	Act%
94.05	100.00	100.00
65.05	54.20	28.89#
66.05	116.60	56.50#
0.00	0.00	0.00

SM-115-Remedial PT Study

SM-PTX490

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 02/26/2018 - Closed: 03/14/2018 - Reports Printed On: 03/14/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCO-005B PCBs in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX490

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<1.91	<0.1	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	8.08	15.0	mg/kg	3.74 to 21.3	ACCEPT.	3/9/18	TKT
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<1.91	0	mg/kg	0.00	ACCEPT.	3/9/18	TKT
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<1.91	0	mg/kg	0.00	ACCEPT.	3/9/18	TKT

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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UST-090

Fall, 2017

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-090 - Shipped: 10/17/2017 - Closed: 11/30/2017 - Reports Printed On: 12/19/2017
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

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1914 Holloway Drive
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517-699-0345

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(800) 234-7837 - mark.hammersla@nsilabsolutions.com
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SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-090

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	554	637	739	mg/kg	241	92.8 to 1390	0.344	ACCEPT.	11/17/17	RDK

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-090

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	537	678	774	mg/kg	469	264 to 1280	0.301	ACCEPT.	10/30/17	TKT

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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2018 PT Studies

WP-243

Winter, 2018

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-243 - Shipped: 01/15/2018 - Closed: 02/28/2018
Reports Printed On: 03/07/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

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(800) 234-7837 - mark.hammersla@nsilabsolutions.com
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PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	27.2	37.5	38.5	mg/L	6.16	19.6 to 57.4	1.67	ACCEPT.	2/5/18	AMG
1555	CBOD	20135255	GALV	SM 5210 B - 2001	26.6	34.9	34.9	mg/L	5.47	14.9 to 54.9	1.52	ACCEPT.	2/5/18	AMG
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	56.0	60.6	62.0	mg/L	8.02	43.6 to 77.8	0.574	ACCEPT.	1/31/18	AMG
2040	TOC	20137615	TOC-IR	SM 5310 B 22nd ED 2011	20.6	23.8	24.5	mg/L	1.91	19.9 to 29.0	1.68	ACCEPT.	1/31/18	SEM
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	20.6	23.8	24.5	mg/L	1.91	19.9 to 29.0	1.68	ACCEPT.	1/31/18	SEM

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	57.3	58.8	61.9	mg/L	6.09	41.4 to 74.1	0.246	ACCEPT.	2/2/18	SEM

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.691	0.780	0.784	mg/L	0.107	0.510 to 1.06	0.832	ACCEPT.	1/29/18	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.314	0.392	0.392	mg/L	0.0982	0.0970 to 0.687	0.794	ACCEPT.	1/29/18	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.71	1.69	1.92	mg/L	0.233	0.972 to 2.86	0.0858	ACCEPT.	2/1/18	RKP
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.71	1.69	1.92	mg/L	0.233	0.972 to 2.86	0.0858	ACCEPT.	2/1/18	RKP

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	1.00	1.00	1.08	mg/L	0.135	0.806 to 1.30	0	ACCEPT.	2/13/18	RKP
1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	0.982	1.00	1.08	mg/L	0.135	0.806 to 1.30	0.133	ACCEPT.	2/14/18	RKP

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	2750	2690	2750	ug/L	183	2290 to 3130	0.328	ACCEPT.	2/13/18	JLH
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	2750	2690	2750	ug/L	183	2290 to 3130	0.328	ACCEPT.	2/13/18	JLH
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	184	187	183	ug/L	17.7	135 to 224	0.169	ACCEPT.	2/13/18	JLH
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	184	187	183	ug/L	17.7	135 to 224	0.169	ACCEPT.	2/13/18	JLH
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	643	681	683	ug/L	34.7	577 to 781	1.10	ACCEPT.	2/12/18	JLH
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	643	681	683	ug/L	34.7	577 to 781	1.10	ACCEPT.	2/12/18	JLH
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1400	1550	1550	ug/L	90.9	1320 to 1780	1.65	ACCEPT.	2/12/18	JLH
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	1400	1550	1550	ug/L	90.9	1320 to 1780	1.65	ACCEPT.	2/12/18	JLH
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	107	119	117	ug/L	9.33	99.5 to 135	1.29	ACCEPT.	2/12/18	JLH
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	107	119	117	ug/L	9.33	99.5 to 135	1.29	ACCEPT.	2/12/18	JLH
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	813	864	867	ug/L	55.4	737 to 997	0.921	ACCEPT.	2/12/18	JLH
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	813	864	867	ug/L	55.4	737 to 997	0.921	ACCEPT.	2/12/18	JLH
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	176	186	183	ug/L	10.9	156 to 210	0.917	ACCEPT.	2/12/18	JLH
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	176	186	183	ug/L	10.9	156 to 210	0.917	ACCEPT.	2/12/18	JLH
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	312	349	350	ug/L	17.5	298 to 403	2.11	ACCEPT.	2/12/18	JLH
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	312	349	350	ug/L	17.5	298 to 403	2.11	ACCEPT.	2/12/18	JLH
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	828	854	850	ug/L	49.1	723 to 978	0.530	ACCEPT.	2/12/18	JLH
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	828	854	850	ug/L	49.1	723 to 978	0.530	ACCEPT.	2/12/18	JLH
1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	290	268	267	ug/L	20.2	227 to 307	1.09	ACCEPT.	2/12/18	JLH
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	290	268	267	ug/L	20.2	227 to 307	1.09	ACCEPT.	2/12/18	JLH
1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	908	926	917	ug/L	78.5	779 to 1050	0.229	ACCEPT.	2/12/18	JLH

1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	908	926	917	ug/L	78.5	779 to 1050	0.229	ACCEPT.	2/12/18	JLH
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	612	668	667	ug/L	36.6	567 to 767	1.53	ACCEPT.	2/12/18	JLH
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	612	668	667	ug/L	36.6	567 to 767	1.53	ACCEPT.	2/12/18	JLH
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	122	132	133	ug/L	9.38	110 to 155	1.07	ACCEPT.	2/12/18	JLH
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	122	132	133	ug/L	9.38	110 to 155	1.07	ACCEPT.	2/12/18	JLH
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1250	1261	1250	ug/L	69.0	1100 to 1400	0.159	ACCEPT.	2/12/18	JLH
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	1250	1261	1250	ug/L	69.0	1100 to 1400	0.159	ACCEPT.	2/12/18	JLH
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	634	682	683	ug/L	49.4	581 to 785	0.972	ACCEPT.	2/12/18	JLH
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	634	682	683	ug/L	49.4	581 to 785	0.972	ACCEPT.	2/12/18	JLH
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	767	758	783	ug/L	98.1	666 to 900	0.0917	ACCEPT.	2/12/18	JLH
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	767	758	783	ug/L	98.1	666 to 900	0.0917	ACCEPT.	2/12/18	JLH
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	435	449	450	ug/L	26.8	383 to 518	0.522	ACCEPT.	2/12/18	JLH
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	435	449	450	ug/L	26.8	383 to 518	0.522	ACCEPT.	2/12/18	JLH
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	164	166	167	ug/L	10.5	128 to 202	0.190	ACCEPT.	2/12/18	JLH
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	164	166	167	ug/L	10.5	128 to 202	0.190	ACCEPT.	2/12/18	JLH
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	505	536	533	ug/L	32.6	453 to 613	0.951	ACCEPT.	2/12/18	JLH
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	505	536	533	ug/L	32.6	453 to 613	0.951	ACCEPT.	2/12/18	JLH
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	880	853	850	ug/L	57.4	723 to 978	0.470	ACCEPT.	2/12/18	JLH
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	880	853	850	ug/L	57.4	723 to 978	0.470	ACCEPT.	2/12/18	JLH

PEI-034-2 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1200	1202	1270	ug/L	199	887 to 1650	0.0101	ACCEPT.	2/12/18	JLH
1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	1200	1202	1270	ug/L	199	887 to 1650	0.0101	ACCEPT.	2/12/18	JLH

1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	227	235	250	ug/L	15.1	213 to 288	0.530	ACCEPT.	2/12/18	JLH
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	227	235	250	ug/L	15.1	213 to 288	0.530	ACCEPT.	2/12/18	JLH

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105015	ISE	SM 4500-H+ B 22nd ED 2011	5.80	5.83	5.83	units	0.0875	5.63 to 6.03	0.343	ACCEPT.	1/26/18	AMG
1900	pH	10244403	ISE	SW-846 9040C - 2002	5.80	5.83	5.83	units	0.0875	5.63 to 6.03	0.343	ACCEPT.	1/26/18	AMG

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051212	GRAV	SM 2540 D-2011 2011	72.5	74.4	84.4	mg/L	9.75	69.1 to 93.8	0.195	ACCEPT.	1/31/18	AMG
1950	Total Solids	20049416	GRAV	SM 2540 B-2011 2011	684	672	683	mg/L	35.2	615 to 751	0.341	ACCEPT.	1/31/18	AMG

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	3.56	3.97	3.67	mg/L	1.57	1.25 to 5.59	0.261	ACCEPT.	2/1/18	SEM

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 - 1994	18.3	17.0	17.3	ug/L	2.32	12.1 to 22.5	0.560	ACCEPT.	2/7/18	NRV
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	18.3	17.0	17.3	ug/L	2.32	12.1 to 22.5	0.560	ACCEPT.	2/7/18	NRV

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	8.04	8.43	8.51	NTU	1.76	6.82 to 10.2	0.222	ACCEPT.	2/19/18	RKP
2055	Turbidity	20042619	TURB	SM 2130 B 22nd Ed 2011	8.04	8.43	8.51	NTU	1.76	6.82 to 10.2	0.222	ACCEPT.	2/19/18	RKP

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	850	662	664	ug/L	63.5	558 to 761	2.96	NOT ACCEPT.	2/2/18	AMG
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	850	662	664	ug/L	63.5	558 to 761	2.96	NOT ACCEPT.	2/2/18	AMG

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.91	2.80	2.79	mg/L	0.148	2.40 to 3.18	0.743	ACCEPT.	2/5/18	RKP
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	2.91	2.80	2.79	mg/L	0.148	2.40 to 3.18	0.743	ACCEPT.	2/5/18	RKP

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	9.90	9.82	9.91	mg/L	0.480	8.49 to 11.4	0.167	ACCEPT.	2/5/18	RKP
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	9.90	9.82	9.91	mg/L	0.480	8.49 to 11.4	0.167	ACCEPT.	2/5/18	RKP

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1770	1656	1650	ug/L	65.9	1400 to 1900	1.73	ACCEPT.	2/12/18	JLH
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1770	1656	1650	ug/L	65.9	1400 to 1900	1.73	ACCEPT.	2/12/18	JLH

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	189	284	304	mg/L	31.7	227 to 350	3.00	NOT ACCEPT.	2/1/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	189	284	304	mg/L	31.7	227 to 350	3.00	NOT ACCEPT.	2/1/18	AMG

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	34.1	37.8	37.8	mg/L	2.42	32.5 to 43.2	1.53	ACCEPT.	2/5/18	RKP
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	34.1	37.8	37.8	mg/L	2.42	32.5 to 43.2	1.53	ACCEPT.	2/5/18	RKP
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	3.24	3.51	3.57	mg/L	0.427	2.89 to 4.10	0.632	ACCEPT.	2/5/18	RKP

1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	3.24	3.51	3.57	mg/L	0.427	2.89 to 4.10	0.632	ACCEPT.	2/5/18	RKP
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	39.7	37.7	38.4	mg/L	3.25	30.7 to 46.1	0.615	ACCEPT.	2/12/18	JLH
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	39.7	37.7	38.4	mg/L	3.25	30.7 to 46.1	0.615	ACCEPT.	2/12/18	JLH
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	59.7	58.0	59.8	mg/L	6.09	47.8 to 71.8	0.279	ACCEPT.	2/12/18	JLH
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	59.7	58.0	59.8	mg/L	6.09	47.8 to 71.8	0.279	ACCEPT.	2/12/18	JLH
1610	Specific Conductance (at 25C)	20048413	COND	SM 2510 B 22nd Ed 2011	415	395	395	umhos/cm	16.6	356 to 435	1.20	ACCEPT.	1/26/18	AMG
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	415	395	395	umhos/cm	16.6	356 to 435	1.20	ACCEPT.	1/26/18	AMG
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	48.7	46.7	47.1	mg/L	7.38	38.6 to 54.0	0.271	ACCEPT.	2/5/18	RKP
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	48.7	46.7	47.1	mg/L	7.38	38.6 to 54.0	0.271	ACCEPT.	2/5/18	RKP
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	72.3	69.7	69.8	mg/L	3.56	59.3 to 80.3	0.730	ACCEPT.	2/9/18	RKP
1505	Total Alkalinity (CaCO3)	20045618	TITR	SM 2320 B-2011 2011	73.5	69.7	69.8	mg/L	3.56	59.3 to 80.3	1.07	ACCEPT.	2/16/18	AMG
1955	Total Dissolved Solids (TDS)	20050424	GRAV	SM 2540 C 22nd Ed 2011	312	296	296	mg/L	52.5	251 to 341	0.305	ACCEPT.	1/31/18	AMG

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	28.9	28.5	27.4	mg/L	8.37	23.3 to 31.5	0.0478	ACCEPT.	2/12/18	JLH
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	28.9	28.5	27.4	mg/L	8.37	23.3 to 31.5	0.0478	ACCEPT.	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT.	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT.	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT.	2/12/18	JLH
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	22.2	20.9	21.0	mg/L	1.12	17.9 to 24.2	1.16	ACCEPT.	2/12/18	JLH
1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	22.2	20.9	21.0	mg/L	1.12	17.9 to 24.2	1.16	ACCEPT.	2/12/18	JLH
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	164	152	155	mg/L	11.5	132 to 178	1.04	ACCEPT.	2/12/18	JLH
1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	164	152	155	mg/L	11.5	132 to 178	1.04	ACCEPT.	2/12/18	JLH

1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	164	152	155	mg/L	11.5	132 to 178	1.04	ACCEPT.	2/12/18	JLH

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	1.67	2.05	2.01	mg/L	0.184	1.43 to 2.68	2.07	ACCEPT.	2/15/18	RKP
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	6.81	6.97	6.97	mg/L	0.810	5.70 to 8.20	0.198	ACCEPT.	2/5/18	RKP
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	6.81	6.97	6.97	mg/L	0.810	5.70 to 8.20	0.198	ACCEPT.	2/5/18	RKP
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	6.81	7.07	6.97	mg/L	0.598	5.75 to 8.12	0.435	ACCEPT.	2/5/18	RKP
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	6.81	7.07	6.97	mg/L	0.598	5.75 to 8.12	0.435	ACCEPT.	2/5/18	RKP
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	4.34	4.40	4.36	mg/L	0.562	3.71 to 5.01	0.107	ACCEPT.	2/5/18	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	4.34	4.40	4.36	mg/L	0.562	3.71 to 5.01	0.107	ACCEPT.	2/5/18	RKP

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	3.00	3.20	3.22	mg/L	0.285	2.64 to 3.77	0.702	ACCEPT.	1/30/18	AMG
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	3.00	3.20	3.22	mg/L	0.285	2.64 to 3.77	0.702	ACCEPT.	1/30/18	AMG
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8900	Arochlor 1248	10103603	GC-ECD	EPA 608	3.21	3.36	4.05	ug/L	0.825	1.52 to 5.62	0.182	ACCEPT.	1/29/18	TKT

8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	3.21	3.36	4.05	ug/L	0.825	1.52 to 5.62	0.182	ACCEPT.	1/29/18	TKT
8905	Arochlor 1254	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8910	Arochlor 1260	10103603	GC-ECD	EPA 608	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	<0.8	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8912	Arochlor 1262	10103603	GC-ECD	EPA 608	<0.800	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8913	Arochlor 1268	10103603	GC-ECD	EPA 608	<0.800	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/29/18	TKT

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10107401	GC-MS	EPA 625	56.6	47.6	59.7	ug/L	8.10	22.0 to 76.7	1.11	ACCEPT.	1/28/18	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	56.6	47.6	59.7	ug/L	8.10	22.0 to 76.7	1.11	ACCEPT.	1/28/18	RDK
6840	2,4,6-Trichlorophenol	10107401	GC-MS	EPA 625	104	87.1	110	ug/L	12.2	40.9 to 134	1.39	ACCEPT.	1/28/18	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	104	87.1	110	ug/L	12.2	40.9 to 134	1.39	ACCEPT.	1/28/18	RDK
6000	2,4-Dichlorophenol	10107401	GC-MS	EPA 625	71.6	57.1	75.9	ug/L	10.3	25.9 to 91.5	1.41	ACCEPT.	1/28/18	RDK
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	71.6	57.1	75.9	ug/L	10.3	25.9 to 91.5	1.41	ACCEPT.	1/28/18	RDK
6130	2,4-Dimethylphenol	10107401	GC-MS	EPA 625	71.7	58.3	84.5	ug/L	10.6	23.9 to 106	1.26	ACCEPT.	1/28/18	RDK
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	71.7	58.3	84.5	ug/L	10.6	23.9 to 106	1.26	ACCEPT.	1/28/18	RDK
6175	2,4-Dinitrophenol	10107401	GC-MS	EPA 625	129	113	126	ug/L	34.7	12.6 to 176	0.461	ACCEPT.	1/28/18	RDK
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	129	113	126	ug/L	34.7	12.6 to 176	0.461	ACCEPT.	1/28/18	RDK
6005	2,6-Dichlorophenol	10107401	GC-MS	EPA 625	119	99.6	134	ug/L	18.5	41.4 to 167	1.05	ACCEPT.	1/28/18	RDK
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	119	99.6	134	ug/L	18.5	41.4 to 167	1.05	ACCEPT.	1/28/18	RDK
5800	2-Chlorophenol	10107401	GC-MS	EPA 625	34.4	27.4	43.4	ug/L	5.35	13.3 to 53.0	1.31	ACCEPT.	1/28/18	RDK
5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	34.4	27.4	43.4	ug/L	5.35	13.3 to 53.0	1.31	ACCEPT.	1/28/18	RDK
6360	2-Methyl-4,6-Dinitrophenol	10107401	GC-MS	EPA 625	55.6	49.0	56.2	ug/L	12.0	16.2 to 82.2	0.550	ACCEPT.	1/28/18	RDK
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	55.6	49.0	56.2	ug/L	12.0	16.2 to 82.2	0.550	ACCEPT.	1/28/18	RDK
6400	2-Methylphenol	10107401	GC-MS	EPA 625	42.9	34.3	51.8	ug/L	7.25	12.1 to 62.9	1.19	ACCEPT.	1/28/18	RDK
6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	42.9	34.3	51.8	ug/L	7.25	12.1 to 62.9	1.19	ACCEPT.	1/28/18	RDK
6490	2-Nitrophenol	10107401	GC-MS	EPA 625	174	134	191	ug/L	26.6	66.6 to 227	1.50	ACCEPT.	1/28/18	RDK

6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	174	134	191	ug/L	26.6	66.6 to 227	1.50	ACCEPT.	1/28/18	RDK
5700	4-Chloro-3-methylphenol	10107401	GC-MS	EPA 625	96.9	81.9	101	ug/L	13.5	38.4 to 125	1.11	ACCEPT.	1/28/18	RDK
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	96.9	81.9	101	ug/L	13.5	38.4 to 125	1.11	ACCEPT.	1/28/18	RDK
6410	4-Methylphenol	10107401	GC-MS	EPA 625	95.5	95.1	151	ug/L	20.2	15.1 to 194	0.0198	ACCEPT.	1/28/18	RDK
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	95.5	95.1	151	ug/L	20.2	15.1 to 194	0.0198	ACCEPT.	1/28/18	RDK
6500	4-Nitrophenol	10107401	GC-MS	EPA 625	90.3	73.6	162	ug/L	23.1	16.2 to 218	0.723	ACCEPT.	1/28/18	RDK
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	90.3	73.6	162	ug/L	23.1	16.2 to 218	0.723	ACCEPT.	1/28/18	RDK
6605	Pentachlorophenol	10107401	GC-MS	EPA 625	76.7	60.5	75.4	ug/L	17.1	23.3 to 103	0.947	ACCEPT.	1/28/18	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	76.7	60.5	75.4	ug/L	17.1	23.3 to 103	0.947	ACCEPT.	1/28/18	RDK
6625	Phenol	10107401	GC-MS	EPA 625	45.7	48.6	129	ug/L	15.0	12.9 to 173	0.193	ACCEPT.	1/28/18	RDK
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	45.7	48.6	129	ug/L	15.0	12.9 to 173	0.193	ACCEPT.	1/28/18	RDK
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10103603	GC-ECD	EPA 608	14.0	14.9	14.9	ug/L	2.34	6.06 to 20.0	0.385	ACCEPT.	1/30/18	TKT
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	14.0	14.9	14.9	ug/L	2.34	6.06 to 20.0	0.385	ACCEPT.	1/30/18	TKT

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10103603	GC-ECD	EPA 608	32.5	39.3	40.5	ug/L	4.83	8.92 to 60.3	1.41	ACCEPT.	1/30/18	TKT
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	32.5	39.3	40.5	ug/L	4.83	8.92 to 60.3	1.41	ACCEPT.	1/30/18	TKT

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	7.05	6.46	8.38	ug/L	2.18	1.90 to 12.0	0.271	ACCEPT.	1/31/18	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	5.39	4.73	6.39	ug/L	1.42	0.639 to 9.87	0.465	ACCEPT.	1/31/18	RDK
8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	5.07	4.59	5.66	ug/L	1.40	1.31 to 8.14	0.343	ACCEPT.	1/31/18	RDK

8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	7.44	6.54	7.75	ug/L	1.66	1.81 to 11.4	0.542	ACCEPT.	1/31/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/18	RDK
8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/31/18	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1050	1556	2490	ug/L	624	482 to 3210	0.811	ACCEPT.	2/8/18	TKT

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	664	827	1010	ug/L	457	309 to 1820	0.357	ACCEPT.	2/7/18	BDA

PEO-103 Low Level Halocarbons - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4570	1,2-Dibromo-3-chloropropane	10173009	GC-ECD	EPA 8011 1994	1.38	1.08	1.00	ug/L	0.239	0.582 to 1.40	1.26	ACCEPT.	2/2/18	BDA
4585	1,2-Dibromoethane	10173009	GC-ECD	EPA 8011 1994	1.32	0.859	0.920	ug/L	0.321	0.516 to 1.26	1.44	NOT ACCEPT.	2/2/18	BDA
5180	1,2,3-Trichloropropane	-- Not Reported --												

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10107207	GC-MS	EPA 624	68.3	63.7	62.8	ug/L	4.38	40.8 to 84.8	1.05	ACCEPT.	2/8/18	MES
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	68.3	63.7	62.8	ug/L	4.38	40.8 to 84.8	1.05	ACCEPT.	2/8/18	MES
5160	1,1,1-Trichloroethane	10107207	GC-MS	EPA 624	70.9	65.6	70.8	ug/L	6.93	42.5 to 99.1	0.765	ACCEPT.	2/8/18	MES
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	70.9	65.6	70.8	ug/L	6.93	42.5 to 99.1	0.765	ACCEPT.	2/8/18	MES
5110	1,1,2,2-Tetrachloroethane	10107207	GC-MS	EPA 624	72.1	74.2	72.6	ug/L	7.76	47.2 to 98.0	0.271	ACCEPT.	2/8/18	MES
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	72.1	74.2	72.6	ug/L	7.76	47.2 to 98.0	0.271	ACCEPT.	2/8/18	MES

5165	1,1,2-Trichloroethane	10107207	GC-MS	EPA 624	<10.5	0	<10.5	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.5	0	<10.5	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	88.1	78.6	87.2	ug/L	12.3	40.0 to 131	0.772	ACCEPT.	2/8/18	MES
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	88.1	78.6	87.2	ug/L	12.3	40.0 to 131	0.772	ACCEPT.	2/8/18	MES
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	110	108	116	ug/L	15.8	52.2 to 158	0.127	ACCEPT.	2/8/18	MES
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	110	108	116	ug/L	15.8	52.2 to 158	0.127	ACCEPT.	2/8/18	MES
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	105	93.5	97.6	ug/L	8.19	63.4 to 132	1.40	ACCEPT.	2/8/18	MES
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	105	93.5	97.6	ug/L	8.19	63.4 to 132	1.40	ACCEPT.	2/8/18	MES
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	81.0	76.8	76.3	ug/L	6.34	49.6 to 103	0.662	ACCEPT.	2/8/18	MES
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	81.0	76.8	76.3	ug/L	6.34	49.6 to 103	0.662	ACCEPT.	2/8/18	MES
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	116	94.2	103	ug/L	23.5	65.1 to 141	0.928	ACCEPT.	2/8/18	MES
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	116	94.2	103	ug/L	23.5	65.1 to 141	0.928	ACCEPT.	2/8/18	MES
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	<6.20	0	<6.2	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	<6.20	0	<6.2	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	150	145	149	ug/L	16.8	89.4 to 209	0.298	ACCEPT.	2/8/18	MES
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	58.7	57.8	62.2	ug/L	5.36	43.6 to 80.9	0.168	ACCEPT.	2/8/18	MES
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	58.7	57.8	62.2	ug/L	5.36	43.6 to 80.9	0.168	ACCEPT.	2/8/18	MES
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	<10.6	0	<10.6	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.6	0	<10.6	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	100	93.3	94.1	ug/L	8.45	65.8 to 122	0.793	ACCEPT.	2/8/18	MES
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	100	93.3	94.1	ug/L	8.45	65.8 to 122	0.793	ACCEPT.	2/8/18	MES
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	118	113	117	ug/L	9.83	82.1 to 153	0.509	ACCEPT.	2/8/18	MES
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	118	113	117	ug/L	9.83	82.1 to 153	0.509	ACCEPT.	2/8/18	MES
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	73.6	71.1	74.5	ug/L	7.71	52.2 to 96.9	0.324	ACCEPT.	2/8/18	MES
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	73.6	71.1	74.5	ug/L	7.71	52.2 to 96.9	0.324	ACCEPT.	2/8/18	MES
4410	2-Butanone	10107207	GC-MS	EPA 624	<25.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES

				8260B - 1996										
4860	2-Hexanone	10107207	GC-MS	EPA 624	<4.40	0	<4.4	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4860	2-Hexanone	10184802	GC-MS	SW-846	<4.40	0	<4.4	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4995	4-Methyl-2-pentanone	10107207	GC-MS	EPA 624	186	197	187	ug/L	28.1	121 to 251	0.391	ACCEPT.	2/8/18	MES
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846	186	197	187	ug/L	28.1	121 to 251	0.391	ACCEPT.	2/8/18	MES
				8260B - 1996										
4315	Acetone	10107207	GC-MS	EPA 624	61.9	70.2	73.0	ug/L	14.1	18.6 to 118	0.589	ACCEPT.	2/8/18	MES
4315	Acetone	10184802	GC-MS	SW-846	61.9	70.2	73.0	ug/L	14.1	18.6 to 118	0.589	ACCEPT.	2/8/18	MES
				8260B - 1996										
4325	Acrolein	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4325	Acrolein	10184802	GC-MS	SW-846	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4340	Acrylonitrile	10107207	GC-MS	EPA 624	<2.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4340	Acrylonitrile	10184802	GC-MS	SW-846	<2.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4375	Benzene	10107207	GC-MS	EPA 624	104	98.9	102	ug/L	11.5	71.4 to 133	0.443	ACCEPT.	2/8/18	MES
4375	Benzene	10184802	GC-MS	SW-846	104	98.9	102	ug/L	11.5	71.4 to 133	0.443	ACCEPT.	2/8/18	MES
				8260B - 1996										
4395	Bromodichloromethane	10107207	GC-MS	EPA 624	36.8	36.0	37.7	ug/L	3.53	22.6 to 52.7	0.227	ACCEPT.	2/8/18	MES
4395	Bromodichloromethane	10184802	GC-MS	SW-846	36.8	36.0	37.7	ug/L	3.53	22.6 to 52.7	0.227	ACCEPT.	2/8/18	MES
				8260B - 1996										
4400	Bromoform	10107207	GC-MS	EPA 624	<6.00	0	<6.0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4400	Bromoform	10184802	GC-MS	SW-846	<6.00	0	<6.0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4950	Bromomethane	10107207	GC-MS	EPA 624	48.3	45.4	47.0	ug/L	7.65	18.8 to 75.2	0.379	ACCEPT.	2/8/18	MES
4950	Bromomethane	10184802	GC-MS	SW-846	48.3	45.4	47.0	ug/L	7.65	18.8 to 75.2	0.379	ACCEPT.	2/8/18	MES
				8260B - 1996										
4450	Carbon disulfide	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4450	Carbon disulfide	10184802	GC-MS	SW-846	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4455	Carbon tetrachloride	10107207	GC-MS	EPA 624	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4455	Carbon tetrachloride	10184802	GC-MS	SW-846	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
				8260B - 1996										
4475	Chlorobenzene	10107207	GC-MS	EPA 624	18.7	18.6	19.2	ug/L	1.48	13.4 to 24.9	0.0676	ACCEPT.	2/8/18	MES
4475	Chlorobenzene	10184802	GC-MS	SW-846	18.7	18.6	19.2	ug/L	1.48	13.4 to 24.9	0.0676	ACCEPT.	2/8/18	MES
				8260B - 1996										
4485	Chloroethane	10107207	GC-MS	EPA 624	24.4	26.1	25.9	ug/L	3.02	10.4 to 41.5	0.563	ACCEPT.	2/8/18	MES
4485	Chloroethane	10184802	GC-MS	SW-846	24.4	26.1	25.9	ug/L	3.02	10.4 to 41.5	0.563	ACCEPT.	2/8/18	MES
				8260B - 1996										
4505	Chloroform	10107207	GC-MS	EPA 624	64.3	56.4	55.3	ug/L	4.66	38.7 to 71.9	1.70	ACCEPT.	2/8/18	MES
4505	Chloroform	10184802	GC-MS	SW-846	64.3	56.4	55.3	ug/L	4.66	38.7 to 71.9	1.70	ACCEPT.	2/8/18	MES
				8260B - 1996										
4960	Chloromethane	10107207	GC-MS	EPA 624	103	86.0	104	ug/L	17.7	41.6 to 166	0.960	ACCEPT.	2/8/18	MES
4960	Chloromethane	10184802	GC-MS	SW-846	103	86.0	104	ug/L	17.7	41.6 to 166	0.960	ACCEPT.	2/8/18	MES
				8260B - 1996										
4645	cis-1,2-Dichloroethene	10107207	GC-MS	EPA 624	94.7	78.8	83.1	ug/L	8.31	55.9 to 110	1.91	ACCEPT.	2/8/18	MES

4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	94.7	78.8	83.1	ug/L	8.31	55.9 to 110	1.91	ACCEPT.	2/8/18	MES
4680	cis-1,3-Dichloropropene	10107207	GC-MS	EPA 624	117	102	113	ug/L	10.5	73.2 to 152	1.43	ACCEPT.	2/8/18	MES
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	117	102	113	ug/L	10.5	73.2 to 152	1.43	ACCEPT.	2/8/18	MES
4575	Dibromochloromethane	10107207	GC-MS	EPA 624	75.1	85.4	81.7	ug/L	7.20	49.0 to 114	1.43	ACCEPT.	2/8/18	MES
4575	Dibromochloromethane	10184802	GC-MS	SW-846 8260B - 1996	75.1	85.4	81.7	ug/L	7.20	49.0 to 114	1.43	ACCEPT.	2/8/18	MES
4595	Dibromomethane	10107207	GC-MS	EPA 624	89.2	100	92.3	ug/L	26.5	60.0 to 125	0.408	ACCEPT.	2/8/18	MES
4595	Dibromomethane	10184802	GC-MS	SW-846 8260B - 1996	89.2	100	92.3	ug/L	26.5	60.0 to 125	0.408	ACCEPT.	2/8/18	MES
4625	Dichlorodifluoromethane	10107207	GC-MS	EPA 624	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4765	Ethylbenzene	10107207	GC-MS	EPA 624	87.7	78.7	82.9	ug/L	6.74	58.0 to 108	1.34	ACCEPT.	2/8/18	MES
4765	Ethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	87.7	78.7	82.9	ug/L	6.74	58.0 to 108	1.34	ACCEPT.	2/8/18	MES
4585	Ethylene dibromide	10107207	GC-MS	EPA 624	111	111	115	ug/L	6.93	74.7 to 155	0	ACCEPT.	2/8/18	MES
4585	Ethylene dibromide	10184802	GC-MS	SW-846 8260B - 1996	111	111	115	ug/L	6.93	74.7 to 155	0	ACCEPT.	2/8/18	MES
4975	Methylene chloride	10107207	GC-MS	EPA 624	57.9	52.6	51.3	ug/L	7.90	30.8 to 71.8	0.671	ACCEPT.	2/8/18	MES
4975	Methylene chloride	10184802	GC-MS	SW-846 8260B - 1996	57.9	52.6	51.3	ug/L	7.90	30.8 to 71.8	0.671	ACCEPT.	2/8/18	MES
5000	MTBE	10107207	GC-MS	EPA 624	136	125	122	ug/L	11.3	82.6 to 166	0.973	ACCEPT.	2/8/18	MES
5000	MTBE	10184802	GC-MS	SW-846 8260B - 1996	136	125	122	ug/L	11.3	82.6 to 166	0.973	ACCEPT.	2/8/18	MES
5005	Naphthalene	10107207	GC-MS	EPA 624	104	102	105	ug/L	18.1	49.3 to 138	0.110	ACCEPT.	2/8/18	MES
5005	Naphthalene	10184802	GC-MS	SW-846 8260B - 1996	104	102	105	ug/L	18.1	49.3 to 138	0.110	ACCEPT.	2/8/18	MES
5100	Styrene	10107207	GC-MS	EPA 624	25.4	28.0	26.3	ug/L	2.23	17.1 to 35.5	1.17	ACCEPT.	2/8/18	MES
5100	Styrene	10184802	GC-MS	SW-846 8260B - 1996	25.4	28.0	26.3	ug/L	2.23	17.1 to 35.5	1.17	ACCEPT.	2/8/18	MES
5115	Tetrachloroethene	10107207	GC-MS	EPA 624	146	133	143	ug/L	24.8	81.8 to 186	0.524	ACCEPT.	2/8/18	MES
5115	Tetrachloroethene	10184802	GC-MS	SW-846 8260B - 1996	146	133	143	ug/L	24.8	81.8 to 186	0.524	ACCEPT.	2/8/18	MES
5140	Toluene	10107207	GC-MS	EPA 624	36.1	36.6	36.0	ug/L	2.77	25.2 to 46.8	0.181	ACCEPT.	2/8/18	MES
5140	Toluene	10184802	GC-MS	SW-846 8260B - 1996	36.1	36.6	36.0	ug/L	2.77	25.2 to 46.8	0.181	ACCEPT.	2/8/18	MES
5240	m+p-Xylene	10107207	GC-MS	EPA 624	117	108	112	ug/L	7.91	67.5 to 157	1.14	ACCEPT.	2/8/18	MES
5240	m+p-Xylene	10184802	GC-MS	SW-846 8260B - 1996	117	108	112	ug/L	7.91	67.5 to 157	1.14	ACCEPT.	2/8/18	MES
5250	o-Xylene	10107207	GC-MS	EPA 624	66.1	62.7	63.8	ug/L	4.20	38.3 to 89.3	0.810	ACCEPT.	2/8/18	MES
5250	o-Xylene	10184802	GC-MS	SW-846 8260B - 1996	66.1	62.7	63.8	ug/L	4.20	38.3 to 89.3	0.810	ACCEPT.	2/8/18	MES
5260	Total Xylenes	10107207	GC-MS	EPA 624	183	171	176	ug/L	12.4	106 to 247	0.968	ACCEPT.	2/8/18	MES
5260	Total Xylenes	10184802	GC-MS	SW-846 8260B - 1996	183	171	176	ug/L	12.4	106 to 247	0.968	ACCEPT.	2/8/18	MES

4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	94.6	82.4	82.6	ug/L	9.90	49.6 to 116	1.23	ACCEPT.	2/8/18	MES
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	94.6	82.4	82.6	ug/L	9.90	49.6 to 116	1.23	ACCEPT.	2/8/18	MES
4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	34.3	27.8	30.0	ug/L	6.75	19.5 to 40.5	0.963	ACCEPT.	2/8/18	MES
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	34.3	27.8	30.0	ug/L	6.75	19.5 to 40.5	0.963	ACCEPT.	2/8/18	MES
5170	Trichloroethene	10107207	GC-MS	EPA 624	88.2	77.7	82.9	ug/L	9.63	52.7 to 108	1.09	ACCEPT.	2/8/18	MES
5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	88.2	77.7	82.9	ug/L	9.63	52.7 to 108	1.09	ACCEPT.	2/8/18	MES
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	34.5	31.6	29.8	ug/L	3.77	11.9 to 47.7	0.769	ACCEPT.	2/8/18	MES
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	34.5	31.6	29.8	ug/L	3.77	11.9 to 47.7	0.769	ACCEPT.	2/8/18	MES
5225	Vinyl acetate	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5235	Vinyl chloride	10107207	GC-MS	EPA 624	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	111	91.8	139	ug/L	19.0	27.6 to 163	1.01	ACCEPT.	1/28/18	RDK
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	111	91.8	139	ug/L	19.0	27.6 to 163	1.01	ACCEPT.	1/28/18	RDK
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	<6.30	0	<6.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	<6.30	0	<6.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	<5.00	0	<2.0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	<2.0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	43.3	35.0	59.0	ug/L	7.96	5.90 to 70.7	1.04	ACCEPT.	1/28/18	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	43.3	35.0	59.0	ug/L	7.96	5.90 to 70.7	1.04	ACCEPT.	1/28/18	RDK
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	92.0	74.7	130	ug/L	22.4	13.0 to 143	0.772	ACCEPT.	1/28/18	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	92.0	74.7	130	ug/L	22.4	13.0 to 143	0.772	ACCEPT.	1/28/18	RDK
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	176	117	182	ug/L	45.6	80.1 to 220	1.29	ACCEPT.	1/28/18	RDK

6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	176	117	182	ug/L	45.6	80.1 to 220	1.29	ACCEPT.	1/28/18	RDK
6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	<8.20	0	<8.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	<8.20	0	<8.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	38.7	30.0	45.9	ug/L	8.38	8.95 to 59.3	1.04	ACCEPT.	1/28/18	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	38.7	30.0	45.9	ug/L	8.38	8.95 to 59.3	1.04	ACCEPT.	1/28/18	RDK
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	<10.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<10.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	142	123	172	ug/L	23.8	70.9 to 213	0.798	ACCEPT.	1/28/18	RDK
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	142	123	172	ug/L	23.8	70.9 to 213	0.798	ACCEPT.	1/28/18	RDK
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	66.8	59.1	80.9	ug/L	12.0	30.7 to 101	0.642	ACCEPT.	1/28/18	RDK
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	66.8	59.1	80.9	ug/L	12.0	30.7 to 101	0.642	ACCEPT.	1/28/18	RDK
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5500	Acenaphthene	10107401	GC-MS	EPA 625	83.1	68.4	92.4	ug/L	11.2	32.5 to 112	1.31	ACCEPT.	1/28/18	RDK
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	83.1	68.4	92.4	ug/L	11.2	32.5 to 112	1.31	ACCEPT.	1/28/18	RDK
5505	Acenaphthylene	10107401	GC-MS	EPA 625	138	123	165	ug/L	24.1	58.5 to 206	0.622	ACCEPT.	1/28/18	RDK
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	138	123	165	ug/L	24.1	58.5 to 206	0.622	ACCEPT.	1/28/18	RDK
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5555	Anthracene	10107401	GC-MS	EPA 625	23.3	18.5	23.4	ug/L	3.68	9.64 to 31.2	1.30	ACCEPT.	1/28/18	RDK
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	23.3	18.5	23.4	ug/L	3.68	9.64 to 31.2	1.30	ACCEPT.	1/28/18	RDK
5595	Benzidine	10107401	GC-MS	EPA 625	<51.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<51.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	49.1	42.3	53.4	ug/L	6.64	24.9 to 65.7	1.02	ACCEPT.	1/28/18	RDK

5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	49.1	42.3	53.4	ug/L	6.64	24.9 to 65.7	1.02	ACCEPT.	1/28/18	RDK
5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	<2.40	0	<2.4	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	<2.40	0	<2.4	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	<7.50	0	<7.5	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.50	0	<7.5	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	85.1	69.0	82.6	ug/L	13.0	31.2 to 108	1.24	ACCEPT.	1/28/18	RDK
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	85.1	69.0	82.6	ug/L	13.0	31.2 to 108	1.24	ACCEPT.	1/28/18	RDK
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	87.9	72.7	118	ug/L	14.0	30.4 to 141	1.09	ACCEPT.	1/28/18	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	87.9	72.7	118	ug/L	14.0	30.4 to 141	1.09	ACCEPT.	1/28/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	102	82.4	68.2	ug/L	16.6	16.0 to 86.7	1.18	NOT ACCEPT.	1/28/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	102	82.4	68.2	ug/L	16.6	16.0 to 86.7	1.18	NOT ACCEPT.	1/28/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	39.1	33.7	41.2	ug/L	5.41	12.7 to 58.8	0.998	ACCEPT.	1/28/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	39.1	33.7	41.2	ug/L	5.41	12.7 to 58.8	0.998	ACCEPT.	1/28/18	RDK
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	79.6	68.4	88.4	ug/L	16.5	25.6 to 120	0.679	ACCEPT.	1/28/18	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	79.6	68.4	88.4	ug/L	16.5	25.6 to 120	0.679	ACCEPT.	1/28/18	RDK
5680	Carbazole	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5855	Chrysene	10107401	GC-MS	EPA 625	101	93.5	111	ug/L	14.9	47.6 to 139	0.503	ACCEPT.	1/28/18	RDK
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	101	93.5	111	ug/L	14.9	47.6 to 139	0.503	ACCEPT.	1/28/18	RDK
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	65.8	55.1	68.2	ug/L	9.11	24.2 to 90.7	1.17	ACCEPT.	1/28/18	RDK
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	65.8	55.1	68.2	ug/L	9.11	24.2 to 90.7	1.17	ACCEPT.	1/28/18	RDK
5905	Dibenzofuran	10107401	GC-MS	EPA 625	<11.3	0	<11.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	<11.3	0	<11.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6070	Diethyl phthalate	10107401	GC-MS	EPA 625	85.8	65.0	98.5	ug/L	19.0	17.8 to 137	1.09	ACCEPT.	1/28/18	RDK

6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	85.8	65.0	98.5	ug/L	19.0	17.8 to 137	1.09	ACCEPT.	1/28/18	RDK
6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	126	93.2	144	ug/L	30.7	14.4 to 207	1.07	ACCEPT.	1/28/18	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	126	93.2	144	ug/L	30.7	14.4 to 207	1.07	ACCEPT.	1/28/18	RDK
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	64.9	54.9	69.4	ug/L	16.2	25.6 to 92.9	0.617	ACCEPT.	1/28/18	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	64.9	54.9	69.4	ug/L	16.2	25.6 to 92.9	0.617	ACCEPT.	1/28/18	RDK
6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	130	121	160	ug/L	25.7	47.3 to 220	0.350	ACCEPT.	1/28/18	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	130	121	160	ug/L	25.7	47.3 to 220	0.350	ACCEPT.	1/28/18	RDK
6265	Fluoranthene	10107401	GC-MS	EPA 625	<15.6	0	<15.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<15.6	0	<15.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6270	Fluorene	10107401	GC-MS	EPA 625	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	54.3	46.5	58.8	ug/L	7.94	26.2 to 70.7	0.982	ACCEPT.	1/28/18	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	54.3	46.5	58.8	ug/L	7.94	26.2 to 70.7	0.982	ACCEPT.	1/28/18	RDK
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	59.9	48.3	72.6	ug/L	10.4	7.37 to 89.2	1.12	ACCEPT.	1/28/18	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	59.9	48.3	72.6	ug/L	10.4	7.37 to 89.2	1.12	ACCEPT.	1/28/18	RDK
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	75.9	55.8	83.9	ug/L	18.0	8.39 to 112	1.12	ACCEPT.	1/28/18	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	75.9	55.8	83.9	ug/L	18.0	8.39 to 112	1.12	ACCEPT.	1/28/18	RDK
4840	Hexachloroethane	10107401	GC-MS	EPA 625	<5.00	0	<3.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	<3.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6320	Isophorone	10107401	GC-MS	EPA 625	171	125	179	ug/L	26.1	65.6 to 222	1.76	ACCEPT.	1/28/18	RDK
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	171	125	179	ug/L	26.1	65.6 to 222	1.76	ACCEPT.	1/28/18	RDK
5005	Naphthalene	10107401	GC-MS	EPA 625	69.2	53.3	78.6	ug/L	10.9	18.7 to 94.5	1.46	ACCEPT.	1/28/18	RDK
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	69.2	53.3	78.6	ug/L	10.9	18.7 to 94.5	1.46	ACCEPT.	1/28/18	RDK
5015	Nitrobenzene	10107401	GC-MS	EPA 625	89.1	70.9	101	ug/L	12.0	32.8 to 119	1.52	ACCEPT.	1/28/18	RDK
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	89.1	70.9	101	ug/L	12.0	32.8 to 119	1.52	ACCEPT.	1/28/18	RDK
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	83.3	53.9	132	ug/L	19.3	13.2 to 147	1.52	ACCEPT.	1/28/18	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	83.3	53.9	132	ug/L	19.3	13.2 to 147	1.52	ACCEPT.	1/28/18	RDK
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	134	115	172	ug/L	24.5	56.2 to 216	0.776	ACCEPT.	2/9/18	RDK
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846	134	115	172	ug/L	24.5	56.2 to 216	0.776	ACCEPT.	2/9/18	RDK

				8270C - 1996										
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
				8270C - 1996										
6615	Phenanthrene	10107401	GC-MS	EPA 625	83.6	71.9	91.3	ug/L	12.3	42.7 to 109	0.951	ACCEPT.	1/28/18	RDK
6615	Phenanthrene	10185805	GC-MS	SW-846	83.6	71.9	91.3	ug/L	12.3	42.7 to 109	0.951	ACCEPT.	1/28/18	RDK
				8270C - 1996										
6665	Pyrene	10107401	GC-MS	EPA 625	16.4	13.4	16.8	ug/L	2.56	7.59 to 23.0	1.17	ACCEPT.	1/28/18	RDK
6665	Pyrene	10185805	GC-MS	SW-846	16.4	13.4	16.8	ug/L	2.56	7.59 to 23.0	1.17	ACCEPT.	1/28/18	RDK
				8270C - 1996										
5095	Pyridine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5095	Pyridine	10185805	GC-MS	SW-846	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
				8270C - 1996										
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												
6420	1,4-Naphthoquinone	-- Not Reported --												
6425	1-Naphthylamine	-- Not Reported --												
6430	2-Naphthylamine	-- Not Reported --												

6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
7065	Atrazine	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10103603	GC-ECD	EPA 608	1.98	2.53	2.76	ug/L	0.462	0.966 to 3.71	1.19	ACCEPT.	1/30/18	TKT
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	1.98	2.53	2.76	ug/L	0.462	0.966 to 3.71	1.19	ACCEPT.	1/30/18	TKT
7110	alpha-BHC	10103603	GC-ECD	EPA 608	3.82	4.79	4.96	ug/L	0.676	2.13 to 6.82	1.43	ACCEPT.	1/30/18	TKT
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	3.82	4.79	4.96	ug/L	0.676	2.13 to 6.82	1.43	ACCEPT.	1/30/18	TKT
7115	beta-BHC	10103603	GC-ECD	EPA 608	10.6	9.76	10.9	ug/L	1.35	5.16 to 14.6	0.622	ACCEPT.	1/30/18	TKT
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	10.6	9.76	10.9	ug/L	1.35	5.16 to 14.6	0.622	ACCEPT.	1/30/18	TKT

7355	4,4'-DDD	10103603	GC-ECD	EPA 608	3.71	4.24	4.48	ug/L	0.522	2.01 to 6.37	1.02	ACCEPT.	1/30/18	TKT
7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	3.71	4.24	4.48	ug/L	0.522	2.01 to 6.37	1.02	ACCEPT.	1/30/18	TKT
7360	4,4'-DDE	10103603	GC-ECD	EPA 608	2.83	3.66	3.71	ug/L	0.539	1.58 to 5.09	1.54	ACCEPT.	1/30/18	TKT
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	2.83	3.66	3.71	ug/L	0.539	1.58 to 5.09	1.54	ACCEPT.	1/30/18	TKT
7365	4,4'-DDT	10103603	GC-ECD	EPA 608	3.93	4.36	4.68	ug/L	0.571	1.85 to 6.77	0.753	ACCEPT.	1/30/18	TKT
7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	3.93	4.36	4.68	ug/L	0.571	1.85 to 6.77	0.753	ACCEPT.	1/30/18	TKT
7105	delta-BHC	10103603	GC-ECD	EPA 608	13.3	10.9	11.6	ug/L	1.59	5.08 to 16.1	1.51	ACCEPT.	1/30/18	TKT
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	13.3	10.9	11.6	ug/L	1.59	5.08 to 16.1	1.51	ACCEPT.	1/30/18	TKT
7470	Dieldrin	10103603	GC-ECD	EPA 608	12.0	12.0	12.5	ug/L	1.42	6.37 to 16.4	0	ACCEPT.	1/30/18	TKT
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	12.0	12.0	12.5	ug/L	1.42	6.37 to 16.4	0	ACCEPT.	1/30/18	TKT
7510	Endosulfan I	10103603	GC-ECD	EPA 608	10.1	10.4	10.8	ug/L	1.27	4.16 to 14.5	0.236	ACCEPT.	1/30/18	TKT
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	10.1	10.4	10.8	ug/L	1.27	4.16 to 14.5	0.236	ACCEPT.	1/30/18	TKT
7515	Endosulfan II	10103603	GC-ECD	EPA 608	13.1	11.9	12.4	ug/L	1.23	5.16 to 16.8	0.976	ACCEPT.	1/30/18	TKT
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	13.1	11.9	12.4	ug/L	1.23	5.16 to 16.8	0.976	ACCEPT.	1/30/18	TKT
7520	Endosulfan sulfate	10103603	GC-ECD	EPA 608	6.68	6.57	6.90	ug/L	0.787	3.15 to 9.99	0.140	ACCEPT.	1/31/18	TKT
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	6.68	6.57	6.90	ug/L	0.787	3.15 to 9.99	0.140	ACCEPT.	1/31/18	TKT
7540	Endrin	10103603	GC-ECD	EPA 608	5.21	4.89	5.46	ug/L	0.556	2.39 to 7.78	0.576	ACCEPT.	1/30/18	TKT
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	5.21	4.89	5.46	ug/L	0.556	2.39 to 7.78	0.576	ACCEPT.	1/30/18	TKT
7530	Endrin aldehyde	10103603	GC-ECD	EPA 608	5.97	5.76	6.22	ug/L	0.691	2.28 to 9.37	0.304	ACCEPT.	1/30/18	TKT
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	5.97	5.76	6.22	ug/L	0.691	2.28 to 9.37	0.304	ACCEPT.	1/30/18	TKT
7120	gamma-BHC	10103603	GC-ECD	EPA 608	1.82	1.93	2.06	ug/L	0.366	0.954 to 2.96	0.301	ACCEPT.	1/30/18	TKT
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	1.82	1.93	2.06	ug/L	0.366	0.954 to 2.96	0.301	ACCEPT.	1/30/18	TKT
7685	Heptachlor	10103603	GC-ECD	EPA 608	7.63	8.27	9.15	ug/L	1.20	3.29 to 12.3	0.533	ACCEPT.	1/30/18	TKT
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	7.63	8.27	9.15	ug/L	1.20	3.29 to 12.3	0.533	ACCEPT.	1/30/18	TKT
7690	Heptachlor epoxide	10103603	GC-ECD	EPA 608	4.16	4.73	5.10	ug/L	0.624	2.55 to 6.82	0.913	ACCEPT.	1/30/18	TKT
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	4.16	4.73	5.10	ug/L	0.624	2.55 to 6.82	0.913	ACCEPT.	1/30/18	TKT
7810	Methoxychlor	10103603	GC-ECD	EPA 608	8.68	7.97	7.92	ug/L	1.11	3.33 to 11.7	0.640	ACCEPT.	1/30/18	TKT
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	8.68	7.97	7.92	ug/L	1.11	3.33 to 11.7	0.640	ACCEPT.	1/30/18	TKT
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	77.1	66.2	68.8	ng/L	11.4	51.7 to 85.0	0.956	ACCEPT.	1/30/18	NRV

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

This PT report shall only be reproduced in full. This report shall not be used to claim approval, certification or endorsement by NSI Lab Solutions. This report has been released only to entities requested by the participant. This report is held in confidence by NSI Lab Solutions with additional reports available by written request of participant.

Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

WP-243

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 664/PAR)

Client: Fibertec **Project/Document Control Number:** WP-243 / 82891

Sample Number(s): 017 **Date Initiated:** 03/19/18 **Date Due:** 04/09/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☒ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The PT result reported for Hexavalent Chromium was outside of the acceptance limits for the study. The reported value was 850 ug/L while the assigned value was 664 ug/L and the study mean was 662 ug/L. The acceptance range was 558 to 761 ug/L..

Please investigate the cause of the failure and propose a corrective action (if applicable) to prevent reoccurrence of the issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The PT sample was reran with 2mL of sample again and had the same result under the mid point. The sample was ran again with 5mLs of sample and its result fell in the accepted range. The 2mL was checked by weight to insure it wasn't an equipment error.

Investigator(s): Alissa Coffler

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

MDL's were done using the 25mL cuvettes to allow more light through. The cuvettes are replacing the glass culture tubes. The cuvettes will provide greater sensitivity. When dilutions are necessary they will be made so the absorbances fall into the top half of the calibration curve.

Follow up complete
PT Passed 7/27/18

QA Approval: Ken Mueller

Follow-Up Required? (If required, reference this Report) Yes ☑ No ☐ Will close upon successful completion of a remedial PT

VI. Approvals:

Managerial: **Area Supervisor:** Ken Mueller

Date Closed: 7/27/18

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	850	662	664	ug/L	63.5	558 to 761	2.96	NOT ACCEPT.	2/2/18	AMG
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	850	662	664	ug/L	63.5	558 to 761	2.96	NOT ACCEPT.	2/2/18	AMG

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.91	2.80	2.79	mg/L	0.148	2.40 to 3.18	0.743	ACCEPT.	2/5/18	RKP
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	2.91	2.80	2.79	mg/L	0.148	2.40 to 3.18	0.743	ACCEPT.	2/5/18	RKP

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	9.90	9.82	9.91	mg/L	0.480	8.49 to 11.4	0.167	ACCEPT.	2/5/18	RKP
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	9.90	9.82	9.91	mg/L	0.480	8.49 to 11.4	0.167	ACCEPT.	2/5/18	RKP

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1770	1656	1650	ug/L	65.9	1400 to 1900	1.73	ACCEPT.	2/12/18	JLH
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1770	1656	1650	ug/L	65.9	1400 to 1900	1.73	ACCEPT.	2/12/18	JLH

Hexavalent Chromium, Colorimetric - Liquid

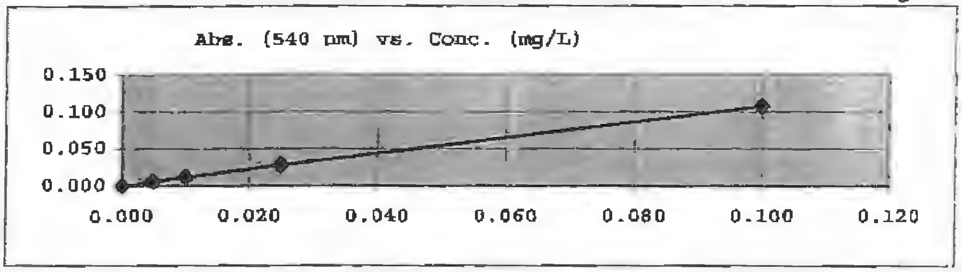
Fibertec

Preparation Method:	Not applicable	Analysis Method:	EPA 7196A / SM 3500-Cr B.
Prep Batch ID:	Not applicable	Batch Number:	WF18B02A-CR6
Prep. Date:	Not applicable	Analysis Date:	02/02/18
Preparer:	Not applicable	Analyst:	AG

RL: 0.005 mg/L RL Test: 0.001 OK ✓

Calibration Curve Data

Cal Level	Conc. (mg/L)	Abs. (540 nm)
1	0.000	0.000
2	0.005	0.006
3	0.010	0.012
4	0.025	0.028
5	0.100	0.107



R-squared	Slope	Intercept
0.9998 ✓	1.0638	0.0008

Quality Control Sample Data

Sample Identification	Vol.Initial (mL)	Vol.Final (mL)	Abs. (Pre)	Abs. (Post)	Abs. (Net)	Raw Result (mg/L)		Final Result (mg/L)	Spike (mg/L)	QC Eval % Rec.	RPD
MB	50.00	50		0.000	0.000	-0.001		<0.005	---		---
LCS	50.00	50		0.056	0.056	0.052		0.052	0.050	104% ✓	---

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 82891-017 ✓

MS	2.00000	50		0.091	0.091	0.085	25	2.119	0.050	102% ✓	---
MSD	2.00000	50		0.093	0.093	0.087	25	2.166	0.050	105% ✓	4%

Matrix Quality Control Sample Data — Sample Identification for Matrix QC:

MS					0.000	-0.001	#DIV/0!	#DIV/0!	0.050	#DIV/0!	---
MSD					0.000	-0.001	#DIV/0!	#DIV/0!	0.050	#DIV/0!	#N/A

Sample Identification	Vol.Initial (ml)	Vol.Final (mL)	Abs. (Pre)	Abs. (Post)	Abs. (Net)	Raw Result (mg/L)	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	Qualifier	Analysis Time
82891-017	2.0000	50		0.037	0.037	0.034	25	0.850	---	---	10:27
83022-002	50.0000	50		0.002	0.002	0.001	1	<0.005	---	---	10:14
CCV	50.0000	50		0.052	0.052	0.048	1	0.048	0.05	96%	10:30
CCB	50.0000	50		0.002	0.002	0.001	1	<0.005	---	---	10:31
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Definitions
*Recovery exceeds control limits

[illegible] 2/2/18
Analyst Approval/Date

[illegible] 2/5/18
Review Approval/Date

DCSID: W-401.5 (12/05/13)

Study Closes

Hexavalent Chromium
Catalog# PEI-095
Description and Instructions

Sample Description

- This PT sample is packaged as a 10.5 mL concentrate and must be diluted into reagent water prior to analysis.
- The PT sample is not preserved but is stable unopened.
- **The unopened ampule should be stored refrigerated (2-8°C) and should be kept away from light.**
- The solution contains Cr (VI) and should be handled with care.
- When prepared according to instructions, the PT sample will contain Hexavalent Chromium in the range:

Analyte	Conc Range	NELAC PTRL
Hexavalent Chromium	90 – 900 ug/L	71 ug/L

Note: Ranges refer to formulation specifications. Most analytical methods recover less than the gravimetric true value. Therefore, it is possible that your determined value might fall below this range.

Where applicable, all NSI PT samples are formulated in ranges specified in the most current NELAC standards (see www.nelac-institute.org). NELAC Proficiency Testing Reporting Limits (PTRLs) apply. **Do not report values below the NELAC PTRL.**

Instructions

- Make sure that the ampule is at room temperature (15-30°C).
- Fill a 1000 mL Class A Volumetric Flask with 900 mL of reagent water.
- Prior to opening the ampule, mix contents gently by inversion 3-5 times.
- Pipet exactly 5.0 mL of the concentrate into the flask.
- Bring the flask to volume with reagent water and mix well.
- This represents the sample for immediate analysis.
- Once diluted, analyze the prepared solution as soon as possible.
- Report in units of ug/L Hexavalent Chromium.

Hexavalent Chromium, Colorimetric - Liquid

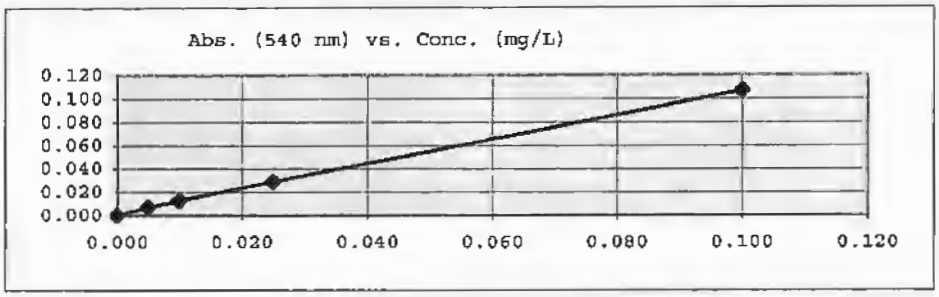
Preparation Method:	Not applicable	Analysis Method	EPA 7196A / SM 3500-Cr B.
Prep Batch ID:	Not applicable	Batch Number:	WF18C30A-CR6
Prep. Date:	Not applicable	Analysis Date:	03/30/18
Preparer:	Not applicable	Analyst:	AG

Calibration Curve Data

RL: 0.005 mg/L RL Test: 0.002 OK

Cal Level	Conc. (mg/L)	Abs. (540 nm)
1	0.000	0.000
2	0.005	0.007
3	0.010	0.013
4	0.025	0.029
5	0.100	0.107

R-squared	Slope	Intercept
0.9994	1.0574	0.0016



Quality Control Sample Data

Sample Identification	Vol. Initial (mL)	Vol. Final (mL)	Abs. (Pre)	Abs. (Post)	Abs. (Net)	Raw Result (mg/L)	Final Result (mg/L)	Spike (mg/L)	QC Lval % Rec.	QC Lval RPD
MB	50.00	50		0.000	0.000	-0.002	<0.005	---		---
LCS	50.00	50		0.057	0.057	0.052	0.052	0.050	104%	---

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 83907-001

MS	50.00000	50		0.050	0.050	0.046	1	0.046	0.050	92%	---
MSD	50.00000	50		0.052	0.052	0.048	1	0.048	0.050	96%	4%

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 82891-017

MS	1.00000	50		0.074	0.074	0.068	50	3.424	0.050	112%	---
MSD	1.00000	50		0.075	0.075	0.069	50	3.471	0.050	114%	1%

Sample Identification	Vol. Initial (ml)	Vol. Final (mL)	Abs. (Pre)	Abs. (Post)	Abs. (Net)	Raw Result (mg/L)	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	Qualifier	Analysis Time
83907-001	50.0000	50		0.002	0.002	0.000	1	<0.005	---	---	9:55
CCV	50.0000	50		0.058	0.058	0.053	1	0.053	0.05	106%	9:58
CCB	50.0000	50		0.002	0.002	0.000	1	<0.005	---	---	9:59
82891-017	50.0000	50		0.661	0.661	0.624	1	0.624	---	---	10:28
82891-017	2.0000	50		0.037	0.037	0.033	25	0.837	---	---	10:22
82891-017	5.0000	50		0.074	0.074	0.068	10	0.685	---	---	10:40
CCV	50.0000	50		0.057	0.057	0.052	1	0.052	0.05	104%	10:42
CCB	50.0000	50		0.000	0.000	-0.002	1	<0.005	---	---	10:43
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Definitions

*Recovery exceeds control limits

Analyst Approval/Date

Review Approval/Date

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 06/11/2018 - Closed: 07/25/2018 - Reports Printed On: 07/26/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to: State Only
EPA Lab Code: MI00129
State Lab Code: MI
Primary Agency: TX -- Texas CEQ
Frank Jamison
12100 Park 35 CircleBldg. A, MC-176
Austin, TX 78753
Reports to : TX

Participant Information

NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer.

Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com

This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-095B Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM

QCI-127B Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK

Assigned Values
All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity
Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability
Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits
Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 665/PAR)

Client: Fibertec **Project/Document Control Number:** WP-243 / 82891

Sample Number(s): 021 **Date Initiated:** 03/19/18 **Date Due:** 04/09/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☒ Client Services / Reporting ☐ Other

☒ Inorganic (Wet Chemistry / Metals / Digestions) ☐ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The PT result reported for volatile solids was outside of the acceptance limits for the study. The reported value was 189 mg/L while the assigned value was 304 mg/L and the study mean was 284 mg/L. The acceptance range was 227 to 350 mg/L..

Please investigate the cause of the failure and propose a corrective action (if applicable) to prevent reoccurrence of the issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The results for the PT samples are manually entered into the PT providers website. The error with the volatiles solids was the result of a transcription error from the report to the website. It was also missed when I did a review of the entries I had made. The result I entered was 189 mg/L when the actual result was 289 mg/L which would have been acceptable.

Investigator(s): Ken Mueller

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Going forward, I will have a second independent review of the result entries I have made to the PT provider website.

Follow up complete 7/27/18
PT passed

QA Approval:

Follow-Up Required? (If required, reference this Report) **Yes** ☑ **No** ☐ will close after successful completion of a PT 6/30/18

VI. Approvals:

Managerial: **Area Supervisor:**

Date Closed: 7/27/18

Total Suspended Solids (TSS) and Volatile Suspended Solids (VSS)

Preparation Method: TSS,SM 2540 D VSS,SM 2540 E./EPA 160.4
Prep Batch ID: WH18A30A-TSS-VSS
Prep Date: 1/30/2018
Preparer: AG

Analysis Method: TSS,SM 2540 D VSS,SM 2540 E./EPA 160.4
Batch Number: WH18A30A-TSS-VSS
Analysis Date: 1/31/2018, 1/1/18
Analyst: AG
Reporting Limit: 2.5 mg/L

Sample Identification for Matrix Dup1: 82891-021

Sample Identification for Matrix Dup2: 82891-013

Matrix Quality Control Sample Data

Sample Identification	Sample Vol	Mass of Filter or Crucible	Mass of Filter or Crucible + Residue after drying at 104°C	Mass of Filter or Crucible + Residue after drying at 550°C	Mass of Residue after drying at 104°C	LOQ Factor‡	TSS Final Result	VSS Final Result	QC Eval	
									TSS	VSS
	(mL)	(g)	(g)	(g)	(mg)	—	(mg/L)	(mg/L)	—	—
Pan Blank	—	0.1129	0.1129	0.1127	0.0	—	0 g	-0.0002 g		
Method Blank	1000	0.1118	0.1118	0.1116	0.0	1.00	0.0000	#NUM!		
LCS	100	0.1182	0.1280	0.1278	9.8	10.00	98		98.0%	
Dup 1 82891-021	100	0.1211	0.2109	0.1822	89.8	10.00	898	287	0.4 %RPD	0.7 %R
Dup 2 82891-013	200	0.1198	0.1330		13.2	5.00	66		9.4 %RPD	N/A

Sample Identification	Sample Vol	Mass of Filter or Crucible	Mass of Filter or Crucible + Residue after drying at 104°C	Mass of Filter or Crucible + Residue after drying at 550°C	Mass of Residue after drying at 104°C	LOQ Adjustment Factor‡	TSS Final Result	VSS Final Result	Comments
	(mL)	(g)	(g)	(g)	(mg)	—	(mg/L)	(mg/L)	
82891-013	200	0.1117	0.1262		14.5	5.00	72.5		
82911-001	1011	0.1143	0.1255		11.2	1.00	11.1		
82912-001	1000	0.1107	0.1157		5.0	1.00	5		
82930-001A	100	0.1117	0.1352	0.1143	23.5	10.00	235	209	
82935-001	100	0.1136	0.1520		38.4	10.00	384		
82967-001	990	0.1098	0.1182		8.4	1.01	8.48		
82967-002	860	0.1147	0.1400		25.3	1.16	29.4		
82970-001	1000	0.1105	0.1159		5.4	1.00	5.4		
82970-003	1033	0.1133	0.1180		4.7	1.00	4.55		
82891-021	100	0.1208	0.2110	0.1821	90.2	10.00	902	289	
82978-001A	1000	0.1103	0.1180		7.7	1.00	7.7		
82976-001	990	0.1108	0.1141		3.3	1.01	3.33		

Note: ☑ Place a check in the checkbox if all available sample has been used. (TSS Only)

(1) Insufficient sample volume available to achieve a reporting limit of 2.5 mg/L.

Definitions
*Exceeds criteria
**RPD high, report higher result
‡ if the limit of quantitation (LOQ) factor is >1, enter into LIMS as the "dilution factor" to raise the reporting limit appropriately on the final client report.
LOQ = 2.5 mg/vol sample in L

Alexis Coughlin 2/1/18
Analyst Approval/Date

Review Approval/Date

DCSID: W-460.5 (10/31/16)

Client Identification:	**Fibertec, Inc.**	Sample Description:	**Volatile Solids**	Chain of Custody:	
Client Project Name:	**WP-243**	Sample No:	**PEI-127**	Collect Date:	**01/24/18**
Client Project No:	**NA**	Sample Matrix:	**PT: Aqueous**	Collect Time:	**NA**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Solids **Aliquot ID: 82891-021** **Matrix: PT: Aqueous**
Method: SM 2540 E-2011 **Description: Volatile Solids**

						Preparation		Analysis		
Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	P. Date	P. Batch	A. Date	A. Batch	Init.
‡ 1. Volatile Solids	289		mg/L	41.0	10	01/30/18	WH18A30A	02/01/18	WH18A30A	AMG

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	189	284	304	mg/L	31.7	227 to 350	3.00	NOT ACCEPT.	2/1/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	189	284	304	mg/L	31.7	227 to 350	3.00	NOT ACCEPT.	2/1/18	AMG

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	34.1	37.8	37.8	mg/L	2.42	32.5 to 43.2	1.53	ACCEPT.	2/5/18	RKP
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	34.1	37.8	37.8	mg/L	2.42	32.5 to 43.2	1.53	ACCEPT.	2/5/18	RKP
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	3.24	3.51	3.57	mg/L	0.427	2.89 to 4.10	0.632	ACCEPT.	2/5/18	RKP
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	3.24	3.51	3.57	mg/L	0.427	2.89 to 4.10	0.632	ACCEPT.	2/5/18	RKP
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	39.7	37.7	38.4	mg/L	3.25	30.7 to 46.1	0.615	ACCEPT.	2/12/18	JLH
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	39.7	37.7	38.4	mg/L	3.25	30.7 to 46.1	0.615	ACCEPT.	2/12/18	JLH
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	59.7	58.0	59.8	mg/L	6.09	47.8 to 71.8	0.279	ACCEPT.	2/12/18	JLH
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	59.7	58.0	59.8	mg/L	6.09	47.8 to 71.8	0.279	ACCEPT.	2/12/18	JLH
1610	Specific Conductance (at 25C)	20048413	COND	SM 2510 B 22nd Ed 2011	415	395	395	umhos/cm	16.6	356 to 435	1.20	ACCEPT.	1/26/18	AMG
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	415	395	395	umhos/cm	16.6	356 to 435	1.20	ACCEPT.	1/26/18	AMG
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	48.7	46.7	47.1	mg/L	7.38	38.6 to 54.0	0.271	ACCEPT.	2/5/18	RKP
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	48.7	46.7	47.1	mg/L	7.38	38.6 to 54.0	0.271	ACCEPT.	2/5/18	RKP
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	72.3	69.7	69.8	mg/L	3.56	59.3 to 80.3	0.730	ACCEPT.	2/9/18	RKP
1505	Total Alkalinity (CaCO3)	20045618	TITR	SM 2320 B-2011 2011	73.5	69.7	69.8	mg/L	3.56	59.3 to 80.3	1.07	ACCEPT.	2/16/18	AMG
1955	Total Dissolved Solids (TDS)	20050424	GRAV	SM 2540 C 22nd Ed 2011	312	296	296	mg/L	52.5	251 to 341	0.305	ACCEPT.	1/31/18	AMG

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean*	Assigned Value	Units	Study Standard Deviation*	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	28.9	28.5	27.4	mg/L	8.37	23.3 to 31.5	0.0478	ACCEPT.	2/12/18	JLH
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	28.9	28.5	27.4	mg/L	8.37	23.3 to 31.5	0.0478	ACCEPT.	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT.	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT	2/12/18	JLH
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	73.0	68.2	68.4	mg/L	5.82	58.1 to 78.7	0.825	ACCEPT.	2/12/18	JLH

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 06/11/2018 - Closed: 07/25/2018 - Reports Printed On: 07/26/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to: State Only
EPA Lab Code: MI00129
State Lab Code: MI
Primary Agency: TX -- Texas CEQ
Frank Jamison
12100 Park 35 CircleBldg. A, MC-176
Austin, TX 78753
Reports to : TX

Participant Information

NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer.

Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com

This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-095B Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM

QCI-127B Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte #	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK

Assigned Values
All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty
All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity
Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability
Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits
Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes
All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary
To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 666/PAR)

Client: Fibertec **Project/Document Control Number:** WP-243 / 82891

Sample Number(s): 032 **Date Initiated:** 03/19/18 **Date Due:** 04/09/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Inorganic (Wet Chemistry / Metals / Digestions) ☒ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The PT result reported for 1,2-Dibromoethane was outside of the acceptance limits for the study. The reported value was 1.32 ug/L while the assigned value was 0.920 ug/L and the study mean was 0.859 ug/L. The acceptance range was 0.516 to 1.26 ug/L..

Please investigate the cause of the failure and propose a corrective action (if applicable) to prevent reoccurrence of the issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

This appears to be the same issue as addressed in CAR 595 (the sample was analyzed before the CAR was completed). The straight analysis would've passed, but the dilution failed high.

Another issue could be that we used to report the lower of the two columns (which assumes that the higher result is due to interference). We switched to reporting a "primary" column, regardless of which was lower. We have since switched back for some analyses due to changes in the method. If the lower of the 2 results were reported here, the sample would've passed.

Investigator(s): BH

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

No samples have been reported for this analysis. The dilution will be made from the original vial, rather than the already punctured vial. A note to file will be written to the SOP to report the lower of the two results.

QA Approval: Ken Mueller

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Managerial: Doug [illegible] **Area Supervisor:** Bethany D. Arnett 4.24.18

Date Closed: 4/26/18

Note to File Form

Use this form to modify an existing Standard Operating Procedure (SOP). Approved changes must be incorporated into the next revision of the SOP. The completed and signed copy of this form must be scanned to openKM. Training documentation of approved changes to the SOP must be on record.

SOP Title: Micro-extraction and Analysis of EDB and DBCP by EPA Method 8011

SOP Number: S-260 SOP Revision: 1

Section(s) Affected: 15.4 Add ☐ Remove ☐ Change ☑
(Check one)

Change(s) Required

Perform the above for both columns in a two-column system. Report the lower of the two results. If results from the two columns do not agree within ± 40% (RPD) flag the data with a P2 flag to show the discrepancy between the two columns.

Date Implemented 4/27/18 Group Leader Bethany Dickinson 4.24.18

QAO Ken Mueller Laboratory Director

DCSID: Q-503.3 (08/12/15)

Fibertec Environmental Services
Corrective and/or Preventive Action Report (CAR 667/PAR)

Client: Fibertec **Project/Document Control Number:** WP-243 / 82891

Sample Number(s): 024 **Date Initiated:** 03/19/18 **Date Due:** 04/09/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☒ Failing PT Sample

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Inorganic (Wet Chemistry / Metals / Digestions) ☒ Organic (Volatile / Semi-Volatile / Extraction)

II. Description of Non-Conformance (attach additional information as needed):

The PT result reported for 2,2-Oxybis(1-chloropropane) aka Bis(2-chloroisopropyl) Ether was outside of the acceptance limits for the study. The reported value was 102 ug/L while the assigned value was 68.2 ug/L and the study mean was 82.4 ug/L. The acceptance range was 16.0 to 86.7 ug/L..

Please investigate the cause of the failure and propose a corrective action (if applicable) to prevent reoccurrence of the issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

We called the PT provider to double check the results bacause the study mean was so high compared to the acceptance range. The sample ran on 2 instruments because the CCV failed low for another compound on the first instrument. For this compound, the CCV passed on both instruments, the QC all passed, and the two instruments results had 11% RPD from each other. For every other B/N compound, the mean is below the assigned value, and for all but 1 other compound we are between the mean and the assigned value (for benzo(ghi) peyrlene the assigned was 82.6 and we reported 85.1). This is the ONLY compound where the mean is above the assigned value. Calibration curve was passing, % RSD passing, ICV passed. There was no dilution factor on the PE sample, results were in the middle of the curve, surrogates passed and there were no hits in the Method Blank.

Investigator(s): Jessica K Salamanca

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

We ruled out every source of error we can think of. There doesn't appear to be any corrective action to take. We will re-assess after the remedial or another PE sample comes through.

QA Approval: Ken Mueller

Follow-Up Required? (If required, reference this Report) Yes ☑ No ☐ will close after passing a remedial PT

VI. Approvals:

Managerial: Bethany D. Annett 8-1-18 Area Supervisor: Jessica K Salamanca

PT passed ws-PTX8009

Date Closed: 8/1/18

Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

ıalyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
ɔxavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM
ɔxavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	484	427	ug/L	357 to 492	ACCEPT	6/21/18	SEM

Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

ıalyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
ɔlatile Solids	10010409	GRAV	EPA 160.4 - 1971	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG
ɔlatile Solids	20051596	GRAV	SM 2540 E-2011 2011	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG

B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

ıalyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK
2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK

ɔd Values

ɔned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT For TDS and Specific Conductance, the assigned value is set at the robust study mean.

ɔy/Traceability/Uncertainty

ɔned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through ılance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0 60%

ɔmogeneity

dividual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous Homogeneity is verified analytically according to in-house SOP.

ıalyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

ınce Limits

ınce limits are set according to current NELAC limits Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

ted Analytes

ɔles are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*)

ɔy Summary

a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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ɔu disagree with any element of this PT report, please submit your complaint to this@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and

Quantitation Report (QT Reviewed)

Data File : C:\S3\S3_DATA\S318A28B\S318AS03.D Vial: 3
Acq On : 28 Jan 2018 3:39 pm Operator: chemist
Sample : ccv01 Inst : S3
Misc : 1/25 b Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 29 15:25 2018 Quant Results File: S3BNAB01.RES

Quant Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Initial Calibration
DataAcq Meth : S3BNAB01

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	8.38	152	688364	20.00	mg/L	-0.02
19) Naphthalene-d8(I)	12.10	136	2507450	20.00	mg/L	-0.02
41) Acenaphthene-d10(I)	18.06	164	1306528	20.00	mg/L	-0.02
63) Phenanthrene-d10(I)	22.29	188	1813760	20.00	mg/L	-0.02
75) Chrysene-d12(I)	29.20	240	1409705	20.00	mg/L	-0.03
82) Perylene-d12(I)	32.60	264	1338704	20.00	mg/L	-0.04
System Monitoring Compounds (Multiplier applied to Results = NO)						
4) 2-Fluorophenol(S)	5.44	112	3362770	47.44	mg/L	-0.02
Spiked Amount 80.000	Range 22 - 85		Recovery = 59.30%			
6) Phenol-d6(S)	7.55	99	4810042	45.85	mg/L	-0.02
Spiked Amount 80.000	Range 11 - 60		Recovery = 57.31%			
31) 1-Fluoronaphthalene(S)	12.17	146	2467537	23.88	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 103		Recovery = 59.70%			
45) 2-Fluorobiphenyl(S)	16.00	172	2006863	24.88	mg/L	-0.03
Spiked Amount 40.000	Range 44 - 109		Recovery = 62.20%			
62) 2,4,6-Tribromophenol(S)	20.40	330	473530	47.46	mg/L	-0.03
Spiked Amount 80.000	Range 38 - 138		Recovery = 59.33%			
77) 4-Terphenyl-d14(S)	26.58	244	1545958	24.50	mg/L	-0.03
Spiked Amount 40.000	Range 44 - 124		Recovery = 61.25%			

Target Compounds (Multiplier applied to Results = NO)				ppb		Qvalue
2) N-Nitrosodimethylamine	3.33	74	1408105	24.93	mg/L #	97
3) Pyridine	3.33	79	2389126	26.63	mg/L	96
5) Aniline	7.60	93	3271350	23.32	mg/L	97
7) Phenol	7.58	94	2945833	23.24	mg/L	98
8) Bis(2-chloroethyl)ether	7.80	93	2298481	23.69	mg/L	99
9) 2-Chlorophenol	7.85	128	1304807	24.93	mg/L	99
10) 1,3-Dichlorobenzene	8.23	146	1318762	24.42	mg/L	98
11) 1,4-Dichlorobenzene	8.43	146	1325450	24.55	mg/L	98
12) 1,2-Dichlorobenzene	8.80	146	1168585	23.45	mg/L	94
13) Benzyl Alcohol	8.81	108	1275580	24.07	mg/L	98
14) 2-Methylphenol	9.12	107	1496560	25.04	mg/L	99
15) Bis(2-chloroisopropyl) Eth	9.22	45	1352421	24.23	mg/L	97 97%
16) N-Nitrosodi-n-propylamine	9.62	70	1562799	24.24	mg/L	99
17) 3&4 Methylphenol	9.60	107	2183557	23.63	mg/L	99
18) Hexachloroethane	9.71	117	692329	24.47	mg/L	98
20) Nitrobenzene	9.95	77	2070452	24.94	mg/L	99
21) 2,6-Dimethylphenol	10.33	122	1173745	25.51	mg/L	98
22) Isophorone	10.78	82	3578501	25.46	mg/L	99
23) 2 Nitrophenol	10.91	139	686787	25.98	mg/L	99
24) 2,4-Dimethylphenol	11.18	122	1217020	25.05	mg/L	98
25) Bis(2-chloroethoxy)methane	11.51	93	2464490	25.37	mg/L	99
26) 2,4-Dichlorophenol	11.68	162	893129	26.05	mg/L	98
27) 3,5-Dimethylphenol	11.65	107	1742881	25.51	mg/L	99
28) 2,3-Dichlorophenol	11.84	162	741070	25.59	mg/L	99
29) 2,3-Dimethylphenol	11.81	107	1754360	24.87	mg/L #	93
30) 1,2,4-Trichlorobenzene	11.94	180	893094	24.89	mg/L	98
32) Naphthalene	12.17	127	453784	25.31	mg/L #	40
33) 3,4-Dimethylphenol	12.17	107	1866160	23.88	mg/L	98
34) 3&4-Chlorophenol	12.22	130	793562	52.12	mg/L #	98
35) 2,6-Dichlorophenol	12.43	162	917916	25.95	mg/L	96
36) 4-Chloroaniline	12.46	127	1470216	24.94	mg/L	99
37) Hexachlorobutadiene	12.67	225	368693	25.47	mg/L	95
38) Bis(2-chloroethoxy)ethane	14.05	63	1687609	25.15	mg/L	99
39) 4-Chloro-3-methylphenol	14.27	107	1428413	26.45	mg/L	98
40) 2-Methylnaphthalene	14.63	142	2024854	24.32	mg/L	95
42) Hexachlorocyclopentadiene	15.22	237	398987	27.16	mg/L	94
43) 2,4,6-Trichlorophenol	15.68	196	534904	26.62	mg/L	97
44) 2,4,5-Trichlorophenol	15.76	196	554914	26.44	mg/L	97
46) 2-Chloronaphthalene	16.29	162	1830938	25.10	mg/L	98
47) 2-Nitroaniline	16.71	65	912489	25.78	mg/L	96

Quantitation Report (QT Reviewed)

Data File : C:\S3\S3_DATA\S318A28B\S318AS06.D Vial: 6
Acq On : 28 Jan 2018 6:02 pm Operator: chemist
Sample : ps18a26a.lcs-bna Inst : S3
Misc : a26a bna water Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 29 15:32 2018 Quant Results File: S3BNAB01.RES

Quant Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Initial Calibration
DataAcq Meth : S3BNAB01

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	8.38	152	666241	20.00	mg/L	-0.02
19) Naphthalene-d8(I)	12.09	136	2601146	20.00	mg/L	-0.03
41) Acenaphthene-d10(I)	18.06	164	1360186	20.00	mg/L	-0.02
63) Phenanthrene-d10(I)	22.30	188	1964599	20.00	mg/L	-0.02
75) Chrysene-d12(I)	29.22	240	1526616	20.00	mg/L	0.00
82) Perylene-d12(I)	32.62	264	1447432	20.00	mg/L	-0.03
System Monitoring Compounds (Multiplier applied to Results = NO)						
4) 2-Fluorophenol(S)	5.47	112	3035946	44.25	mg/L	0.01
Spiked Amount 80.000	Range 22 - 85		Recovery = 55.31%			
6) Phenol-d6(S)	7.56	99	3011498	29.66	mg/L	-0.02
Spiked Amount 80.000	Range 11 - 60		Recovery = 37.08%			
31) 1-Fluoronaphthalene(S)	12.16	146	2819558	26.30	mg/L	-0.03
Spiked Amount 40.000	Range 44 - 103		Recovery = 65.75%			
45) 2-Fluorobiphenyl(S)	16.02	172	2455580	29.24	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 109		Recovery = 73.10%			
62) 2,4,6-Tribromophenol(S)	20.42	330	810011	77.97	mg/L	0.00
Spiked Amount 80.000	Range 38 - 138		Recovery = 97.46%			
77) 4-Terphenyl-d14(S)	26.60	244	2528967	37.01	mg/L	0.00
Spiked Amount 40.000	Range 44 - 124		Recovery = 92.52%			
Target Compounds (Multiplier applied to Results = NO)			ppb			Qvalue
2) N-Nitrosodimethylamine	3.34	74	1451422	26.55	mg/L	# 98
3) Pyridine	3.34	79	2082221	23.98	mg/L	95
5) Aniline	7.59	93	3773969	27.80	mg/L	88
7) Phenol	7.59	94	1911679	15.58	mg/L	# 68
8) Bis(2-chloroethyl)ether	7.81	93	3080194	32.80	mg/L	# 87
9) 2-Chlorophenol	7.86	128	1624869	32.07	mg/L	99
10) 1,3-Dichlorobenzene	8.23	146	1104355	21.13	mg/L	98
11) 1,4-Dichlorobenzene	8.43	146	1078226	20.63	mg/L	98
12) 1,2-Dichlorobenzene	8.80	146	1050390	21.77	mg/L	99
13) Benzyl Alcohol	8.82	108	1492712	29.11	mg/L	99
14) 2-Methylphenol	9.14	107	1741198	30.10	mg/L	98
15) Bis(2-chloroisopropyl) Eth	9.22	45	1683080	31.16	mg/L	97
16) N-Nitrosodi-n-propylamine	9.58	70	2186957	35.05	mg/L	98
17) 3&4-Methylphenol	9.60	107	2052045	22.94	mg/L	# 91
18) Hexachloroethane	9.71	117	554434	20.25	mg/L	97
20) Nitrobenzene	9.96	77	2662084	30.91	mg/L	100
22) Isophorone	10.73	82	5786031	39.69	mg/L	99
23) 2 Nitrophenol	10.91	139	897460	32.73	mg/L	99
24) 2,4 Dimethylphenol	11.19	122	1643544	32.60	mg/L	98
25) Bis(2-chloroethoxy)methane	11.52	93	3538898	35.12	mg/L	97
26) 2,4-Dichlorophenol	11.69	162	1253814	35.26	mg/L	99
30) 1,2,4-Trichlorobenzene	11.93	180	850294	22.84	mg/L	98
32) Naphthalene	12.18	127	480184	25.82	mg/L	# 1
36) 4-Chloroaniline	12.44	127	1688889	27.62	mg/L	98
37) Hexachlorobutadiene	12.67	225	308929	20.57	mg/L	91
39) 4-Chloro-3-methylphenol	14.28	107	1967596	35.12	mg/L	99
40) 2-Methylnaphthalene	14.63	142	2214904	25.65	mg/L	97
42) Hexachlorocyclopentadiene	15.22	237	363805	23.79	mg/L	96
43) 2,4,6-Trichlorophenol	15.68	196	753247	36.01	mg/L	95
44) 2,4,5-Trichlorophenol	15.77	196	787133	36.02	mg/L	96
46) 2 Chloronaphthalene	16.29	162	2077760	27.36	mg/L	99
47) 2-Nitroaniline	16.72	65	1339933	36.37	mg/L	95
48) 1,3-Dinitrobenzene	17.47	168	647274	41.75	mg/L	94
49) Dimethyl Phthalate	17.49	163	2929588	38.11	mg/L	98
50) Acenaphthylene	17.60	152	3409930	28.90	mg/L	99
51) 2,6-Dinitrotoluene	17.60	165	748649	36.53	mg/L	98
52) Acenaphthene	18.17	154	2117304	31.48	mg/L	99
53) 3-Nitroaniline	18.07	138	751582	34.48	mg/L	99
54) 2,4-Dinitrophenol	18.38	184	503564	29.75	mg/L	95
55) Dibenzofuran	18.70	168	3204950	32.73	mg/L	# 85

78%

Quantitation Report (QT Reviewed)

Data File : C:\S3\S3_DATA\S318A28B\S318AS07.D Vial: 7
Acq On : 28 Jan 2018 6:50 pm Operator: chemist
Sample : ps18a26a.lcd-bna Inst : S3
Misc : a26a bna water Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jan 29 15:35 2018 Quant Results File: S3BNAB01.RES

Quant Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Initial Calibration
DataAcq Meth : S3BNAB01

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	8.38	152	623943	20.00	mg/L	-0.02
19) Naphthalene-d8(I)	12.09	136	2411001	20.00	mg/L	-0.02
41) Acenaphthene-d10(I)	18.06	164	1244995	20.00	mg/L	-0.02
63) Phenanthrene-d10(I)	22.30	188	1783877	20.00	mg/L	-0.02
75) Chrysene-d12(I)	29.21	240	1402444	20.00	mg/L	-0.02
82) Perylene-d12(I)	32.62	264	1301500	20.00	mg/L	-0.02

System Monitoring Compounds (Multiplier applied to Results = NO)						
4) 2-Fluorophenol(S)	5.46	112	2009630	31.27	mg/L	0.00
Spiked Amount 80.000	Range 22 - 85		Recovery = 39.09%			
6) Phenol-d6(S)	7.55	99	2423574	25.49	mg/L	-0.02
Spiked Amount 80.000	Range 11 - 60		Recovery = 31.86%			
31) 1-Fluoronaphthalene(S)	12.16	146	2742855	27.60	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 103		Recovery = 69.00%			
45) 2-Fluorobiphenyl(S)	16.02	172	2396415	31.18	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 109		Recovery = 77.95%			
62) 2,4,6-Tribromophenol(S)	20.41	330	547215	57.55	mg/L	-0.02
Spiked Amount 80.000	Range 38 - 138		Recovery = 71.94%			
77) 4-Terphenyl-d14(S)	26.59	244	2282561	36.36	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 124		Recovery = 90.90%			

Target Compounds (Multiplier applied to Results = NO)				ppb		Qvalue
2) N-Nitrosodimethylamine	3.34	74	1222998	23.89 mg/L	#	99
3) Pyridine	3.34	79	1702760	20.94 mg/L		98
5) Aniline	7.59	93	3479085	27.37 mg/L		86
7) Phenol	7.58	94	1555568	13.54 mg/L	#	58
8) Bis(2-chloroethyl)ether	7.80	93	2791545	31.74 mg/L	#	87
9) 2-Chlorophenol	7.85	128	1143191	24.10 mg/L		97
10) 1,3-Dichlorobenzene	8.23	146	1027066	20.98 mg/L		99
11) 1,4-Dichlorobenzene	8.43	146	1050576	21.47 mg/L		100
12) 1,2-Dichlorobenzene	8.81	146	1014543	22.46 mg/L		99
13) Benzyl Alcohol	8.81	108	1357377	28.26 mg/L		97
14) 2-Methylphenol	9.14	107	1555437	28.71 mg/L		99
15) Bis(2 chloroisopropyl) Eth	9.21	45	1564719	30.93 mg/L		97
16) N-Nitrosodi-n-propylamine	9.57	70	2064855	35.34 mg/L		98
17) 3&4-Methylphenol	9.59	107	1799404	21.48 mg/L	#	92
18) Hexachloroethane	9.71	117	525117	20.48 mg/L		99
20) Nitrobenzene	9.96	77	2515335	31.51 mg/L		99
22) Isophorone	10.72	82	5246745	38.83 mg/L		99
23) 2-Nitrophenol	10.91	139	591209	23.26 mg/L		99
24) 2,4-Dimethylphenol	11.19	122	1492568	31.94 mg/L		99
25) Bis(2-chloroethoxy)methane	11.51	93	3163100	33.86 mg/L		98
26) 2,4 Dichlorophenol	11.69	162	872920	26.48 mg/L		98
30) 1,2,4-Trichlorobenzene	11.94	180	840282	24.35 mg/L		99
32) Naphthalene	12.18	127	455464	26.42 mg/L	#	1
36) 4-Chloroaniline	12.44	127	1641466	28.96 mg/L		100
37) Hexachlorobutadiene	12.67	225	296418	21.29 mg/L		93
39) 4-Chloro-3-methylphenol	14.27	107	1584819	30.52 mg/L		99
40) 2 Methylnaphthalene	14.63	142	2221545	27.75 mg/L		96
42) Hexachlorocyclopentadiene	15.22	237	347113	24.80 mg/L		99
43) 2,4,6-Trichlorophenol	15.67	196	487279	25.45 mg/L		98
44) 2,4,5-Trichlorophenol	15.76	196	522101	26.10 mg/L		97
46) 2-Chloronaphthalene	16.29	162	2119761	30.50 mg/L		99
47) 2-Nitroaniline	16.72	65	1253510	37.17 mg/L		100
48) 1,3-Dinitrobenzene	17.46	168	583004	41.09 mg/L		95
49) Dimethyl Phthalate	17.49	163	2693239	38.27 mg/L		100
50) Acenaphthylene	17.60	152	3271348	30.29 mg/L		99
51) 2,6-Dinitrotoluene	17.60	165	696170	37.12 mg/L		97
52) Acenaphthene	18.17	154	2067841	33.58 mg/L		99
53) 3-Nitroaniline	18.07	138	730533	36.62 mg/L		98
54) 2,4-Dinitrophenol	18.37	184	286030	18.46 mg/L		95
55) Dibenzofuran	18.70	168	3016920	33.66 mg/L	#	79

77%

Quantitation Report (QT Reviewed)

Data File : C:\S3\S3_DATA\S318A28B\S318AS10.D Vial: 10
Acq On : 28 Jan 2018 9:12 pm Operator: chemist
Sample : 82891-024.01 Inst : S3
Misc : a26a bna water Multipir: 1.00
MS Integration Params: rteint.p
Quant Time: Feb 9 13:37 2018 Quant Results File: S3BNAB01.RES

Quant Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Initial Calibration
DataAcq Meth : S3BNAB01

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	8.38	152	634641	20.00	mg/L	-0.02
19) Naphthalene d8(I)	12.08	136	2291440	20.00	mg/L	-0.04
41) Acenaphthene-d10(I)	18.04	164	1261922	20.00	mg/L	-0.04
63) Phenanthrene-d10(I)	22.28	188	1737346	20.00	mg/L	-0.03
75) Chrysene-d12(I)	29.20	240	1406052	20.00	mg/L	-0.03
82) Perylene-d12(I)	32.59	264	1264777	20.00	mg/L	-0.05
System Monitoring Compounds (Multiplier applied to Results = NO)						
4) 2-Fluorophenol(S)	5.48	112	2994826	45.82	mg/L	0.02
Spiked Amount 80.000	Range 22 - 85		Recovery = 57.27%			
6) Phenol-d6(S)	7.55	99	3108990	32.14	mg/L	-0.02
Spiked Amount 80.000	Range 11 - 60		Recovery = 40.17%			
31) 1-Fluoronaphthalene(S)	12.16	146	2879552	30.49	mg/L	-0.03
Spiked Amount 40.000	Range 44 - 103		Recovery = 76.22%			
45) 2-Fluorobiphenyl(S)	15.99	172	2455725	31.52	mg/L	-0.04
Spiked Amount 40.000	Range 44 - 109		Recovery = 78.80%			
62) 2,4,6-Tribromophenol(S)	20.39	330	763550	79.23	mg/L	0.04
Spiked Amount 80.000	Range 38 - 138		Recovery = 99.04%			
77) 4-Terphenyl-d14(S)	26.59	244	2355392	37.42	mg/L	-0.02
Spiked Amount 40.000	Range 44 - 124		Recovery = 93.55%			
Target Compounds (Multiplier applied to Results = NO)				ppb		Qvalue
2) N-Nitrosodimethylamine	3.35	74	2169066	41.66	mg/L #	99
7) Phenol	7.59	94	2670693	22.86	mg/L #	60
8) Bis(2-chloroethyl)ether	7.80	93	3929840	43.93	mg/L	93
9) 2-Chlorophenol	7.84	128	828926	17.18	mg/L	90
10) 1,3-Dichlorobenzene	8.22	146	1077050	21.63	mg/L	98
11) 1,4-Dichlorobenzene	8.43	146	2289298	45.99	mg/L	99
14) 2-Methylphenol	9.12	107	1182799	21.46	mg/L	99
15) Bis(2-chloroisopropyl) Eth	9.21	45	2637022	51.25	mg/L	99
16) N-Nitrosodi-n-propylamine	9.58	70	4312023m	72.55	mg/L	
17) 3&4-Methylphenol	9.61	107	4069622	47.77	mg/L	98
20) Nitrobenzene	9.96	77	3378533	44.54	mg/L	99
22) Isophorone	10.75	82	10962245	85.35	mg/L #	97
23) 2 Nitrophenol	10.93	139	2101330	86.99	mg/L	99
24) 2,4-Dimethylphenol	11.19	122	1591162	35.83	mg/L	99
26) 2,4-Dichlorophenol	11.69	162	1121062	35.79	mg/L	99
30) 1,2,4-Trichlorobenzene	11.94	180	1821249	55.53	mg/L	96
32) Naphthalene	12.16	127	566963	34.61	mg/L #	1
35) 2,6-Dichlorophenol	12.44	162	1917879	59.34	mg/L	88
37) Hexachlorobutadiene	12.65	225	395984	29.93	mg/L	98
39) 4-Chloro-3-methylphenol	14.27	107	2391949	48.47	mg/L	99
40) 2-Methylnaphthalene	14.62	142	1473008	19.36	mg/L	94
42) Hexachlorocyclopentadiene	15.21	237	538095	37.93	mg/L	96
43) 2,4,6-Trichlorophenol	15.68	196	1006006	51.84	mg/L	96
44) 2,4,5-Trichlorophenol	15.76	196	573214	28.28	mg/L	98
49) Dimethyl Phthalate	17.46	163	4480356	62.82	mg/L	98
50) Acenaphthylene	17.61	152	7565248	69.11	mg/L	98
52) Acenaphthene	18.15	154	2592552	41.54	mg/L	98
54) 2,4-Dinitrophenol	18.37	184	1011030	64.38	mg/L	98
56) 4-Nitrophenol	18.69	65	1007087	45.15	mg/L #	36
57) 2,4-Dinitrotoluene	18.81	165	2100087	87.84	mg/L	96
59) Diethyl Phthalate	19.63	149	3157084	42.89	mg/L	99
60) 4-Chlorophenyl Phenylether	19.80	204	1008734	33.39	mg/L	99
64) 2-Methyl-4,6-dinitrophenol	19.94	198	391782	27.81	mg/L	98
67) 4-Bromophenyl Phenylether	21.17	248	1085892	71.10	mg/L	97
68) Hexachlorobenzene	21.22	284	454667	27.15	mg/L	97
69) Pentachlorophenol	21.80	266	448726	38.34	mg/L	97
70) Phenanthrene	22.36	178	3918323	41.78	mg/L	100
71) Anthracene	22.48	178	1127340	11.64	mg/L	98
73) Di-n-butyl Phthalate	24.07	149	3941868	32.46	mg/L	99
76) Pyrene	26.04	202	757531	8.18	mg/L	97

102 reported value.

Method Path : C:\S3\s3_c\S3\S3_METHO\
Method File : S3BNAB01.M
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response Via : Initial Calibration

Calibration Files
0.50=S318AN12.D 1.00=S318AN11.D 2.50=S318AN10.D 5.00=S318AN09.D 10.0=S318AN08.D 25.0=S318AN07.D 50.0=S318AN06.D
75.0=S318AN05.D 100 =S318AN04.D

		Compound	0.50	1.00	2.50	5.00	10.0	25.0	50.0	75.0	100	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	ISTD										
2)	T	N-Nitrosodimet...	1.284	1.559	1.586	1.631	1.820	1.846	1.695	1.700	1.646	1.641	10.04
3)	T	Pyridine	2.005	2.286	2.627	2.375	2.792	2.891	2.738	2.861	2.885	2.607	12.07
4)	S	2-Fluorophenol(S)	2.032	2.562	2.063	1.997	2.227	2.145	1.904	1.903	1.705	2.060	11.73
5)	T	Aniline	4.204	4.843	4.295	3.987	4.357	4.093	3.793	3.670	3.432	4.075	10.26
6)	S	Phenol-d6(S)	2.879	3.887	3.221	3.007	3.352	3.096	2.749	2.736	2.507	3.048	13.42
7)	MC	Phenol	3.936	4.231	4.058	3.690	3.821	3.671	3.365	3.284	3.084	3.682	10.27#
8)	T	Bis(2-chloroet...	2.710	3.542	3.192	2.704	2.921	2.883	2.667	2.470	2.286	2.819	13.34
9)	M	2-Chlorophenol	1.332	1.757	1.608	1.445	1.632	1.593	1.491	1.448	1.380	1.521	8.96
10)	T	1,3-Dichlorobe...	1.576	1.850	1.638	1.564	1.628	1.609	1.474	1.425	1.357	1.569	9.12
11)	MC	1,4-Dichlorobe...	1.545	1.918	1.599	1.612	1.611	1.604	1.489	1.412	1.329	1.569	10.48#
12)	T	1,2-Dichlorobe...	1.327	1.749	1.479	1.484	1.478	1.544	1.365	1.342	1.264	1.448	10.05
13)	T	Benzyl Alcohol	1.381	1.711	1.560	1.493	1.609	1.600	1.514	1.520	1.467	1.539	6.16
14)	T	2-Methylphenol	1.662	1.915	1.902	1.619	1.850	1.804	1.720	1.625	1.533	1.737	7.88
15)	T	Bis(2-chlorois...	1.461	1.984	1.648	1.621	1.709	1.710	1.562	1.486	1.412	1.622	10.67
16)	MP	N-Nitrosodi-n-...	1.746	2.251	2.014	1.766	2.009	1.910	1.786	1.735	1.641	1.873	10.18
17)	T	3&4-Methylphenol	2.533	3.321	2.843	2.506	2.787	2.712	2.597	2.538	2.325	2.685	10.65
18)	T	Hexachloroethane	0.827	0.950	0.805	0.835	0.819	0.858	0.807	0.784	0.714	0.822	7.63
19)	I	Naphthalene-d8(I)	ISTD										
20)	T	Nitrobenzene	0.644	0.749	0.706	0.635	0.710	0.666	0.627	0.619	0.603	0.662	7.42
21)	T	2,6-Dimethylph...	0.384	0.376	0.390	0.362	0.389	0.366	0.349	0.347	0.339	0.367	5.22
22)	T	Isophorone	1.080	1.214	1.148	1.147	1.163	1.137	1.082	1.070	1.051	1.121	4.76
23)	TC	2-Nitrophenol	0.143	0.229	0.207	0.216	0.221	0.221	0.220	0.219	0.222	0.211	12.35#
24)	T	2,4-Dimethylph...	0.392	0.478	0.360	0.391	0.403	0.379	0.365	0.361	0.358	0.388	9.75
25)	T	Bis(2-chloroet...	0.770	0.849	0.813	0.792	0.818	0.785	0.744	0.715	0.688	0.775	6.66
26)	TC	2,4-Dichloroph...	0.204	0.280	0.317	0.259	0.306	0.292	0.272	0.266	0.264	0.273	11.97#
27)	T	3,5-Dimethylph...	0.445	0.594	0.634	0.533	0.601	0.556	0.523	0.513	0.505	0.545	10.62
28)	T	2,3-Dichloroph...	0.243	0.259	0.242	0.222	0.234	0.231	0.220	0.223	0.204	0.231	6.94
29)	T	2,3-Dimethylph...	0.502	0.699	0.604	0.559	0.615	0.557	0.533	0.505	0.490	0.563	11.97
30)	M	1,2,4-Trichlor...	0.296	0.328	0.297	0.283	0.298	0.279	0.272	0.266	0.258	0.286	7.43
31)	S	1-Fluoronaphth...	0.804	0.994	0.918	0.808	0.923	0.807	0.739	0.735	0.692	0.824	12.20
32)	M	Naphthalene	0.165	0.171	0.144	0.121	0.134	0.142	0.136	0.141	0.133	0.143	10.97
33)	T	3,4-Dimethylph...	0.719	0.656	0.707	0.638	0.646	0.599	0.566	0.536	0.542	0.623	10.75
34)	T	3&4-Chlorophenol	0.130	0.128	0.125	0.122	0.125	0.122	0.117	0.114	0.110	0.121	5.54
35)	T	2,6-Dichloroph...	0.265	0.345	0.274	0.289	0.290	0.274	0.271	0.265	0.266	0.282	9.08
36)	T	4-Chloroaniline	0.441	0.520	0.510	0.477	0.493	0.480	0.445	0.436	0.429	0.470	7.19
37)	TC	Hexachlorobuta...	0.120	0.122	0.126	0.107	0.121	0.120	0.109	0.110	0.104	0.115	6.95#
38)	T	Bis(2-chloroet...	0.464	0.609	0.594	0.523	0.564	0.546	0.522	0.503	0.492	0.535	8.91
39)	MC	4-Chloro-3-met...	0.359	0.441	0.432	0.468	0.461	0.439	0.424	0.429	0.424	0.431	7.24#
40)	M	2-Methylnaphth...	0.636	0.809	0.721	0.652	0.697	0.668	0.606	0.602	0.585	0.664	10.63
41)	I	Acenaphthene-d10(I)	ISTD										

RK 1/24/18

T 1251

Quantitation Report (QT Reviewed)

Data File : C:\S3\S3_DATA\S318A23A\S318AN13.D Vial: 12
Acq On : 23 Jan 2018 9:35 pm Operator: chemist
Sample : 40 bna icv Inst : S3
sc : 1/21 Multiplr: 1.00
Integration Params: rteint.p
Quant Time: Jan 24 19:06 2018 Quant Results File: S3BNAB01.RES

Quant Method : C:\S3\S3_METHO\S3BNAB01.M (RTE Integrator)
Title : EPA 8270B
Last Update : Wed Jan 24 19:00:45 2018
Response via : Initial Calibration
DataAcq Meth : S3BNAA99

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	8.40	152	761288	20.00	mg/L	0.00
19) Naphthalene-d8(I)	12.12	136	2809437	20.00	mg/L	0.00
41) Acenaphthene-d10(I)	18.07	164	1463247	20.00	mg/L	0.00
63) Phenanthrene-d10(I)	22.30	188	2001934	20.00	mg/L	-0.01
75) Chrysene-d12(I)	29.22	240	1532776	20.00	mg/L	0.00
82) Perylene-d12(I)	32.63	264	1429735	20.00	mg/L	-0.01
System Monitoring Compounds (Multiplier applied to Surr %R = NO)						
4) 2-Fluorophenol(S)	5.47	112	5674601	72.38	mg/L	0.02
Spiked Amount 80.000	Range 22 - 85		Recovery = 90.47%#			
6) Phenol-d6(S)	7.60	99	8242209	71.04	mg/L	0.02
Spiked Amount 80.000	Range 11 - 60		Recovery = 88.80%#			
31) 1-Fluoronaphthalene(S)	12.19	146	4350610	37.57	mg/L	0.00
Spiked Amount 40.000	Range 44 - 103		Recovery = 93.92%			
45) 2-Fluorobiphenyl(S)	16.03	172	3460876	38.31	mg/L	0.00
Spiked Amount 40.000	Range 44 - 109		Recovery = 95.78%			
62) 2,4,6-Tribromophenol(S)	20.43	330	853518	76.38	mg/L	0.00
Spiked Amount 80.000	Range 38 - 138		Recovery = 95.47%			
77) 4-Terphenyl-d14(S)	26.60	244	2644416	38.54	mg/L	0.00
Spiked Amount 40.000	Range 44 - 124		Recovery = 96.35%			
Target Compounds (Multiplier applied to Results = NO)				ppb		Qvalue
2) N-Nitrosodimethylamine	3.37	74	2732247	43.75	mg/L #	100
3) Pyridine	3.35	79	4541267	45.77	mg/L	98
5) Aniline	7.63	93	5775348	37.23	mg/L	99
7) Phenol	7.62	94	5054525	36.06	mg/L	99
8) Bis(2-chloroethyl)ether	7.83	93	4009073	37.36	mg/L	99
9) 2-Chlorophenol	7.87	128	2272538	39.26	mg/L	100
10) 1,3-Dichlorobenzene	8.24	146	2257177	37.79	mg/L	99
11) 1,4-Dichlorobenzene	8.45	146	2257086	37.80	mg/L	99
12) 1,2-Dichlorobenzene	8.82	146	2065057	37.46	mg/L	96
13) Benzyl Alcohol	8.84	108	2250770	38.41	mg/L	99
14) 2-Methylphenol	9.16	107	2612156	39.51	mg/L	96
15) Bis(2-chloroisopropyl) Eth	9.24	45	2409204	39.03	mg/L	96
16) N-Nitrosodi-n-propylamine	9.61	70	2846015m	39.92	mg/L	
17) 3&4-Methylphenol	9.62	107	3404905	33.32	mg/L #	90
18) Hexachloroethane	9.72	117	1192868	38.12	mg/L	99
20) Nitrobenzene	9.98	77	3606430	38.77	mg/L	98
22) Isophorone	10.77	82	7294047	46.32	mg/L	99
23) 2-Nitrophenol	10.93	139	1200405	40.53	mg/L	98
24) 2,4-Dimethylphenol	11.21	122	2283220	41.94	mg/L	95
25) Bis(2-chloroethoxy)methane	11.54	93	4555065	41.85	mg/L	99
26) 2,4-Dichlorophenol	11.72	162	1625569	42.32	mg/L	98
30) 1,2,4-Trichlorobenzene	11.95	180	1585791	39.44	mg/L	97
32) Naphthalene	12.20	127	818799	40.77	mg/L #	1
36) 4-Chloroaniline	12.46	127	2633349	39.88	mg/L	99
37) Hexachlorobutadiene	12.68	225	640902	39.51	mg/L	96
39) 4-Chloro-3-methylphenol	14.29	107	2453367	40.54	mg/L	99
40) 2-Methylnaphthalene	14.65	142	3683626	39.49	mg/L	100
42) Hexachlorocyclopentadiene	15.23	237	793832	48.25	mg/L	96
43) 2,4,6-Trichlorophenol	15.69	196	946609	42.06	mg/L	96
44) 2,4,5-Trichlorophenol	15.78	196	954853	40.62	mg/L	97
46) 2-Chloronaphthalene	16.31	162	3188181	39.03	mg/L	98
47) 2-Nitroaniline	16.74	65	1608366	40.58	mg/L	95
48) 1,3-Dinitrobenzene	17.49	168	754924	45.27	mg/L	99
49) Dimethyl Phthalate	17.52	163	3400670	41.12	mg/L	98
50) Acenaphthylene	17.63	152	4775639	37.62	mg/L	99
51) 2,6-Dinitrotoluene	17.62	165	860282	39.02	mg/L	97

(#) = qualifier out of range (m) = manual integration
S318AN13.D S3BNAB01.M Wed Jan 24 19:06:29 2018

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518B09a\
Data File : S518B904.D
Acq On : 9 Feb 2018 8:44 am
Operator : chemist
Sample : ccv01
Misc : 1/22 a
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 09 09:08:47 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB23.M
Quant Title : EPA 8270C
QLast Update : Tue Jan 30 13:56:03 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.622	152	145893	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.842	136	594358	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.596	164	324652	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.105	188	543874	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.021	240	531896	20.00 mg/L	0.00
82) Perylene-d12(I)	18.923	264	473891	20.00 mg/L	0.01
System Monitoring Compounds					
4) 2-Fluorophenol(S)	4.482	112	464615	50.77 mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =	63.46%
6) Phenol-d6(S)	5.237	99	571641	49.65 mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =	62.06%#
31) 1-Fluoronaphthalene(S)	6.845	146	685952	25.81 mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =	64.53%
45) 2-Fluorobiphenyl(S)	7.876	172	557792	25.92 mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =	64.80%
62) 2,4,6-Tribromophenol(S)	9.391	330	120208	58.68 mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =	73.35%
77) 4-Terphenyl-d14(S)	11.863	244	563569	25.77 mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery =	64.42%

Target Compounds (Multiplier applied to Results = YES)				ppb	Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.467	74	120780	23.39	# 91	23.39
3) Pyridine	3.511	79	240358	23.93	96	23.93
5) Aniline	5.321	66	97047	19.37	96	19.37
7) Phenol	5.249	94	310589	25.44	99	25.44
8) Bis(2-chloroethyl)ether	5.336	95	75501	23.21	97	23.21
9) 2-Chlorophenol	5.436	128	271734	26.15	97	26.15
10) 1,3-Dichlorobenzene	5.575	146	297119	25.35	99	25.35
11) 1,4-Dichlorobenzene	5.637	146	301311	25.06	100	25.06
12) 1,2-Dichlorobenzene	5.786	146	287986	25.51	99	25.51
13) Benzyl Alcohol	5.718	79	192122	25.18	100	25.18
14) 2-Methylphenol	5.796	107	198998	24.74	100	~~24.74~~
15) Bis(2-chloroisopropyl)...	5.821	45	284513	23.70	98	~~23.70~~ 95%
16) N-Nitrosodi-n-propylamine	5.957	70	125058	22.25	93	22.25
17) 3&4-Methylphenol	5.932	107	294162	24.99	99	24.99
18) Hexachloroethane	6.106	117	109872	24.41	96	24.41
20) Nitrobenzene	6.150	77	241665	24.25	95	24.25
21) 2,6-Dimethylphenol	6.221	122	186612	22.61	100	22.61
22) Isophorone	6.379	82	333337	22.02	97	22.02
23) 2-Nitrophenol	6.454	139	150798	26.89	97	26.89
24) 2,4-Dimethylphenol	6.445	122	214898	24.56	98	24.56
25) Bis(2-chloroethoxy)met...	6.529	93	257207	23.85	100	23.85
26) 2,4-Dichlorophenol	6.684	162	218078	27.36	99	27.36
27) 3,5-Dimethylphenol	6.572	122	281327m	24.66		24.66
28) 2,3-Dichlorophenol	6.746	162	179768	27.13	99	27.13
29) 2,3-Dimethylphenol	6.646	107	248433	24.37	97	24.37
30) 1,2,4-Trichlorobenzene	6.774	180	224054	25.62	100	25.62
32) Naphthalene	6.867	128	863223	25.72	97	25.72
33) 3,4-Dimethylphenol	6.743	107	292350	24.68	98	24.68
34) 3&4-Chlorophenol	6.746	130	181731	53.16	99	53.16
35) 2,6-Dichlorophenol	6.904	162	208610	26.29	99	26.29
36) 4-Chloroaniline	6.889	65	69448	22.14	96	22.14
37) Hexachlorobutadiene	6.957	225	119429	25.90	99	25.90
38) Bis(2-chloroethoxy)ethane	7.233	63	191910	23.10	99	23.10
39) 4-Chloro-3-methylphenol	7.330	107	212445	26.11	96	26.11
40) 2-Methylnaphthalene	7.538	142	516082	26.10	100	26.10

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518B09a\
Data File : S518B912.D
Acq On : 9 Feb 2018 1:18 pm
Operator : chemist
Sample : 82891-024.01
Misc : a26a bna water
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Feb 09 13:42:49 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB23.M
Quant Title : EPA 8270C
QLast Update : Tue Jan 30 13:56:03 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.619	152	119368	20.00	mg/L	0.00
19) Naphthalene-d8(I)	6.842	136	489264	20.00	mg/L	0.00
41) Acenaphthene-d10(I)	8.593	164	266290	20.00	mg/L	0.00
63) Phenanthrene-d10(I)	10.105	188	434947	20.00	mg/L	0.00
75) Chrysene-d12(I)	14.024	240	427565	20.00	mg/L	0.00
82) Perylene-d12(I)	18.917	264	388146	20.00	mg/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol(S)	4.489	112	348834	46.59	mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =		58.24%
6) Phenol-d6(S)	5.237	99	285788	30.34	mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =		37.92%
31) 1-Fluoronaphthalene(S)	6.845	146	660551	30.20	mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =		75.50%
45) 2-Fluorobiphenyl(S)	7.876	172	569444	32.27	mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =		80.68%
62) 2,4,6-Tribromophenol(S)	9.394	330	154243	91.79	mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =		114.74%
77) 4-Terphenyl-d14(S)	11.866	244	716845	40.78	mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery =		101.95%

Target Compounds (Multiplier applied to Results = YES)				ppb	Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.480	74	143797	34.04	# 92	34.04
7) Phenol	5.249	94	235484	23.57	100	23.57
8) Bis(2-chloroethyl)ether	5.333	95	114437	43.00	87	43.00
9) 2-Chlorophenol	5.439	128	142972	16.82	97	16.82
10) 1,3-Dichlorobenzene	5.572	146	209146	21.81	99	21.81
11) 1,4-Dichlorobenzene	5.634	146	479869	48.79	99	48.79
14) 2-Methylphenol	5.799	107	126283	19.19	94	19.19
15) Bis(2-chloroisopropyl)...	5.821	45	447887	45.60	94	45.60
16) N-Nitrosodi-n-propylamine	5.954	70	307414	66.83	96	66.83
17) 3&4-Methylphenol	5.942	107	502486	52.18	99	52.18
20) Nitrobenzene	6.150	77	329827	40.20	93	40.20
22) Isophorone	6.367	82	1067067	85.64	96	85.64
23) 2-Nitrophenol	6.457	139	400649	86.78	90	86.78
24) 2,4-Dimethylphenol	6.448	122	264500	36.72	94	36.72
26) 2,4-Dichlorophenol	6.687	162	219143	33.40	98	33.40
30) 1,2,4-Trichlorobenzene	6.774	180	416481	57.85	100	57.85
32) Naphthalene	6.864	128	837099	30.30	97	30.30
35) 2,6-Dichlorophenol	6.901	162	399097	61.09	98	61.09
37) Hexachlorobutadiene	6.954	225	112849	29.73	99	29.73
39) 4-Chloro-3-methylphenol	7.333	107	303438	45.30	94	45.30
40) 2-Methylnaphthalene	7.535	142	314314	19.31	100	19.31
42) Hexachlorocyclopentadiene	7.687	237	58736	18.81	99	18.81
43) 2,4,6-Trichlorophenol	7.808	196	238608	55.37	100	55.37
44) 2,4,5-Trichlorophenol	7.848	196	127779	29.31	98	29.31
49) Dimethyl Phthalate	8.258	163	1029785	67.13	100	67.13
50) Acenaphthylene	8.463	152	1887438	78.61	99	78.61
52) Acenaphthene	8.631	153	648997	43.38	98	43.38
54) 2,4-Dinitrophenol	8.631	184	142732	46.88	65	46.88
56) 4-Nitrophenol	8.674	65	95146	38.02	90	38.02
57) 2,4-Dinitrotoluene	8.758	165	451327	89.46	94	89.46
59) Diethyl Phthalate	8.954	149	759954	47.19	100	47.19
60) 4-Chlorophenyl Phenyle...	9.109	204	244281	34.71	100	34.71
64) 2-Methyl-4,6-dinitroph...	9.171	198	68654	21.84	97	21.84
67) 4-Bromophenyl Phenylether	9.612	248	313754	78.15	97	78.15
68) Hexachlorobenzene	9.717	284	116426	26.65	98	26.65

91.2 calc. value.

Response Factor Report S5

Method Path : C:\S5\S5_METHOD\
Method File : S5BNAB23.M
Title : EPA 8270C
Last Update : Tue Jan 30 13:56:03 2018
Response Via : Initial Calibration

Calibration Files
.5 =S518AQ11.D 1 =S518AQ10.D 2.5 =S518AQ09.D 5 =S518AQ08.D 10 =S518AQ07.D 25 =S518AU04.D 50 =S518AQ05.D 75 =S518AQ04.D
100 =S518AQ03.D

		Compound	.5	1	2.5	5	10	25	50	75	100	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	----------	ISTD	----------	----------	----------	----------	----------	----------		
2)	T	N-Nitrosodimet...	0.576	0.696	0.729	0.670	0.731	0.733	0.754	0.747	0.733	0.708	7.88
3)	T	Pyridine	1.185	1.446	1.393	1.337	1.408	1.438	1.417	1.396	1.374	1.377	5.76
4)	S	2-Fluorophenol(S)	1.093	1.372	1.241	1.153	1.317	1.312	1.248	1.295	1.260	1.255	6.85
5)	T	Aniline	0.661	0.780	0.712	0.669	0.717	0.691	0.666	0.651	0.634	0.687	6.45
6)	S	Phenol-d6(S)	1.374	1.750	1.618	1.462	1.655	1.633	1.550	1.615	1.548	1.578	7.01
7)	MC	Phenol	1.475	1.786	1.659	1.592	1.706	1.736	1.698	1.714	1.699	1.674	5.45#
8)	T	Bis(2-chloroet...	0.415	0.484	0.440	0.428	0.449	0.450	0.444	0.454	0.449	0.446	4.23
9)	M	2-Chlorophenol	1.299	1.540	1.427	1.357	1.451	1.466	1.432	1.437	1.411	1.424	4.73
10)	T	1,3-Dichlorobe...	1.554	1.804	1.564	1.489	1.597	1.609	1.604	1.624	1.618	1.607	5.30
11)	MC	1,4-Dichlorobe...	1.611	1.885	1.627	1.520	1.630	1.636	1.630	1.646	1.646	1.648	5.89#
12)	T	1,2-Dichlorobe...	1.435	1.711	1.512	1.455	1.537	1.555	1.578	1.583	1.562	1.548	5.19
13)	T	Benzyl Alcohol	0.866	1.118	1.041	1.018	1.104	1.098	1.085	1.047	1.037	1.046	7.27
14)	T	2-Methylphenol	0.990	1.173	1.098	1.043	1.107	1.134	1.126	1.130	1.121	1.102	4.95
15)	T	Bis(2-chlorois...	1.616	1.935	1.675	1.604	1.684	1.656	1.572	1.537	1.534	1.646	7.39
16)	MP	N-Nitrosodi-n-...	0.753	0.901	0.809	0.771	0.832	0.814	0.753	0.646	0.657	0.771	10.59
17)	T	3&4-Methylphenol	1.383	1.722	1.615	1.551	1.701	1.674	1.658	1.623	1.595	1.613	6.30
18)	T	Hexachloroethane	0.603	0.698	0.603	0.578	0.610	0.617	0.612	0.616	0.615	0.617	5.27
19)	I	Naphthalene-d8(I)	----------	----------	ISTD	----------	----------	----------	----------	----------	----------		
20)	T	Nitrobenzene	0.313	0.375	0.340	0.330	0.347	0.341	0.328	0.325	0.320	0.335	5.45
21)	T	2,6-Dimethylph...	0.285	0.319	0.289	0.274	0.281	0.271	0.264	0.260	0.256	0.278	6.91
22)	T	Isophorone	0.492	0.600	0.543	0.514	0.527	0.479	0.461	0.481	0.486	0.509	8.36
23)	TC	2-Nitrophenol	0.164	0.194	0.182	0.183	0.197	0.193	0.194	0.192	0.199	0.189	5.74#
24)	T	2,4-Dimethylph...	0.274	0.335	0.304	0.289	0.302	0.293	0.287	0.283	0.282	0.294	6.13
25)	T	Bis(2-chloroet...	0.353	0.415	0.373	0.361	0.376	0.368	0.353	0.334	0.332	0.363	6.89
26)	TC	2,4-Dichloroph...	0.227	0.299	0.271	0.264	0.280	0.275	0.272	0.266	0.261	0.268	7.10#
27)	T	3,5-Dimethylph...	0.319	0.401	0.363	0.350	0.368	0.451	0.439	0.414	0.349	0.384	11.67
28)	T	2,3-Dichloroph...	0.190	0.245	0.216	0.218	0.228	0.233	0.231	0.225	0.220	0.223	6.81
29)	T	2,3-Dimethylph...	0.334	0.398	0.365	0.344	0.360	0.346	0.329	0.321	0.291	0.343	8.77
30)	M	1,2,4-Trichlor...	0.282	0.335	0.298	0.286	0.294	0.288	0.287	0.289	0.290	0.294	5.41
31)	S	1-Fluoronaphth...	0.859	1.056	0.919	0.842	0.929	0.894	0.842	0.869	0.838	0.894	7.75
32)	M	Naphthalene	1.148	1.320	1.125	1.097	1.141	1.130	1.079	1.066	1.058	1.129	6.97
33)	T	3,4-Dimethylph...	0.370	0.446	0.404	0.391	0.414	0.407	0.390	0.385	0.382	0.399	5.62
34)	T	3&4-Chlorophenol	0.094	0.124	0.116	0.111	0.121	0.121	0.118	0.116	0.115	0.115	7.53
35)	T	2,6-Dichloroph...	0.243	0.290	0.262	0.263	0.277	0.273	0.267	0.264	0.264	0.267	4.84
36)	T	4-Chloroaniline	0.103	0.128	0.112	0.104	0.106	0.104	0.098	0.097	0.097	0.106	9.37
37)	TC	Hexachlorobuta...	0.155	0.180	0.157	0.148	0.156	0.152	0.150	0.150	0.149	0.155	6.32#
38)	T	Bis(2-chloroet...	0.251	0.319	0.293	0.283	0.287	0.275	0.269	0.268	0.272	0.280	6.89
39)	MC	4-Chloro-3-met...	0.237	0.297	0.277	0.269	0.284	0.281	0.271	0.275	0.271	0.274	5.89#
40)	M	2-Methylnaphth...	0.627	0.757	0.670	0.647	0.682	0.671	0.649	0.643	0.642	0.665	5.78

Updated RT
GTP 1-30-18

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518A26b\
Data File : S518AQ22.D
Acq On : 27 Jan 2018 12:24 am
Operator : chemist
Sample : 40 icv
Misc : 1/19
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 28 17:03:42 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB23.M
Quant Title : EPA 8270C
QLast Update : Sun Jan 28 16:57:33 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.662	152	202475 ✓	20.00	mg/L	0.00
19) Naphthalene-d8(I)	6.885	136	822475 ✓	20.00	mg/L	0.00
41) Acenaphthene-d10(I)	8.643	164	444544 ✓	20.00	mg/L	0.00
63) Phenanthrene-d10(I)	10.152	188	678278 ✓	20.00	mg/L	0.00
75) Chrysene-d12(I)	14.123	240	649634 ✓	20.00	mg/L	0.00
82) Perylene-d12(I)	19.063	264	564333 ✓	20.00	mg/L	0.00
System Monitoring Compounds						
4) 2-Fluorophenol(S)	4.519	112	1008923	79.44	mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery	=	99.30%#
6) Phenol-d6(S)	5.280	99	1247286	78.05	mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery	=	97.56%#
31) 1-Fluoronaphthalene(S)	6.888	146	1425325	38.76	mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery	=	96.90%
45) 2-Fluorobiphenyl(S)	7.922	172	1154321	39.18	mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery	=	97.95%
62) 2,4,6-Tribromophenol(S)	9.441	330	239755	85.47	mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery	=	106.84%
77) 4-Terphenyl-d14(S)	11.925	244	1089297	40.79	mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery	=	101.97%

Target Compounds (Multiplier applied to Results = YES)				ppb		Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.504	74	321998	44.94	#	96	44.94
3) Pyridine	3.545	79	611039	43.83		99	43.83
5) Aniline	5.364	66	290405	41.77		98	41.77
7) Phenol	5.289	94	673963	39.77		99	39.77
8) Bis(2-chloroethyl)ether	5.379	95	179297	39.71		100	39.71
9) 2-Chlorophenol	5.479	128	588725	40.83		99	40.83
10) 1,3-Dichlorobenzene	5.619	146	643737	39.57		100	39.57
11) 1,4-Dichlorobenzene	5.678	146	664203	39.81		100	39.81
12) 1,2-Dichlorobenzene	5.830	146	626700	40.00		100	40.00
13) Benzyl Alcohol	5.761	79	427035	40.33		99	40.33
14) 2-Methylphenol	5.836	107	470154	42.12		99	~~42.12~~
15) Bis(2-chloroisopropyl)...	5.864	45	646907	38.83		98	38.83
16) N-Nitrosodi-n-propylamine	6.000	70	321307	41.18		98	~~41.18~~
17) 3&4-Methylphenol	5.979	107	590631	36.16	#	90	36.16
18) Hexachloroethane	6.149	117	245526	39.31		100	39.31
20) Nitrobenzene	6.193	77	545055	39.52		98	39.52
22) Isophorone	6.410	82	969873	46.31		100	46.31
23) 2-Nitrophenol	6.497	139	308849	39.80		100	39.80
24) 2,4-Dimethylphenol	6.488	122	504431	41.65		99	41.65
25) Bis(2-chloroethoxy)met...	6.572	93	624067	41.82		99	41.82
26) 2,4-Dichlorophenol	6.727	162	444023	40.25		99	40.25
30) 1,2,4-Trichlorobenzene	6.817	180	480105	39.67		100	39.67
32) Naphthalene	6.910	128	1789436	38.53		99	38.53
36) 4-Chloroaniline	6.926	65	163449	37.66	#	85	37.66
37) Hexachlorobutadiene	7.000	225	254668	39.91		99	39.91
39) 4-Chloro-3-methylphenol	7.370	107	455769	40.47		98	40.47
40) 2-Methylnaphthalene	7.581	142	1132036	41.37		99	41.37
42) Hexachlorocyclopentadiene	7.733	237	240422	42.79		99	42.79
43) 2,4,6-Trichlorophenol	7.848	196	286849	39.87		100	39.87
44) 2,4,5-Trichlorophenol	7.891	196	305578	41.99		100	41.99
46) 2-Chloronaphthalene	8.078	162	973664	39.46		99	39.46
47) 2-Nitroaniline	8.158	65	256378	40.55		99	40.55
48) 1,3-Dinitrobenzene	8.366	168	196940	44.18		98	44.18
49) Dimethyl Phthalate	8.307	163	1031662	40.28		100	40.28
50) Acenaphthylene	8.506	152	1560853	38.94		100	38.84

4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	94.6	82.4	82.6	ug/L	9.90	49.6 to 116	1.23	ACCEPT.	2/8/18	MES
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	94.6	82.4	82.6	ug/L	9.90	49.6 to 116	1.23	ACCEPT.	2/8/18	MES
4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	34.3	27.8	30.0	ug/L	6.75	19.5 to 40.5	0.963	ACCEPT.	2/8/18	MES
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	34.3	27.8	30.0	ug/L	6.75	19.5 to 40.5	0.963	ACCEPT.	2/8/18	MES
5170	Trichloroethene	10107207	GC-MS	EPA 624	88.2	77.7	82.9	ug/L	9.63	52.7 to 108	1.09	ACCEPT.	2/8/18	MES
5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	88.2	77.7	82.9	ug/L	9.63	52.7 to 108	1.09	ACCEPT.	2/8/18	MES
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	34.5	31.6	29.8	ug/L	3.77	11.9 to 47.7	0.769	ACCEPT.	2/8/18	MES
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	34.5	31.6	29.8	ug/L	3.77	11.9 to 47.7	0.769	ACCEPT.	2/8/18	MES
5225	Vinyl acetate	10107207	GC-MS	EPA 624	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5235	Vinyl chloride	10107207	GC-MS	EPA 624	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0	<8	ug/L	0	0.00	n/a	ACCEPT.	2/8/18	MES

4320	Acetonitrile	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
4855	n-Hexane	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-243

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	111	91.8	139	ug/L	19.0	27.6 to 163	1.01	ACCEPT.	1/28/18	RDK
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	111	91.8	139	ug/L	19.0	27.6 to 163	1.01	ACCEPT.	1/28/18	RDK
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	<6.30	0	<6.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	<6.30	0	<6.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	<5.00	0	<2.0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	<2.0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	43.3	35.0	59.0	ug/L	7.96	5.90 to 70.7	1.04	ACCEPT.	1/28/18	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	43.3	35.0	59.0	ug/L	7.96	5.90 to 70.7	1.04	ACCEPT.	1/28/18	RDK
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	92.0	74.7	130	ug/L	22.4	13.0 to 143	0.772	ACCEPT.	1/28/18	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	92.0	74.7	130	ug/L	22.4	13.0 to 143	0.772	ACCEPT.	1/28/18	RDK
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	176	117	182	ug/L	45.6	80.1 to 220	1.29	ACCEPT.	1/28/18	RDK

					reported	Mean	assigned			limits			
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	176	117	182	ug/L	45.6	80.1 to 220	1.29	ACCEPT	1/28/18	RDK
6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	<8.20	0	<8.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	<8.20	0	<8.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	38.7	30.0	45.9	ug/L	8.38	8.95 to 59.3	1.04	ACCEPT	1/28/18	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	38.7	30.0	45.9	ug/L	8.38	8.95 to 59.3	1.04	ACCEPT.	1/28/18	RDK
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	<10.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<10.3	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	TKT
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	142	123	172	ug/L	23.8	70.9 to 213	0.798	ACCEPT.	1/28/18	RDK
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	142	123	172	ug/L	23.8	70.9 to 213	0.798	ACCEPT	1/28/18	RDK
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	66.8	59.1	80.9	ug/L	12.0	30.7 to 101	0.642	ACCEPT.	1/28/18	RDK
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	66.8	59.1	80.9	ug/L	12.0	30.7 to 101	0.642	ACCEPT	1/28/18	RDK
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5500	Acenaphthene	10107401	GC-MS	EPA 625	83.1	68.4	92.4	ug/L	11.2	32.5 to 112	1.31	ACCEPT.	1/28/18	RDK
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	83.1	68.4	92.4	ug/L	11.2	32.5 to 112	1.31	ACCEPT.	1/28/18	RDK
5505	Acenaphthylene	10107401	GC-MS	EPA 625	138	123	165	ug/L	24.1	58.5 to 206	0.622	ACCEPT.	1/28/18	RDK
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	138	123	165	ug/L	24.1	58.5 to 206	0.622	ACCEPT.	1/28/18	RDK
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5555	Anthracene	10107401	GC-MS	EPA 625	23.3	18.5	23.4	ug/L	3.68	9.64 to 31.2	1.30	ACCEPT	1/28/18	RDK
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	23.3	18.5	23.4	ug/L	3.68	9.64 to 31.2	1.30	ACCEPT.	1/28/18	RDK
5595	Benzidine	10107401	GC-MS	EPA 625	<51.3	0	0	ug/L	0	0.00	n/a	ACCEPT	1/28/18	TKT
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<51.3	0	0	ug/L	0	0.00	n/a	ACCEPT	1/28/18	TKT
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	49.1	42.3	53.4	ug/L	6.64	24.9 to 65.7	1.02	ACCEPT	1/28/18	RDK

					reported	mean	assigned			limits				
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	49.1	42.3	53.4	ug/L	6.64	24.9 to 65.7	1.02	ACCEPT.	1/28/18	RDK
5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	<2.40	0	<2.4	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	<2.40	0	<2.4	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	<7.50	0	<7.5	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.50	0	<7.5	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	85.1	69.0	82.8	ug/L	13.0	31.2 to 108	1.24	ACCEPT.	1/28/18	RDK
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	85.1	69.0	82.8	ug/L	13.0	31.2 to 108	1.24	ACCEPT.	1/28/18	RDK
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.70	0	<7.7	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	<3.90	0	<3.9	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	87.9	72.7	118	ug/L	14.0	30.4 to 141	1.09	ACCEPT.	1/28/18	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	87.9	72.7	118	ug/L	14.0	30.4 to 141	1.09	ACCEPT.	1/28/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	102	82.4	68.2	ug/L	16.6	16.0 to 86.7	1.18	NOT ACCEPT.	1/28/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	102	82.4	68.2	ug/L	16.6	16.0 to 86.7	1.18	NOT ACCEPT.	1/28/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	39.1	33.7	41.2	ug/L	5.41	12.7 to 58.8	0.998	ACCEPT.	1/28/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	39.1	33.7	41.2	ug/L	5.41	12.7 to 58.8	0.998	ACCEPT.	1/28/18	RDK
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	79.6	68.4	88.4	ug/L	16.5	25.6 to 120	0.679	ACCEPT.	1/28/18	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	79.6	68.4	88.4	ug/L	16.5	25.6 to 120	0.679	ACCEPT.	1/28/18	RDK
5680	Carbazole	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5855	Chrysene	10107401	GC-MS	EPA 625	101	93.5	111	ug/L	14.9	47.6 to 139	0.503	ACCEPT.	1/28/18	RDK
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	101	93.5	111	ug/L	14.9	47.6 to 139	0.503	ACCEPT.	1/28/18	RDK
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	65.8	55.1	68.2	ug/L	9.11	24.2 to 90.7	1.17	ACCEPT.	1/28/18	RDK
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	65.8	55.1	68.2	ug/L	9.11	24.2 to 90.7	1.17	ACCEPT.	1/28/18	RDK
5905	Dibenzofuran	10107401	GC-MS	EPA 625	<11.3	0	<11.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	<11.3	0	<11.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
8070	Diethyl phthalate	10107401	GC-MS	EPA 625	85.8	65.0	98.5	ug/L	19.0	17.8 to 137	1.09	ACCEPT.	1/28/18	RDK

					reported	mean	assigned			limits				
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	65.0	65.0	98.5	ug/L	19.0	17.8 to 137	1.09	ACCEPT.	1/28/18	RDK
6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	126	93.2	144	ug/L	30.7	14.4 to 207	1.07	ACCEPT.	1/28/18	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	126	93.2	144	ug/L	30.7	14.4 to 207	1.07	ACCEPT.	1/28/18	RDK
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	64.9	54.9	69.4	ug/L	16.2	25.6 to 92.9	0.617	ACCEPT.	1/28/18	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	64.9	54.9	69.4	ug/L	16.2	25.6 to 92.9	0.617	ACCEPT.	1/28/18	RDK
6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	130	121	160	ug/L	25.7	47.3 to 220	0.350	ACCEPT.	1/28/18	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	130	121	160	ug/L	25.7	47.3 to 220	0.350	ACCEPT.	1/28/18	RDK
6265	Fluoranthene	10107401	GC-MS	EPA 625	<15.6	0	<15.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<15.6	0	<15.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6270	Fluorene	10107401	GC-MS	EPA 625	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	<4.80	0	<4.8	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	54.3	46.5	58.8	ug/L	7.94	26.2 to 70.7	0.982	ACCEPT.	1/28/18	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	54.3	46.5	58.8	ug/L	7.94	26.2 to 70.7	0.982	ACCEPT.	1/28/18	RDK
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	59.9	48.3	72.6	ug/L	10.4	7.37 to 89.2	1.12	ACCEPT.	1/28/18	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	59.9	48.3	72.6	ug/L	10.4	7.37 to 89.2	1.12	ACCEPT.	1/28/18	RDK
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	75.9	55.8	83.9	ug/L	18.0	8.39 to 112	1.12	ACCEPT.	1/28/18	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	75.9	55.8	83.9	ug/L	18.0	8.39 to 112	1.12	ACCEPT.	1/28/18	RDK
4840	Hexachloroethane	10107401	GC-MS	EPA 625	<5.00	0	<3.3	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0	<3.3	ug/L	0	0.00	n/a	ACCEPT	1/28/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	<9.20	0	<9.2	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6320	Isophorone	10107401	GC-MS	EPA 625	171	125	179	ug/L	26.1	65.6 to 222	1.76	ACCEPT.	1/28/18	RDK
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	171	125	179	ug/L	26.1	65.6 to 222	1.76	ACCEPT.	1/28/18	RDK
5005	Naphthalene	10107401	GC-MS	EPA 625	69.2	53.3	78.6	ug/L	10.9	18.7 to 94.5	1.46	ACCEPT.	1/28/18	RDK
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	69.2	53.3	78.6	ug/L	10.9	18.7 to 94.5	1.46	ACCEPT.	1/28/18	RDK
5015	Nitrobenzene	10107401	GC-MS	EPA 625	89.1	70.9	101	ug/L	12.0	32.8 to 119	1.52	ACCEPT.	1/28/18	RDK
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	89.1	70.9	101	ug/L	12.0	32.8 to 119	1.52	ACCEPT.	1/28/18	RDK
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	83.3	53.9	132	ug/L	19.3	13.2 to 147	1.52	ACCEPT.	1/28/18	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	83.3	53.9	132	ug/L	19.3	13.2 to 147	1.52	ACCEPT.	1/28/18	RDK
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	134	115	172	ug/L	24.5	56.2 to 216	0.776	ACCEPT.	2/9/18	RDK
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846	134	115	172	ug/L	24.5	56.2 to 216	0.776	ACCEPT.	2/9/18	RDK

				8270C - 1996									
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846	<5.60	0	<5.6	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
				8270C - 1996									
6615	Phenanthrene	10107401	GC-MS	EPA 625	83.6	71.9	91.3	ug/L	12.3	42.7 to 109	0.951	ACCEPT.	1/28/18	RDK
6615	Phenanthrene	10185805	GC-MS	SW-846	83.6	71.9	91.3	ug/L	12.3	42.7 to 109	0.951	ACCEPT.	1/28/18	RDK
				8270C - 1996									
6665	Pyrene	10107401	GC-MS	EPA 625	16.4	13.4	16.8	ug/L	2.56	7.59 to 23.0	1.17	ACCEPT.	1/28/18	RDK
6665	Pyrene	10185805	GC-MS	SW-846	16.4	13.4	16.8	ug/L	2.56	7.59 to 23.0	1.17	ACCEPT.	1/28/18	RDK
				8270C - 1996									
5095	Pyridine	10107401	GC-MS	EPA 625	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
5095	Pyridine	10185805	GC-MS	SW-846	<5.00	0	0	ug/L	0	0.00	n/a	ACCEPT.	1/28/18	RDK
				8270C - 1996									

6525	N-Nitrosodiethylamine	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
5510	Acetophenone	-- Not Reported --
6260	Ethyl methanesulfonate	-- Not Reported --
6375	Methyl methanesulfonate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
4871	2-Methylcholanthrene	-- Not Reported --
5025	N-Nitroso-di-n-butylamine	-- Not Reported --
5050	2-Picoline	-- Not Reported --
5145	o-Toluidine	-- Not Reported --
5515	2-Acetylaminofluorene	-- Not Reported --
5540	4-Aminobiphenyl	-- Not Reported --
5790	1-Chloronaphthalene	-- Not Reported --
5875	n-Decane	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	1,3-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --

WP-243-Remedial PT Study

WP-PTX3009

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 06/11/2018 - Closed: 07/25/2018
Reports Printed On: 07/26/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-095B Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	484	427	ug/L	357 to 492	ACCEPT.	6/21/18	SEM

QCI-127B Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	176	202	mg/L	134 to 246	ACCEPT.	6/27/18	AMG

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3009

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	71.7	94.5	ug/L	24.9 to 116	ACCEPT.	6/22/18	RDK

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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AE 0418

Spring, 2018

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Study: AE0418 Air & Emissions Proficiency Testing Results
Opening Date: 4/16/2018 **Closing Date:** 5/31/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1057-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
Additional State Specific Analytes											
4315	Acetone	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4320	Acetonitrile					<5		ppbv			NR
4323	Acetylene					<5		ppbv			NR
4325	Acrolein (Propenal)					<5		ppbv			NR
4340	Acrylonitrile					<5		ppbv			NR
4375	Benzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	16.0	15.9	ppbv	6.40	25.6	Acceptable
4390	Bromochloromethane					<5		ppbv			NR
4395	Bromodichloromethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4400	Bromoform	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4950	Bromomethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
9318	1,3-Butadiene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4410	2-Butanone (Methyl ethyl ketone, MEK)	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4450	Carbon disulfide	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4455	Carbon tetrachloride	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4475	Chlorobenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	30.0	26.8	ppbv	12.0	48.0	Acceptable
4485	Chloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4505	Chloroform	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	38.0	28.2	ppbv	15.2	60.8	Acceptable
4960	Chloromethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5635	Chloromethylbenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable

Study: AE0418 Air & Emissions Proficiency Testing Results
Opening Date: 4/16/2018 **Closing Date:** 5/31/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1057-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4525	Chloroprene					<5		ppbv			NR
4555	Cyclohexane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)					<5		ppbv			NR
4575	Dibromochloromethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4625	Dichlorodifluoromethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4610	1,2 Dichlorobenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	43.0	40.2	ppbv	17.2	68.8	Acceptable
4615	1,3 Dichlorobenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4620	1,4 Dichlorobenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4630	1,1-Dichloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	20.0	19.2	ppbv	8.00	32.0	Acceptable
4635	1,2 Dichloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	44.0	39.5	ppbv	17.6	70.4	Acceptable
4640	1,1-Dichloroethene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4645	cis-1,2-Dichloroethene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	15.0	13.9	ppbv	6.00	24.0	Acceptable
4700	trans-1,2-Dichloroethene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4655	1,2-Dichloropropane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	26.0	25.6	ppbv	10.4	41.6	Acceptable
4680	cis-1,3-Dichloropropene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4685	trans-1,3-Dichloropropene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4695	1,2-Dichloro-1,1,2,2-tetrafluoroethane					<5		ppbv			NR
4755	Ethyl acetate	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4760	Ethyl acrylate					<5		ppbv			NR

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Study: AE0418 Air & Emissions Proficiency Testing Results
Opening Date: 4/16/2018 **Closing Date:** 5/31/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) Lot #: 1057-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4765	Ethylbenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	46.0	43.5	ppbv	18.4	73.6	Acceptable
4770	Ethyl-t-butylether (ETBE)					<5		ppbv			NR
4542	4-Ethyltoluene					<5		ppbv			NR
4825	n-Heptane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4835	Hexachlorobutadiene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4855	Hexane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	22.0	24.2	ppbv	8.80	35.2	Acceptable
4895	Isopropanol	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5000	Methyl tert-butyl ether (MTBE)	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4975	Methylene chloride	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	42.0	41.4	ppbv	16.8	67.2	Acceptable
4995	Methyl isobutyl ketone (Hexone)	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4990	Methyl methacrylate					<5		ppbv			NR
5027	n-Octane					<5		ppbv			NR
4836	Propylene					<5		ppbv			NR
5100	Styrene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4370	T-amylmethylether (TAME)					<5		ppbv			NR
5115	Tetrachloroethene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	45.0	40.1	ppbv	18.0	72.0	Acceptable
5155	1,2,4-Trichlorobenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5160	1,1,1-Trichloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	15.0	14.6	ppbv	6.00	24.0	Acceptable
5165	1,1,2-Trichloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5110	1,1,2,2-Tetrachloroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable

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Certified Reference Materials

Study: AE0418 Air & Emissions Proficiency Testing Results
Opening Date: 4/16/2018 **Closing Date:** 5/31/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) — Lot #: 1057-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
5170	Trichloroethene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	19.0	17.5	ppbv	7.60	30.4	Acceptable
5175	Trichlorofluoromethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5210	1,2,4-Trimethylbenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	27.0	27.5	ppbv	10.8	43.2	Acceptable
5215	1,3,5-Trimethylbenzene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	16.0	16.3	ppbv	6.40	25.6	Acceptable
5140	Toluene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	39.0	36.7	ppbv	15.6	62.4	Acceptable
5230	Vinyl bromide					<5		ppbv			NR
5235	Vinyl chloride	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5240	m+p-Xylene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	20.0	19.9	ppbv	8.00	32.0	Acceptable
5250	o-Xylene	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	32.0	30.7	ppbv	12.8	51.2	Acceptable
5260	Xylenes, total	4/30/2018	DJS	10248803	EPA TO-15 Rev.2 1999	52.0	50.7	ppbv	20.8	83.2	Acceptable

SM-117

Spring, 2018

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-117 - Shipped: 04/18/2018 - Closed: 06/01/2018 - Reports Printed On: 06/22/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	9990	9228	8400	mg/kg	2245	4160 to 12400	0.339	ACCEPT.	5/9/18	NRV
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	291	152	218	mg/kg	79.5	12.4 to 313	1.75	ACCEPT.	5/9/18	NRV
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	122	124	148	mg/kg	11.6	92.1 to 163	0.172	ACCEPT.	5/9/18	NRV
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	234	217	269	mg/kg	25.4	143 to 295	0.669	ACCEPT.	5/9/18	NRV
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	472	420	323	mg/kg	80.5	276 to 596	0.646	ACCEPT.	5/9/18	NRV
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	128	119	163	mg/kg	17.8	66.5 to 179	0.506	ACCEPT.	5/9/18	NRV
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	4560	5917	6220	mg/kg	835	4370 to 7490	1.63	ACCEPT.	5/9/18	NRV
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	185	197	215	mg/kg	25.9	108 to 284	0.463	ACCEPT.	5/9/18	NRV
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	124	117	150	mg/kg	12.9	67.2 to 168	0.543	ACCEPT.	5/9/18	NRV
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	320	331	376	mg/kg	39.8	194 to 470	0.276	ACCEPT.	5/9/18	NRV
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	9170	8824	9450	mg/kg	1908	1920 to 17300	0.181	ACCEPT.	5/9/18	NRV
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	308	288	366	mg/kg	40.4	213 to 403	0.495	ACCEPT.	5/9/18	NRV
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	8400	8018	9830	mg/kg	842	5950 to 10800	0.454	ACCEPT.	5/9/18	NRV
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	1720	1639	1900	mg/kg	194	1310 to 2090	0.418	ACCEPT.	5/9/18	NRV
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	18.5	17.4	18.0	mg/kg	3.82	10.2 to 24.9	0.288	ACCEPT.	4/30/18	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	140	113	153	mg/kg	11.7	79.1 to 168	2.31	ACCEPT.	5/9/18	NRV
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	156	141	176	mg/kg	17.1	92.1 to 193	0.877	ACCEPT.	5/9/18	NRV
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	10300	10241	10870	mg/kg	985	7210 to 13200	0.0599	ACCEPT.	5/9/18	NRV
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	51.1	47.1	76.6	mg/kg	12.9	31.8 to 84.3	0.310	ACCEPT.	5/9/18	NRV
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	2460	2429	2570	mg/kg	804	1560 to 3110	0.0386	ACCEPT.	5/9/18	NRV
1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	412	220	279	mg/kg	49.0	156 to 307	3.92	NOT ACCEPT.	5/9/18	NRV

1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	139	113	140	mg/kg	20.2	64.2 to 158	1.29	ACCEPT.	5/10/18	NRV
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	182	184	206	mg/kg	21.8	136 to 232	0.0917	ACCEPT.	5/9/18	NRV
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	223	210	254	mg/kg	21.8	132 to 287	0.596	ACCEPT.	5/9/18	NRV
1025	Boron	-- Not Reported --												
1140	Selenium	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-001-1 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	164	215	248	mg/kg	66.3	24.8 to 454	0.769	ACCEPT.	5/9/18	NRV

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	115	166	188	mg/kg	53.6	63.3 to 269	0.951	ACCEPT.	4/26/18	RKP

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/18	NRV
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	0.378	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	4/24/18	NRV
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	36.1	37.9	41.4	mg/L	3.57	27.2 to 48.6	0.504	ACCEPT.	5/11/18	NRV
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	6.16	7.29	9.50	mg/L	0.784	4.94 to 10.5	1.44	ACCEPT.	4/24/18	NRV
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	<0.0750	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/18	NRV
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/18	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	4.15	4.98	5.40	mg/L	0.360	3.90 to 6.06	2.31	ACCEPT.	4/24/18	NRV
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/18	NRV
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	1.45	1.33	1.30	mg/L	0.440	0.130 to 2.65	0.273	ACCEPT.	4/24/18	NRV
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	8.50	8.28	8.38	pH units	0.192	7.78 to 8.98	1.15	ACCEPT.	4/20/18	AMG

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	171	170	167	oF	9.71	150 to 184	0.103	ACCEPT.	4/30/18	SEM

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	92.4	55.3	64.9	mg/kg	16.9	40.0 to 71.4	2.20	NOT ACCEPT.	5/24/18	RKP
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	267	341	340	mg/kg	55.9	234 to 448	1.32	ACCEPT.	5/24/18	RKP
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	341	228	318	mg/kg	15.9	99.6 to 354	7.11	ACCEPT.	5/24/18	RKP
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	71.0	88.5	63.7	mg/kg	18.0	57.3 to 113	0.972	ACCEPT.	5/24/18	RKP
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	70.0	76.0	111	mg/kg	10.9	43.3 to 122	0.550	ACCEPT.	5/24/18	RKP
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	1310	1055	1060	mg/kg	110	614 to 1510	2.32	ACCEPT.	5/24/18	RKP
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	600	552	867	ug/kg	121	185 to 954	0.397	ACCEPT.	4/23/18	RDK
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	274	261	366	ug/kg	58.5	77.0 to 445	0.222	ACCEPT.	4/23/18	RDK
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	621	631	855	ug/kg	147	85.5 to 1250	0.0680	ACCEPT.	4/23/18	RDK
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	416	381	589	ug/kg	76.1	161 to 601	0.460	ACCEPT.	4/23/18	RDK
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	309	303	389	ug/kg	50.8	152 to 454	0.118	ACCEPT.	4/23/18	RDK
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	167	158	207	ug/kg	33.0	62.7 to 253	0.273	ACCEPT.	4/23/18	RDK
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	369	378	471	ug/kg	67.9	213 to 543	0.133	ACCEPT.	4/23/18	RDK

5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	182	155	209	ug/kg	35.6	61.2 to 249	0.758	ACCEPT.	4/23/18	RDK
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	235	211	267	ug/kg	51.5	112 to 310	0.466	ACCEPT.	4/23/18	RDK
5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	146	142	182	ug/kg	25.2	61.6 to 222	0.159	ACCEPT.	4/23/18	RDK
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	169	158	224	ug/kg	30.3	74.7 to 246	0.363	ACCEPT.	4/23/18	RDK
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	136	136	182	ug/kg	29.2	61.7 to 210	0	ACCEPT.	4/23/18	RDK
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	143	135	207	ug/kg	29.3	40.5 to 230	0.273	ACCEPT.	4/23/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	321	290	360	ug/kg	50.1	156 to 424	0.619	ACCEPT.	4/23/18	RDK
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	548	570	898	ug/kg	120	89.8 to 1100	0.183	ACCEPT.	4/23/18	RDK
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	84.4	99.2	115	ug/kg	41.5	41.4 to 157	0.357	ACCEPT.	4/23/18	RDK
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	86.8	106	133	ug/kg	24.7	41.8 to 170	0.777	ACCEPT.	4/23/18	RDK
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	175	159	171	mg/kg	27.4	71.6 to 246	0.584	ACCEPT.	4/30/18	SEM

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B --2007	143	142	160	ug/kg	16.9	45.2 to 239	0.0592	ACCEPT.	4/27/18	BDA
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B --2007	206	225	257	ug/kg	24.1	88.9 to 361	0.788	ACCEPT.	5/1/18	BDA
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B --2007	107	105	113	ug/kg	18.4	26.4 to 184	0.109	ACCEPT.	4/27/18	BDA
7025	Aldrin	10178811	GC-ECD	SW 8081 B --2007	302	276	336	ug/kg	36.6	103 to 449	0.710	ACCEPT.	4/27/18	BDA
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B --2007	272	256	318	ug/kg	41.5	92.6 to 419	0.386	ACCEPT.	4/27/18	BDA
7115	beta-BHC	10178811	GC-ECD	SW 8081 B --2007	71.2	90.3	122	ug/kg	18.3	13.6 to 167	1.04	ACCEPT.	4/27/18	BDA
7105	delta-BHC	10178811	GC-ECD	SW 8081 B --2007	255	229	274	ug/kg	31.2	72.0 to 386	0.833	ACCEPT.	4/27/18	BDA

7470	Dieldrin	10178811	GC-ECD	SW 8081 B -- 2007	465	439	498	ug/kg	50.3	207 to 671	0.517	ACCEPT.	4/27/18	BDA
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B -- 2007	188	135	162	ug/kg	24.9	45.9 to 224	2.13	ACCEPT.	4/27/18	BDA
7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	187	168	189	ug/kg	25.4	56.2 to 280	0.748	ACCEPT.	4/27/18	BDA
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	294	272	303	ug/kg	38.6	71.8 to 472	0.570	ACCEPT.	4/27/18	BDA
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	294	272	333	ug/kg	39.6	133 to 411	0.556	ACCEPT.	4/27/18	BDA
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	340	325	411	ug/kg	47.0	69.6 to 580	0.319	ACCEPT.	4/27/18	BDA
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	209	191	233	ug/kg	27.2	61.0 to 321	0.662	ACCEPT.	4/27/18	BDA
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	210	196	228	ug/kg	24.9	75.9 to 316	0.562	ACCEPT.	4/27/18	BDA
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	134	117	136	ug/kg	14.7	47.0 to 187	1.16	ACCEPT.	4/27/18	BDA
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	379	371	399	ug/kg	117	52.7 to 689	0.0684	ACCEPT.	4/27/18	BDA
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	543	406	560	ug/kg	118	56.0 to 760	1.16	ACCEPT.	4/26/18	BDA

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	7.15	12.5	15.0	mg/kg	3.64	3.75 to 21.3	1.47	ACCEPT.	4/24/18	GJP
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/24/18	GJP
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<1.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	4/24/18	GJP

8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<1.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	4/24/18	GJP

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	462	283	422	ug/kg	154	42.2 to 744	1.16	ACCEPT.	4/27/18	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	191	172	228	ug/kg	30.9	79.3 to 265	0.615	ACCEPT.	4/27/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	1200	494	788	ug/kg	145	78.8 to 929	4.87	NOT ACCEPT.	5/18/18	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<200	ug/kg	0.00	0.00 to 200	n/a	ACCEPT.	4/27/18	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	942	562	759	ug/kg	283	75.9 to 1410	1.34	ACCEPT.	5/18/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<75	ug/kg	0.00	0.00 to 75.0	n/a	ACCEPT.	4/27/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	721	463	756	ug/kg	196	75.6 to 1050	1.32	ACCEPT.	5/18/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	754	471	694	ug/kg	224	69.4 to 1140	1.26	ACCEPT.	5/18/18	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	3460	3617	5720	ug/kg	813	572 to 7400	0.193	ACCEPT.	4/21/18	RDK
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	4180	4458	7630	ug/kg	1009	763 to 8890	0.276	ACCEPT.	4/21/18	RDK

6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	4980	3810	3980	ug/kg	1147	1080 to 6270	1.02	ACCEPT.	4/21/18	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	8440	6474	7320	ug/kg	1733	2260 to 10400	1.13	ACCEPT.	4/22/18	RDK
6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5760	4429	6680	ug/kg	1087	1410 to 7310	1.22	ACCEPT.	4/21/18	RDK
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	9730	7924	10990	ug/kg	1851	2370 to 13500	0.976	ACCEPT.	4/22/18	RDK
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	<1500	3007	10190	ug/kg	1364	1020 to 11200	n/a	ACCEPT.	4/21/18	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	10700	8334	11160	ug/kg	1759	3400 to 13300	1.35	ACCEPT.	4/22/18	RDK
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	11400	7319	13320	ug/kg	3872	1160 to 18900	1.05	ACCEPT.	4/22/18	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	9210	6641	9370	ug/kg	1431	3000 to 10300	1.80	ACCEPT.	4/22/18	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	1830	1470	2180	ug/kg	319	488 to 2450	1.13	ACCEPT.	4/21/18	RDK
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	1950	1652	2690	ug/kg	354	407 to 2960	0.842	ACCEPT.	4/21/18	RDK
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	5820	7217	11720	ug/kg	2785	1170 to 16900	0.502	ACCEPT.	4/21/18	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	6040	5683	8750	ug/kg	1148	2140 to 9630	0.311	ACCEPT.	4/21/18	RDK
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	9860	7789	11390	ug/kg	1910	1790 to 13800	1.08	ACCEPT.	4/22/18	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	2830	2775	4380	ug/kg	798	629 to 4930	0.0689	ACCEPT.	4/21/18	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	13800	11067	14450	ug/kg	2218	4530 to 17700	1.23	ACCEPT.	4/22/18	RDK
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	8860	6112	8620	ug/kg	1489	2310 to 9910	1.85	ACCEPT.	4/22/18	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	<333	ug/kg	0.00	0.00 to 333	n/a	ACCEPT.	4/21/18	RDK
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	9310	6813	9210	ug/kg	1725	2550 to 11100	1.45	ACCEPT.	4/22/18	RDK
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	8960	5817	11000	ug/kg	1853	1100 to 12100	1.70	ACCEPT.	4/22/18	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	5040	4728	6880	ug/kg	1431	688 to 9020	0.218	ACCEPT.	4/21/18	RDK

5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	3210	2834	4020	ug/kg	660	1150 to 4510	0.570	ACCEPT.	4/21/18	RDK
5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	3840	3515	4810	ug/kg	788	1290 to 5750	0.412	ACCEPT.	4/21/18	RDK
5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/21/18	RDK
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	8460	6536	8790	ug/kg	1391	3200 to 9880	1.38	ACCEPT.	4/22/18	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	10800	8464	11260	ug/kg	1965	3690 to 13200	1.19	ACCEPT.	4/22/18	RDK
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/21/18	RDK
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/21/18	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	2940	2377	2350	ug/kg	449	960 to 3800	1.25	ACCEPT.	4/21/18	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	5210	4494	6220	ug/kg	1004	1590 to 7390	0.713	ACCEPT.	4/21/18	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	4820	3676	4800	ug/kg	691	1320 to 6040	1.66	ACCEPT.	4/21/18	RDK
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	4860	4062	5350	ug/kg	870	1990 to 6130	0.917	ACCEPT.	4/21/18	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/21/18	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	5750	4087	5760	ug/kg	867	1100 to 7080	1.92	ACCEPT.	4/21/18	RDK
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	10500	7566	10300	ug/kg	1452	3080 to 12100	2.02	ACCEPT.	4/22/18	RDK
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	2410	1865	2680	ug/kg	411	771 to 2970	1.33	ACCEPT.	4/21/18	RDK
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	9270	7374	9420	ug/kg	1701	3010 to 11700	1.11	ACCEPT.	4/22/18	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	9520	7069	9590	ug/kg	1640	2930 to 11200	1.49	ACCEPT.	4/22/18	RDK
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	9640	7332	9890	ug/kg	1542	3050 to 11600	1.50	ACCEPT.	4/22/18	RDK

6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	4080	3705	5190	ug/kg	860	1630 to 5790	0.436	ACCEPT.	4/21/18	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	11800	10033	14490	ug/kg	2212	3080 to 17000	0.799	ACCEPT.	4/22/18	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	4620	4864	8240	ug/kg	1132	824 to 9830	0.216	ACCEPT.	4/21/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	3550	2667	3580	ug/kg	594	588 to 4750	1.49	ACCEPT.	4/22/18	RDK
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	5040	2983	4080	ug/kg	749	939 to 5020	2.75	NOT ACCEPT.	4/22/18	RDK
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	1600	1379	2230	ug/kg	249	277 to 2480	0.888	ACCEPT.	4/21/18	RDK
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	7510	6004	9220	ug/kg	1533	1900 to 10100	0.982	ACCEPT.	4/22/18	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	5270	4219	6870	ug/kg	1045	687 to 8500	1.01	ACCEPT.	4/21/18	RDK
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	2660	2223	3110	ug/kg	382	1000 to 3440	1.14	ACCEPT.	4/21/18	RDK
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	5350	4802	7840	ug/kg	1171	1290 to 8270	0.468	ACCEPT.	4/21/18	RDK
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/21/18	RDK
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
4659	2,2-Oxybis(1-chloropropane)	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												

5610	Benzoic acid	-- Not Reported --
5790	1-Chloronaphthalene	-- Not Reported --
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --
5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --

6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	<520	0.00	<520	ug/kg	0.00	0.00 to 520	n/a	ACCEPT.	4/20/18	NSB
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	1730	1394	1340	ug/kg	139	805 to 1880	2.42	ACCEPT.	4/20/18	NSB
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	2280	2123	2270	ug/kg	231	1000 to 3390	0.680	ACCEPT.	4/20/18	NSB
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	1820	1786	1840	ug/kg	170	1200 to 2490	0.200	ACCEPT.	4/20/18	NSB
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	6690	5891	6160	ug/kg	568	4000 to 8320	1.41	ACCEPT.	4/20/18	NSB
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	6140	5115	5080	ug/kg	763	2540 to 7620	1.34	ACCEPT.	4/20/18	NSB
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	<407	0.00	<825	ug/kg	0.00	0.00 to 825	n/a	ACCEPT.	4/20/18	NSB

5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/20/18	NSB
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/20/18	NSB
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/20/18	NSB
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6740	6237	6310	ug/kg	449	4730 to 7890	1.12	ACCEPT.	4/20/18	NSB
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<663	0.00	<930	ug/kg	0.00	0.00 to 930	n/a	ACCEPT.	4/20/18	NSB
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	11300	9396	9980	ug/kg	1038	6990 to 13000	1.83	ACCEPT.	4/20/18	NSB
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6860	6552	6520	ug/kg	468	5160 to 7980	0.658	ACCEPT.	4/20/18	NSB
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	3530	3437	3430	ug/kg	223	2620 to 4270	0.417	ACCEPT.	4/20/18	NSB
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	15500	14820	16960	ug/kg	2156	4770 to 25600	0.315	ACCEPT.	4/20/18	NSB
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	6020	5593	5370	ug/kg	1547	2680 to 8050	0.276	ACCEPT.	4/20/18	NSB
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	14100	10486	12160	ug/kg	3592	6080 to 18200	1.01	ACCEPT.	4/20/18	NSB
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	12300	12943	15800	ug/kg	1864	4510 to 24100	0.345	ACCEPT.	4/20/18	NSB
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	3840	3599	3700	ug/kg	290	2770 to 4620	0.831	ACCEPT.	4/20/18	NSB
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	<600	ug/kg	0.00	0.00 to 600	n/a	ACCEPT.	4/20/18	NSB
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	4730	4214	4480	ug/kg	465	2910 to 6050	1.11	ACCEPT.	4/20/18	NSB
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	9840	8104	8660	ug/kg	1243	5190 to 12100	1.40	ACCEPT.	4/20/18	NSB
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	<600	ug/kg	0.00	0.00 to 600	n/a	ACCEPT.	4/20/18	NSB
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	1730	1420	1590	ug/kg	153	871 to 2330	2.03	ACCEPT.	4/20/18	NSB

4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	4570	4322	4270	ug/kg	362	3200 to 5340	0.685	ACCEPT.	4/20/18	NSB
4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	10800	9076	9270	ug/kg	712	6490 to 12000	2.42	ACCEPT.	4/20/18	NSB
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	<600	ug/kg	0.00	0.00 to 600	n/a	ACCEPT.	4/20/18	NSB
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	9080	7119	7330	ug/kg	856	4400 to 10300	2.29	ACCEPT.	4/20/18	NSB
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	6300	4889	5100	ug/kg	681	3060 to 7140	2.07	ACCEPT.	4/20/18	NSB
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	8640	7595	7840	ug/kg	870	5490 to 10200	1.20	ACCEPT.	4/20/18	NSB
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	4670	4762	5020	ug/kg	291	3010 to 7020	0.316	ACCEPT.	4/20/18	NSB
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	5900	5208	5390	ug/kg	545	3770 to 7000	1.27	ACCEPT.	4/20/18	NSB
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	2940	2327	2500	ug/kg	225	1720 to 2880	2.72	NOT ACCEPT.	4/20/18	NSB
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	8950	7380	7800	ug/kg	2128	5460 to 10100	0.738	ACCEPT.	4/20/18	NSB
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	10200	9056	9090	ug/kg	1607	5450 to 12700	0.712	ACCEPT.	4/20/18	NSB
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	2470	2608	2760	ug/kg	370	1290 to 4000	0.373	ACCEPT.	4/20/18	NSB
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	9820	8476	9050	ug/kg	957	5430 to 12700	1.40	ACCEPT.	4/20/18	NSB
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB

4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	4760	4286	4500	ug/kg	389	3080 to 6150	1.22	ACCEPT.	4/20/18	NSB
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	1460	1337	1460	ug/kg	104	1090 to 1820	1.18	ACCEPT.	4/20/18	NSB
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	10100	8668	9120	ug/kg	943	6390 to 11900	1.52	ACCEPT.	4/20/18	NSB
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	3160	2739	2760	ug/kg	414	1660 to 3870	1.02	ACCEPT.	4/20/18	NSB
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	6210	5256	5270	ug/kg	585	3160 to 7380	1.63	ACCEPT.	4/20/18	NSB
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	4050	3493	3490	ug/kg	282	2500 to 4590	1.98	ACCEPT.	4/20/18	NSB
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	8980	8019	8800	ug/kg	1700	2710 to 13300	0.565	ACCEPT.	4/20/18	NSB
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												

4835	Hexachlorobutadiene	-- Not Reported --
4855	n-Hexane	-- Not Reported --
5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	304	341	350	ug/kg	47.0	96.4 to 586	0.787	ACCEPT.	4/26/18	BDA

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	2.71	2.10	14.8	mg/L	1.50	0.210 to 15.5	0.407	ACCEPT.	4/26/18	RDK
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	12.9	8.39	14.4	mg/L	3.24	1.44 to 18.1	1.39	ACCEPT.	4/27/18	RDK
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	0.509	0.442	0.760	mg/L	0.0760	0.210 to 0.840	0.882	ACCEPT.	4/26/18	RDK
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	0.100	0.00	0	mg/L	0.00	0.00	n/a	NOT ACCEPT.	4/26/18	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6.98	4.60	8.10	mg/L	2.76	0.460 to 8.91	0.862	ACCEPT.	4/26/18	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	0.867	0.549	0.940	mg/L	0.266	0.0940 to 1.03	1.20	ACCEPT.	4/26/18	RDK
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.143	0.241	0.300	mg/L	0.0910	0.0300 to 0.510	1.08	ACCEPT.	5/20/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.0787	0.0932	0.110	mg/L	0.0208	0.0300 to 0.160	0.697	ACCEPT.	5/20/18	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	0.0963	0.0977	0.110	mg/L	0.0019	0.0920 to 0.121	0.737	ACCEPT.	4/27/18	BDA
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	BDA
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	0.105	0.110	0.160	mg/L	0.0071	0.0887 to 0.121	0.704	ACCEPT.	4/27/18	BDA
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	BDA
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	BDA
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0005	0.00	<.06	mg/L	0.00	0.00 to 0.0600	n/a	ACCEPT.	4/26/18	BDA
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	BDA

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	582	428	476	mg/kg	65.9	54.6 to 801	2.34	ACCEPT.	4/26/18	AMG
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<3.75	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/26/18	GJP
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<3.75	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/26/18	GJP
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	29.7	33.0	46.9	mg/kg	10.1	8.07 to 66.5	0.327	ACCEPT.	4/26/18	GJP
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<3.75	0.00	<1.25	mg/kg	0.00	0.00 to 1.25	n/a	ACCEPT.	4/26/18	GJP
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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SM-117

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 672 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 001 **Date Initiated:** 07/03/18 **Date Due:** 07/17/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☑ 3 (RCA Required) ☐ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Wet Chemistry ☑ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported Thallium result was above the acceptance limits for the PT Study (See Attached)
Result reported: 412 mg/Kg Actual Value: 279 mg/Kg Mean Study Result: 220 mg/Kg Acceptance range: 156 to 307 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the nonoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See Attached

Investigator(s): Ken Mueller, Jeri Haney, Na Vue

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

See Attached

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: 11/09/18 Will be closed after passed remedial PT ***Follow-Up Complete:*** ***Yes*** ☑ ***No*** ☐

VI. Approvals:

Technical : [signature] **Supervisory:** J Haney

Quality Assurance: [signature]

Date Closed: 11/9/18

CAR 672 – Investigation Into the Unacceptable Result for Thallium on SM-117

Investigation

A number of things were reviewed in trying to determine a cause of the high result for Thallium.

It was determined that there was no issue with the sample prep because all of the other elements in the sample were acceptable. Had there been an error in the prep there would have been other failures besides Thallium.

The LCS recovery was a 113% however that amount of bias would not account for the result that was 187% of the study mean.

The calibration curve was evaluated and there did not appear to be any significant source of error.

The slope of the Thallium calibration curve was similar to curves run on other days.

The correlation coefficient was 1.00 indicating a very linear calibration curve.

There were no apparent issues with the run QC.

The second source ICV had a recovery of 105.9% which was within the acceptance range of 90 – 110%.

The CCVs throughout the run were all within the acceptance range of 90-110%. This indicates that there wasn't any type of high bias or shift in the instrument response.

Initially, the result was over the top of the calibration curve. The sample was run at several dilutions in order to bring Thallium and some of the other elements within the range of the calibration curves. It was run at a 20x, 100x and 1000x dilutions and when the concentrations were calculated from each of these the results had a RPD of 10% which is within the standard range.

Conclusion/Corrective Action

After looking at all of the potential sources of error, we could not determine one that was the likely cause of the problem. Without a definitive source of error, a corrective action cannot be determined, and therefore one has not been assigned.

The analytical sequences were also reviewed for potential contamination. None was found.

DJS
11/9/18

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A – 2007	9990	9226	8400	mg/kg	2245	4160 to 12400	0.339	ACCEPT.	5/9/18	NRV
1005	Antimony	10156419	ICP-MS	SW 6020A – 2007	291	152	218	mg/kg	79.5	12.4 to 313	1.75	ACCEPT.	5/9/18	NRV
1010	Arsenic	10156419	ICP-MS	SW 6020A – 2007	122	124	148	mg/kg	11.6	92.1 to 163	0.172	ACCEPT.	5/9/18	NRV
1015	Barium	10156419	ICP-MS	SW 6020A – 2007	234	217	269	mg/kg	25.4	143 to 295	0.669	ACCEPT.	5/9/18	NRV
1020	Beryllium	10156419	ICP-MS	SW 6020A – 2007	472	420	323	mg/kg	80.5	276 to 586	0.648	ACCEPT.	5/9/18	NRV
1030	Cadmium	10156419	ICP-MS	SW 6020A – 2007	126	119	163	mg/kg	17.8	86.5 to 179	0.506	ACCEPT.	5/9/18	NRV
1035	Calcium	10156419	ICP-MS	SW 6020A – 2007	4560	5917	6220	mg/kg	835	4370 to 7490	1.63	ACCEPT.	5/9/18	NRV
1040	Chromium	10156419	ICP-MS	SW 6020A – 2007	165	197	215	mg/kg	25.9	108 to 264	0.463	ACCEPT.	5/9/18	NRV
1050	Cobalt	10156419	ICP-MS	SW 6020A – 2007	124	117	150	mg/kg	12.9	67.2 to 168	0.543	ACCEPT.	5/9/18	NRV
1055	Copper	10156419	ICP-MS	SW 6020A – 2007	320	331	376	mg/kg	39.8	194 to 470	0.276	ACCEPT.	5/9/18	NRV
1070	Iron	10156419	ICP-MS	SW 6020A – 2007	9170	8824	9450	mg/kg	1908	1920 to 17300	0.181	ACCEPT.	5/9/18	NRV
1075	Lead	10156419	ICP-MS	SW 6020A – 2007	308	288	366	mg/kg	40.4	213 to 403	0.495	ACCEPT.	5/9/18	NRV
1085	Magnesium	10156419	ICP-MS	SW 6020A – 2007	8400	8018	9830	mg/kg	842	5950 to 10800	0.454	ACCEPT.	5/9/18	NRV
1090	Manganese	10156419	ICP-MS	SW 6020A – 2007	1720	1639	1900	mg/kg	194	1310 to 2090	0.418	ACCEPT.	5/9/18	NRV
1095	Mercury	10166457	CVAAS	SW 7471 B – 2007	16.5	17.4	18.0	mg/kg	3.82	10.2 to 24.9	0.288	ACCEPT.	4/30/18	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A – 2007	140	113	153	mg/kg	11.7	79.1 to 188	2.31	ACCEPT.	5/9/18	NRV
1105	Nickel	10156419	ICP-MS	SW 6020A – 2007	156	141	176	mg/kg	17.1	92.1 to 193	0.877	ACCEPT.	5/9/18	NRV
1125	Potassium	10156419	ICP-MS	SW 6020A – 2007	10300	10241	10870	mg/kg	985	7210 to 13200	0.0599	ACCEPT.	5/9/18	NRV
1150	Silver	10156419	ICP-MS	SW 6020A – 2007	51.1	47.1	76.6	mg/kg	12.9	31.8 to 64.3	0.310	ACCEPT.	5/9/18	NRV
1155	Sodium	10156419	ICP-MS	SW 6020A – 2007	2460	2429	2570	mg/kg	804	1560 to 3110	0.0386	ACCEPT.	5/9/18	NRV
1165	Thallium	10156419	ICP-MS	SW 6020A – 2007	412	220	279	mg/kg	49.0	156 to 307	3.92	NOT ACCEPT.	5/9/18	NRV

Concentrations

11/7/2018 8:58:28 AM

Instrument Name:	Serial Number:
iCAP Q	Undefined

Labbook:
T418E09a.imexp

Analysis label:	84232-001.05	Analysis started at:	5/9/2018 12:22:46 PM	Rack:	1
Comment	20	User name:	FIBERTEC\chemist	Vial:	28

Category	Concentration average	Concentration RSD
7Li (STD)	3.707 ppb	3.7 %
9Be (STD)	443.917 ppb	1.2 %
11B (STD)	214.939 ppb	2.6 %
23Na (KED)	2,460.355 ppb	2.0 %
24Mg (KED)	8,485.537 ppb	2.0 %
27Al (KED)	11,574.931 ppb	2.8 %
39K (KED)	10,408.469 ppb	2.0 %
42Ca (STD)	4,529.581 ppb	3.2 %
44Ca (STD)	4,555.860 ppb	2.7 %
45Sc (KED)	94.178 %	4.2 %
45Sc (STD)	92.399 %	1.0 %
47Ti (KED)	113.300 ppb	25.7 %
51V (KED)	231.933 ppb	1.9 %
52Cr (KED)	225.061 ppb	0.9 %
55Mn (KED)	1,847.646 ppb	0.9 %
57Fe (KED)	10,687.435 ppb	1.8 %
59Co (KED)	140.057 ppb	1.1 %
60Ni (KED)	155.790 ppb	0.9 %
63Cu (KED)	335.456 ppb	0.6 %
66Zn (KED)	222.542 ppb	0.9 %
74Ge (STD)	79.112 %	1.7 %
74Ge (KED)	85.627 %	3.2 %
75As (KED)	130.544 ppb	1.0 %
78Se (KED)	172.950 ppb	1.8 %
82Se (STD)	174.124 ppb	1.1 %
88Sr (KED)	113.103 ppb	0.9 %
95Mo (KED)	140.045 ppb	1.2 %
96Mo (KED)	141.334 ppb	1.4 %
103Rh (KED)	79.944 %	1.8 %
107Ag (KED)	51.132 ppb	0.9 %
111Cd (KED)	138.027 ppb	0.5 %
118Sn (KED)	119.241 ppb	0.4 %
121Sb (KED)	336.395 ppb	0.2 %
137Ba (KED)	233.795 ppb	0.8 %
159Tb (KED)	90.102 %	4.1 %
175Lu (KED)	90.527 %	2.4 %
205Tl (KED)	432.082 ppb	1.3 %
208Pb (KED)	325.003 ppb	2.1 %
209Bi (KED)	78.931 %	1.3 %
232Th (KED)	0.789 ppb	1.0 %
238U (KED)	0.293 ppb	4.1 %

1000+ = 432 082 ppb

Concentrations

11/7/2018 8:58:28 AM

Instrument Name:	Serial Number:
iCAP Q	Undefined

Labbook:
T418E09a.imexp

Analysis label:	84232-001.06	Analysis started at:	5/9/2018 12:51:57 PM	Rack:	1
Comment	100	User name:	FIBERTEC\chemist	Vial:	43

Category	Concentration average	Concentration RSD
7Li (STD)	0.387 ppb	2.8 %
9Be (STD)	94.363 ppb	1.7 %
11B (STD)	55.201 ppb	7.3 %
23Na (KED)	434.760 ppb	1.2 %
24Mg (KED)	1,680.053 ppb	2.3 %
27Al (KED)	1,980.320 ppb	7.8 %
39K (KED)	2,053.150 ppb	2.3 %
42Ca (STD)	984.301 ppb	3.0 %
44Ca (STD)	967.944 ppb	1.8 %
45Sc (KED)	97.835 %	1.9 %
45Sc (STD)	94.663 %	2.4 %
47Ti (KED)	8.497 ppb	15.5 %
51V (KED)	36.397 ppb	2.0 %
52Cr (KED)	37.009 ppb	0.7 %
55Mn (KED)	343.113 ppb	1.5 %
57Fe (KED)	1,834.624 ppb	0.6 %
59Co (KED)	24.734 ppb	1.4 %
60Ni (KED)	29.455 ppb	1.6 %
63Cu (KED)	63.967 ppb	1.1 %
66Zn (KED)	44.454 ppb	1.4 %
74Ge (STD)	95.475 %	1.5 %
74Ge (KED)	98.803 %	2.6 %
75As (KED)	24.480 ppb	2.1 %
78Se (KED)	32.424 ppb	3.0 %
82Se (STD)	32.797 ppb	1.0 %
88Sr (KED)	19.573 ppb	1.7 %
95Mo (KED)	23.465 ppb	1.4 %
96Mo (KED)	23.519 ppb	1.4 %
103Rh (KED)	95.497 %	2.1 %
107Ag (KED)	9.230 ppb	0.8 %
111Cd (KED)	25.615 ppb	1.9 %
118Sn (KED)	20.914 ppb	1.2 %
121Sb (KED)	58.232 ppb	1.9 %
137Ba (KED)	40.219 ppb	0.2 %
159Tb (KED)	100.642 %	1.1 %
175Lu (KED)	102.521 %	1.1 %
205Tl (KED)	82.500 ppb	0.1 %
208Pb (KED)	61.557 ppb	1.1 %
209Bi (KED)	96.091 %	0.2 %
232Th (KED)	0.106 ppb	8.2 %
238U (KED)	0.042 ppb	3.0 %

5000x = 412500 ppb

Concentrations

11/7/2018 8:58:28 AM

Instrument Name:	Serial Number:
iCAP Q	Undefined

Labbook:
T418E09a.imexp

Analysis label:	84232-001.07	Analysis started at:	5/9/2018 1:13:50 PM	Rack:	1
Comment	1000	User name:	FIBERTEC\chemist	Vial:	45

Category	Concentration average	Concentration RSD
7Li (STD)	0.076 ppb	32.9 %
9Be (STD)	9.088 ppb	1.2 %
11B (STD)	5.748 ppb	0.7 %
23Na (KED)	82.395 ppb	1.3 %
24Mg (KED)	145.211 ppb	1.3 %
27Al (KED)	199.740 ppb	0.8 %
39K (KED)	184.555 ppb	1.5 %
42Ca (STD)	42.544 ppb	20.5 %
44Ca (STD)	79.559 ppb	1.3 %
45Sc (KED)	106.594 %	2.6 %
45Sc (STD)	97.265 %	2.3 %
47Ti (KED)	1.198 ppb	21.3 %
51V (KED)	3.263 ppb	0.8 %
52Cr (KED)	3.544 ppb	1.1 %
55Mn (KED)	29.887 ppb	0.7 %
57Fe (KED)	173.565 ppb	0.9 %
59Co (KED)	2.350 ppb	1.6 %
60Ni (KED)	2.776 ppb	0.7 %
63Cu (KED)	6.152 ppb	1.1 %
66Zn (KED)	4.332 ppb	0.8 %
74Ge (STD)	101.009 %	3.0 %
74Ge (KED)	106.478 %	2.4 %
75As (KED)	2.292 ppb	1.5 %
78Se (KED)	3.041 ppb	5.7 %
82Se (STD)	2.959 ppb	1.0 %
88Sr (KED)	1.908 ppb	4.5 %
95Mo (KED)	2.296 ppb	1.1 %
96Mo (KED)	2.317 ppb	1.2 %
103Rh (KED)	102.584 %	2.8 %
107Ag (KED)	0.861 ppb	1.3 %
111Cd (KED)	2.412 ppb	2.8 %
118Sn (KED)	2.516 ppb	1.2 %
121Sb (KED)	6.610 ppb	0.5 %
137Ba (KED)	3.858 ppb	1.5 %
159Tb (KED)	106.497 %	2.4 %
175Lu (KED)	108.495 %	2.6 %
205Tl (KED)	7.781 ppb	2.8 %
208Pb (KED)	5.350 ppb	1.0 %
209Bi (KED)	102.986 %	1.9 %
232Th (KED)	0.111 ppb	7.8 %
238U (KED)	0.012 ppb	11.9 %

50,000 × = 389050

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 673 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 015 **Date Initiated:** 07/03/18 **Date Due:** 07/17/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☑ 3 (RCA Required) ☐ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported Bromide result was above the acceptance limits for the PT Study (See Attached)
Result reported: 92.4 mg/Kg Actual Value: 64.9 mg/Kg Mean Study Result: 55.3 mg/Kg Acceptance range: 40.0 to 71.4 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the reoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See Attached Root Cause Analysis

Investigator(s): K Mueller, S McKenna, R Penn, D Strandbergh

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

see attached

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: When remedial PT has passed. ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical: [signature] **Supervisory:** [signature] 7/27/18

Quality Assurance: [signature]

Date Closed: 10/24/18

012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
Corrosivity (pH)	10244607	ISE	SW 9045D	8.50	8.28	8.38	pH units	0.192	7.78 to 8.98	1.15	ACCEPT.	4/20/18	AMG

014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	171	168	167	oF	12.0	150 to 184	0.250	ACCEPT.	4/30/18	SEM

015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
Bromide	10199607	IC-COND	SW 9056A -- 2007	92.4	55.3	64.9	mg/kg	16.9	40.0 to 71.4	2.20	NOT ACCEPT.	5/24/18	RKP
Chloride	10199607	IC-COND	SW 9056A -- 2007	267	341	340	mg/kg	55.9	234 to 448	1.32	ACCEPT.	5/24/18	RKP
Fluoride	10199607	IC-COND	SW 9056A -- 2007	341	228	318	mg/kg	15.9	99.6 to 354	7.11	ACCEPT.	5/24/18	RKP
Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	71.0	88.5	63.7	mg/kg	18.0	57.3 to 113	0.972	ACCEPT.	5/24/18	RKP
Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	70.0	76.0	111	mg/kg	10.9	43.3 to 122	0.550	ACCEPT.	5/24/18	RKP
Sulfate	10199607	IC-COND	SW 9056A -- 2007	1310	1055	1060	mg/kg	110	614 to 1510	2.32	ACCEPT.	5/24/18	RKP
Nitrate+Nitrite as N	-- Not Reported --												
Nitrite as N	-- Not Reported --												

016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	600	552	867	ug/kg	121	185 to 954	0.397	ACCEPT.	4/23/18	RDK
Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	274	261	366	ug/kg	58.5	77.0 to 445	0.222	ACCEPT.	4/23/18	RDK
Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	621	631	855	ug/kg	147	85.5 to 1250	0.0680	ACCEPT.	4/23/18	RDK
Anthracene	10242407	GC-MS	SW 8270C SIM --1996	416	381	589	ug/kg	76.1	161 to 601	0.460	ACCEPT.	4/23/18	RDK
Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	309	303	389	ug/kg	50.8	152 to 454	0.118	ACCEPT.	4/23/18	RDK
Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	167	158	207	ug/kg	33.0	62.7 to 253	0.273	ACCEPT.	4/23/18	RDK
Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	369	378	471	ug/kg	67.9	213 to 543	0.133	ACCEPT.	4/23/18	RDK

CAR 673 Root Cause Investigation

The investigation to determine the likely cause of the PT Failure for Bromide is as follows:

The reported result was 92.4 mg/Kg and the study mean was 55.3 mg/Kg.

1. A review of the result that was uploaded to the NSI website for the study was done to ensure there was no error in the entry.
    a. The result was entered correctly.
2. The data upload into LIM was reviewed for any type of error in transcription or calculation.
    a. No errors were found.
3. The reported results for Bromide were compared with the calculated concentration of Bromide from other dilutions of the sample that were made.
    a. There was good agreement between all of the different dilutions.

Because there was good agreement between the multiple dilutions that were made it was determined that the issue was isolated to the preparation of the sample.

The PT sample was re-prepped and reanalyzed to see if the failure could be duplicated. The subsequent result was 43.3 mg/Kg which was within the acceptance range for the study.

When comparing the original result and the reanalyzed result, the difference in concentration was similar to that of a matrix spike (49.1 mg/Kg difference vs matrix spike of 50 mg/Kg).

The prep procedure was examined to determine where the spike/contamination could have occurred.

1. The extraction tubes are put on the balance and the weight is zeroed out.
2. 5 grams of sample are weighed into the tube and the tube is zeroed out again.
3. If the sample is to be spiked, the individual anion spikes are added to the tube and then DI water is added until the weight is equal to 50 grams otherwise the DI water is added until the weight equals 50 grams.
4. The tubes are capped and shaken by hand for approximately 30 seconds and then are placed on the shaker table where they are shaken for 15 minutes.
5. After the shaking is complete, the solids are allowed to settle out of the extract. A portion of extract supernatant is removed and filtered through a PTFE filter.
6. The filtrate is either run as-is through the IC or a dilution is made and then run on the IC.

Once the sample has been weighed and had the water added, there is virtually no place for the contamination to have occurred. The syringe filters are single use and all samples, standards, and blanks are filtered before being run, so the contamination would have shown up in the other samples as well. Also, since all of the results for the other anions were acceptable, it becomes even more unlikely that the contamination would be only Bromide.

The difference between the original reported concentration and the re-prepped/reanalyzed sample concentration is so similar to the concentration of a matrix spike that it seems unlikely to be random contamination and is most likely a case of the sample having been accidentally spiked.

The anions are all spiked from individual spike standards and are grouped by the amount of spike to be added. Bromide and Chloride use 250uL of spike which is also the largest spike volume of all of the anions. It is possible that the first spike added was Bromide.

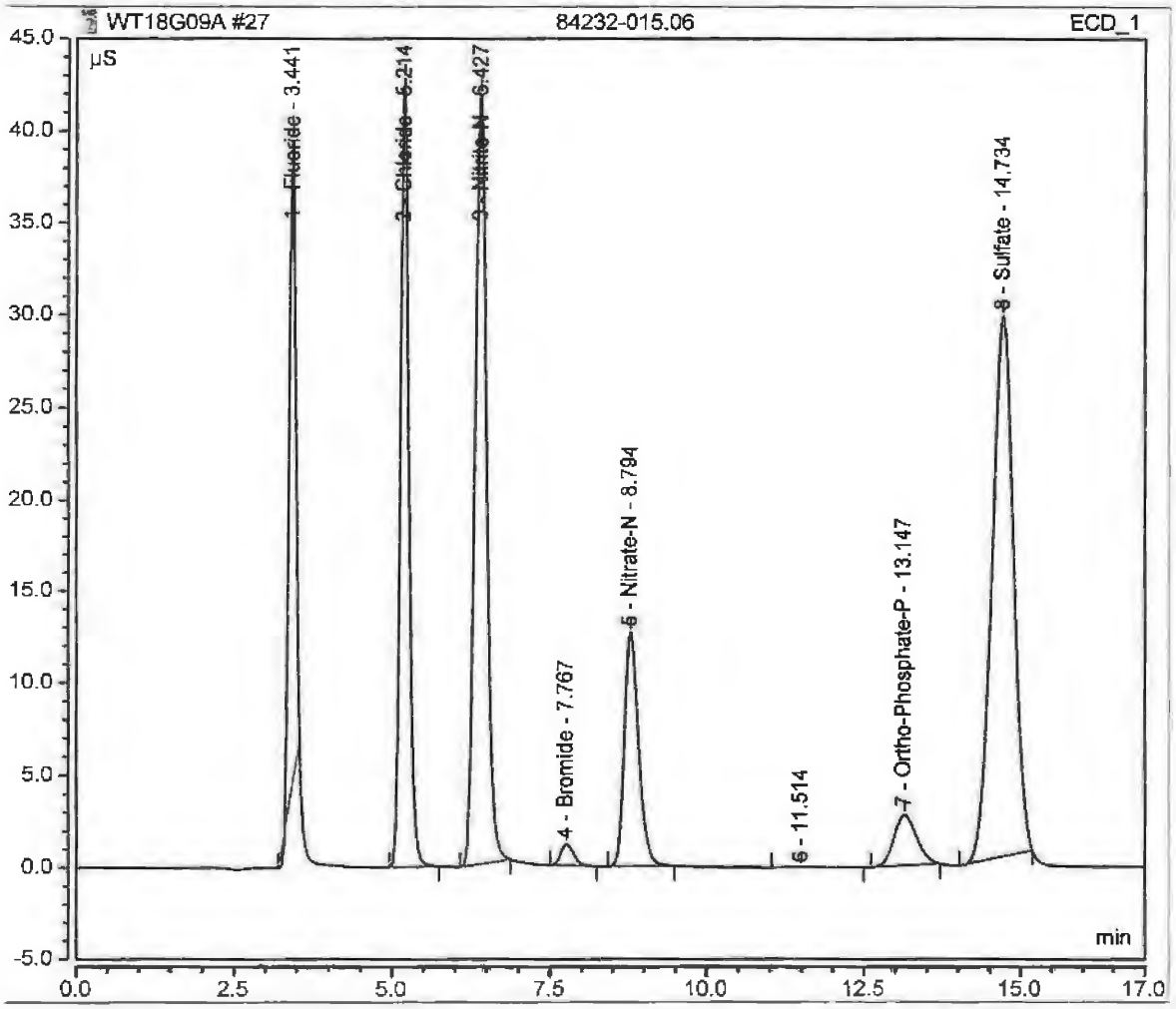
1. The most like scenario for the error is that the analyst got distracted and accidentally added the spike to the wrong tube.

There has been enough time elapsed that it is not possible to know exactly what happened, but this seems to be most likely way after we had eliminated all other possibilities.

Sample Name:	**84232-015.06**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**09.07.18 18:19**	*Sample ID:*	**FAILED PT**
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/07-2018/WT18G06A.seq**		

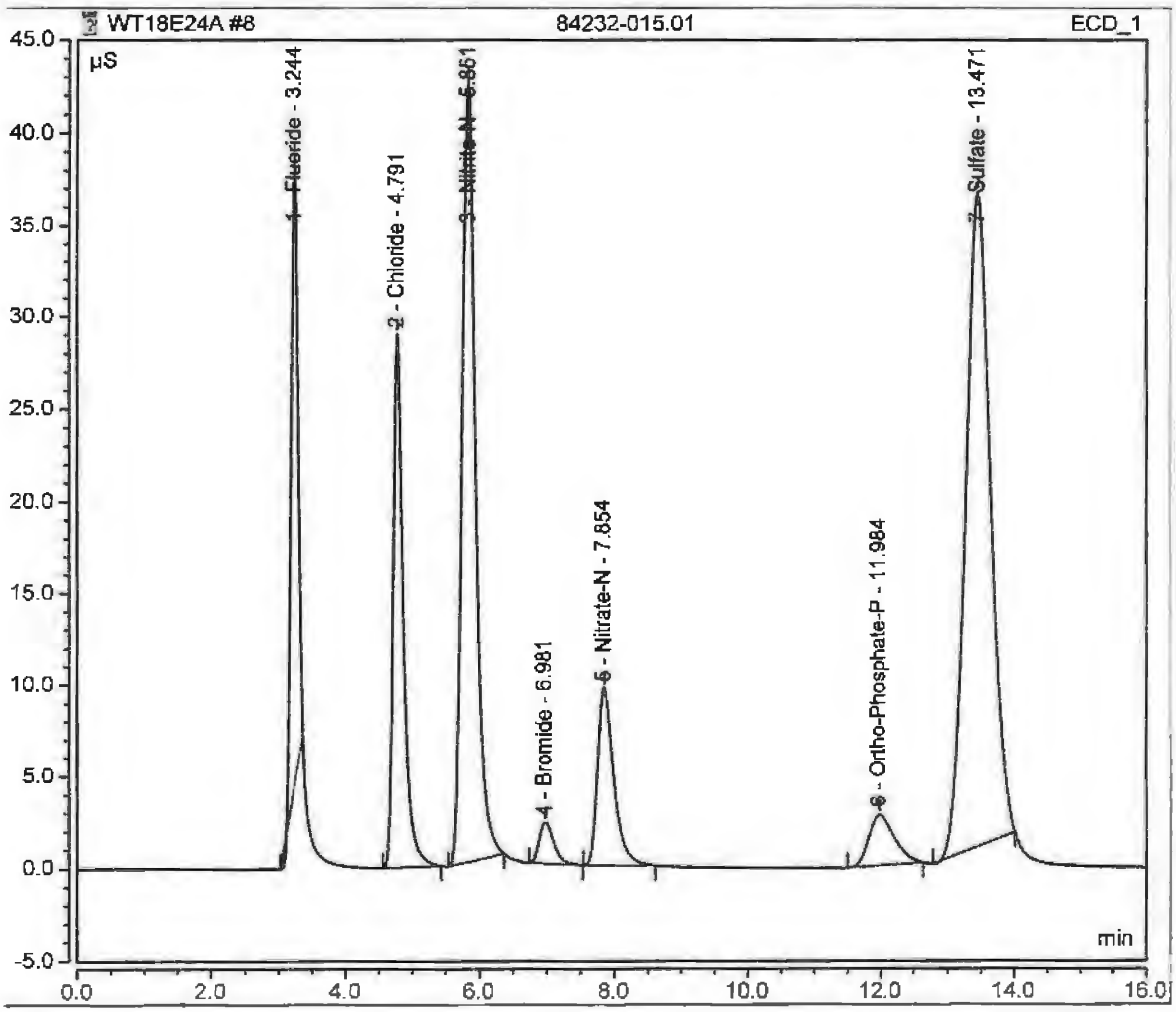
No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.44	Fluoride	BMB	4.0586	34.724	24.2449
2	5.21	Chloride	BMB	6.6276	42.755	32.6635
3	6.43	Nitrite-N	BMB	8.9053	41.747	28.4334
4	7.77	Bromide	BMB	0.2737	1.169	4.3279
5	8.79	Nitrate-N	BMB	3.3243	12.646	9.0137
7	13.15	Ortho-Phosphate-P	BMB	1.1417	2.748	5.8569
8	14.73	Sulfate	BMB	11.7604	29.271	101.4376
		TOTAL:		36.09	165.06	205.98

$4.3279 \times 10 = 43.3\ mg/kg$



Sample Name:	**84232-015.01**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**24.05.18 11:25**	*Sample ID:*	
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/05-2018/WT18E22B.seq**		

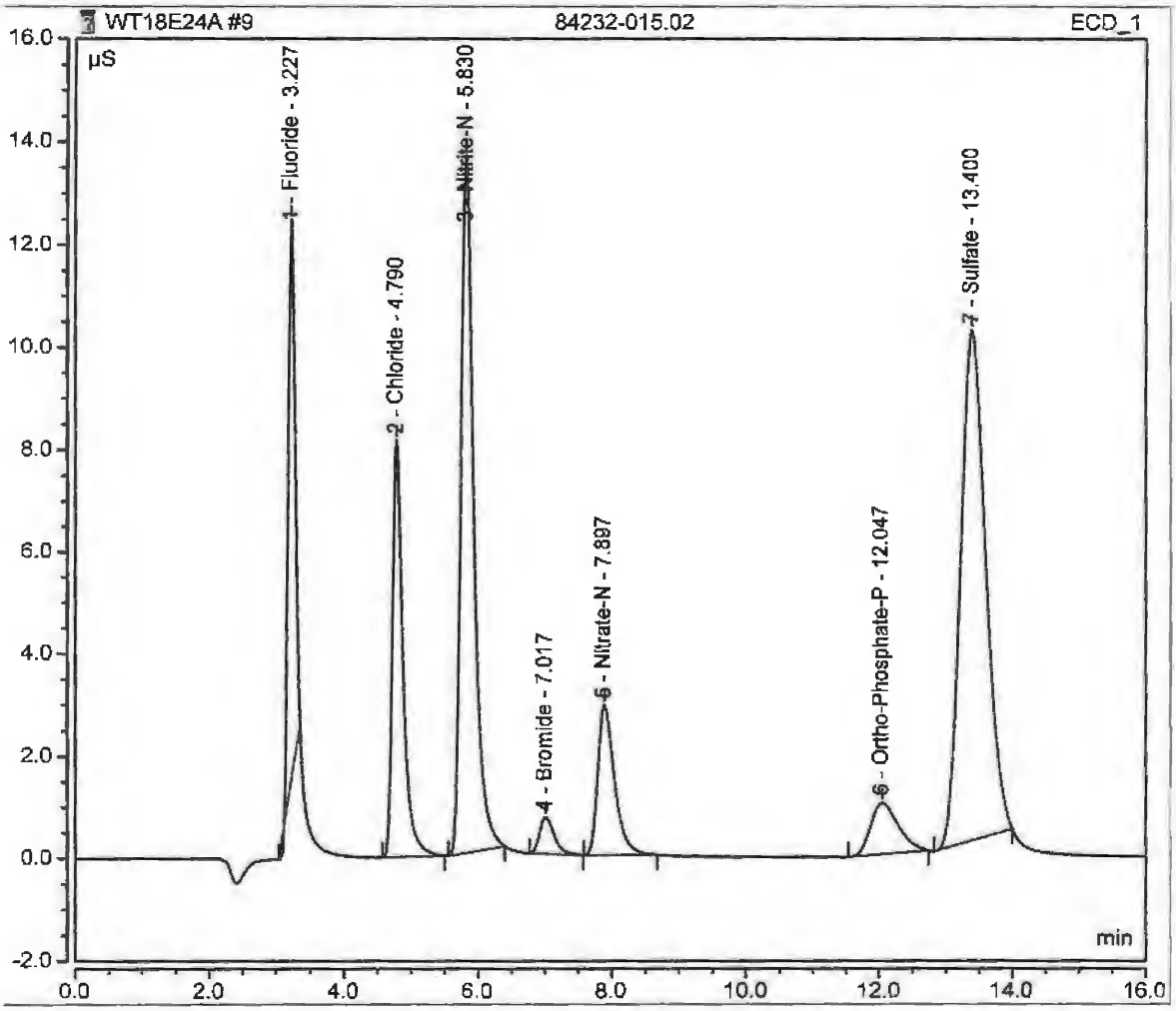
No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.24	Fluoride	BMB	4.2420	34.136	26.4009
2	4.79	Chloride	BMB	5.0025	28.960	26.6796
3	5.85	Nitrite-N	BMB	9.6929	42.425	34.7955
4	6.98	Bromide	BMB	0.5587	2.257	9.2371 × 10 = 92.4 mg/kg
5	7.85	Nitrate-N	BMB	2.7166	9.654	7.7844
6	11.98	Ortho-Phosphate-P	BMB	1.2397	2.749	6.0534
7	13.47	Sulfate	BMB	15.2616	35.628	143.1437
		TOTAL:		38.71	155.81	254.09



Sample Name:	**84232-015.02**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**24.05.18 12:04**	*Sample ID:*	**3X**
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/05-2018/WT18E22B.seq**		

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.23	Fluoride	BMB	1.2710	10.950	7.9332
2	4.79	Chloride	BMB	1.4895	8.152	8.8371
3	5.83	Nitrite-N	BMB	3.0427	13.632	10.9244
4	7.02	Bromide	BMB	0.1831	0.727	3.0381
5	7.90	Nitrate-N	BMB	0.8472	2.936	2.4285
6	12.05	Ortho-Phosphate-P	BMB	0.4832	1.007	2.3030
7	13.40	Sulfate	BMB	4.3418	9.985	40.9119
TOTAL:				11.66	47.39	76.38

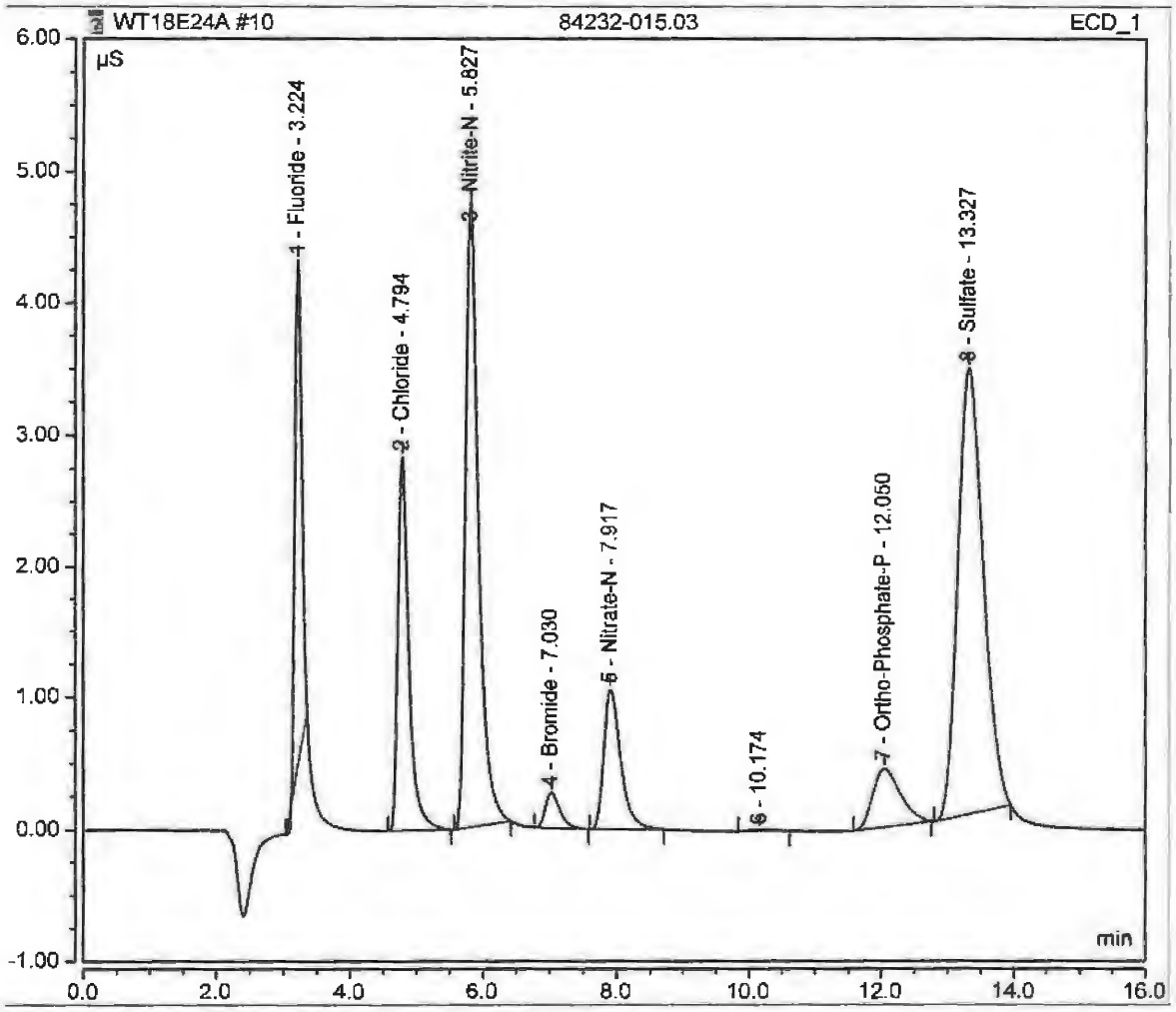
3.0381 × 3 × 10 = 91.1 mg/kg



Sample Name:	**84232-015.03**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**24.05.18 12:23**	*Sample ID:*	**8X**
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/05-2018/WT18E22B.seq**		

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.22	Fluoride	BMB	0.4510	3.828	2.8359
2	4.79	Chloride	BMB	0.5362	2.845	3.9955
3	5.83	Nitrite-N	BMB	1.0750	4.748	3.8610
4	7.03	Bromide	BMB	0.0682	0.268	1.1404
5	7.92	Nitrate-N	BMB	0.3092	1.059	0.8873
7	12.05	Ortho-Phosphate-P	BMB	0.2134	0.440	0.9654
8	13.33	Sulfate	BMB	1.5058	3.390	14.3810
		TOTAL:		4.16	16.58	28.05

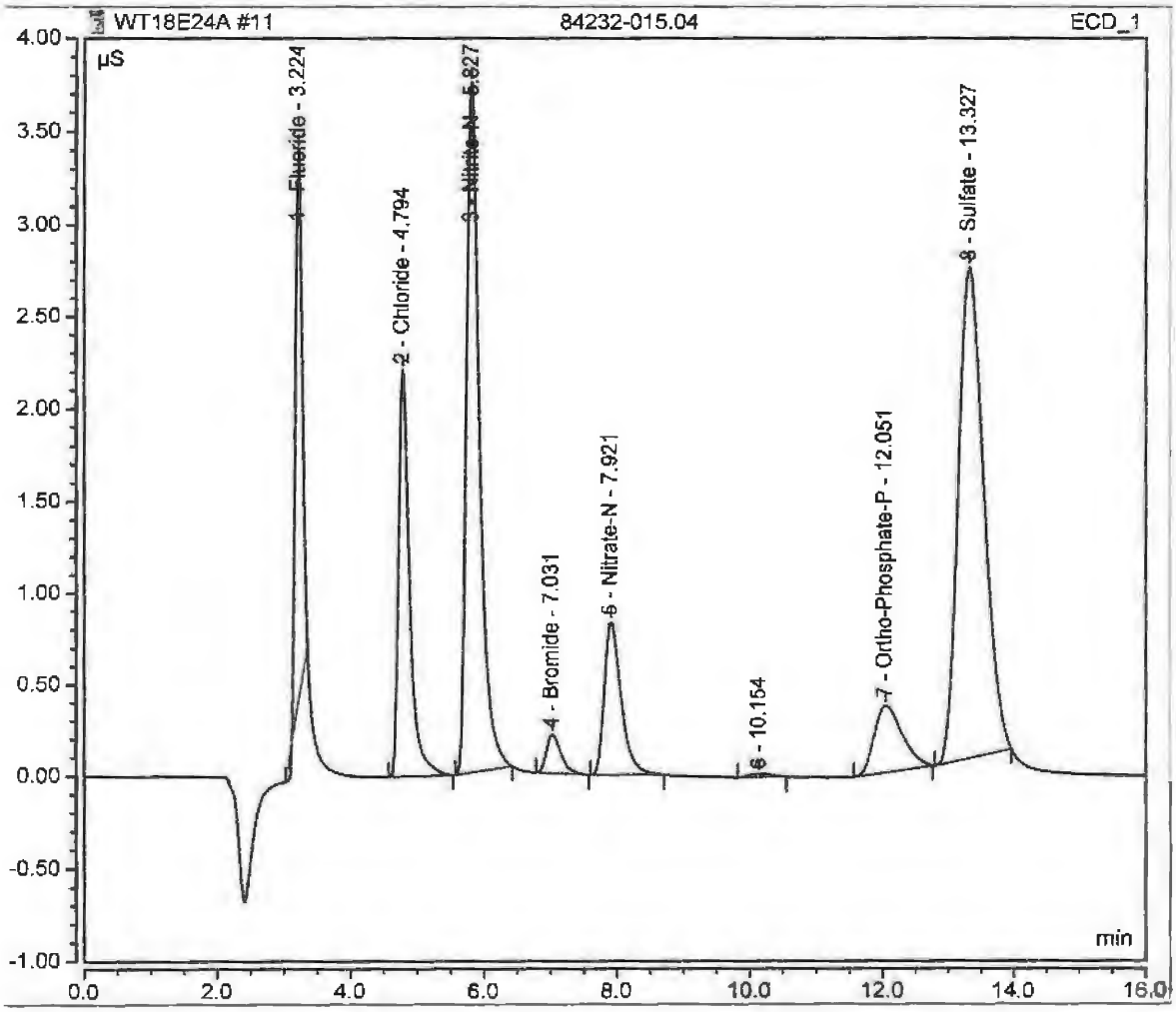
$1.1404 \times 8 \times 10 = 91.2$ mg/kg



Sample Name:	**84232-015.04**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**24.05.18 12:41**	*Sample ID:*	**10X**
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/05-2018/WT18E22B.seq**		

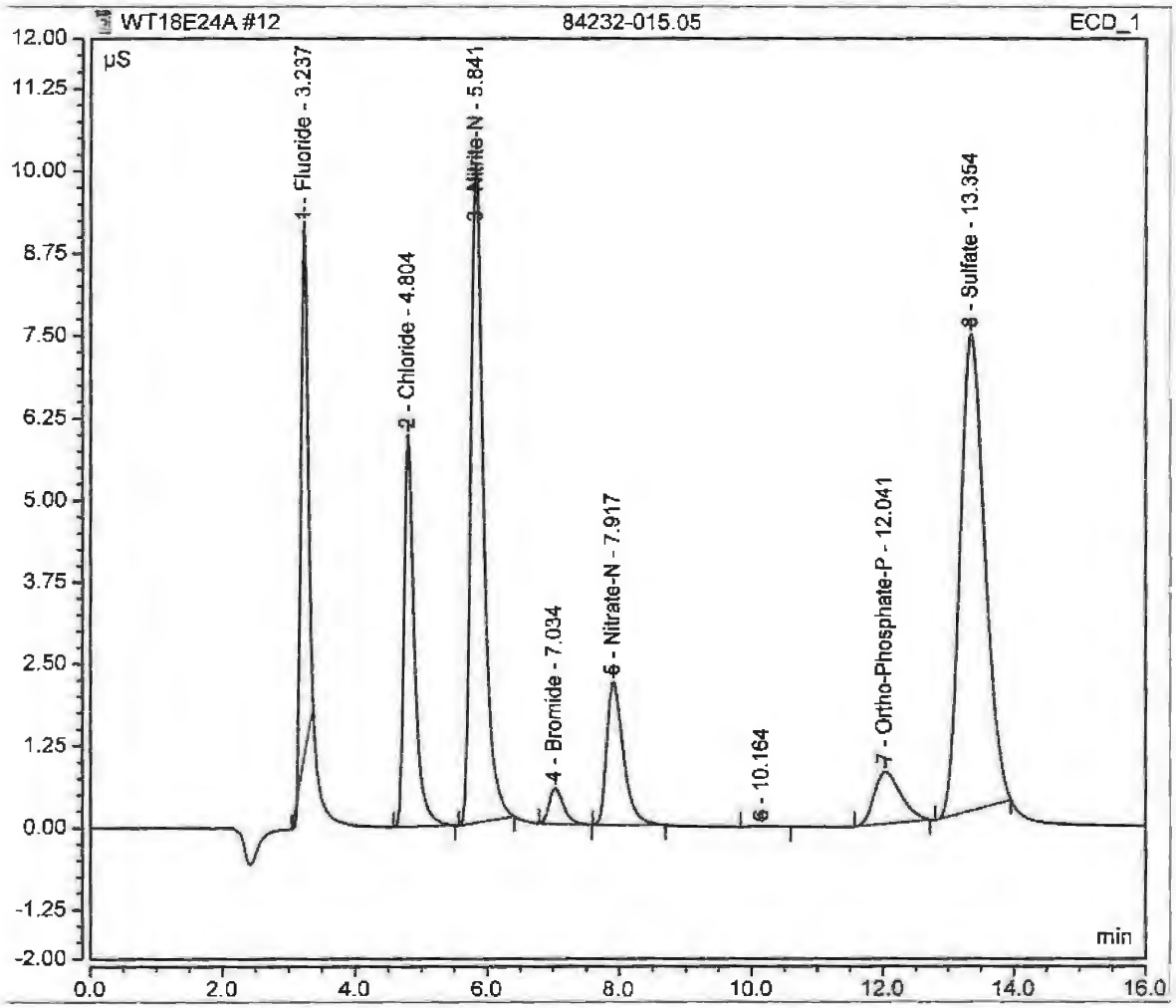
No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.22	Fluoride	BMB	0.3474	3.001	2.1921
2	4.79	Chloride	BMB	0.4216	2.213	3.4131
3	5.83	Nitrite-N	BMB	0.8515	3.747	3.0590
4	7.03	Bromide	BMB	0.0543	0.214	0.9110
5	7.92	Nitrate-N	BMB	0.2457	0.841	0.7052
7	12.05	Ortho-Phosphate-P	BMB	0.1790	0.366	0.7951
8	13.33	Sulfate	BMB	1.1950	2.675	11.4510
		TOTAL:		3.29	13.06	22.53

$0.9110 \times 10 \times 10 = 91.1$ mg/Kg



Sample Name:	**84232-015.05**	*Inj. Vol.:*	**1.0**
Sample Type:	**Unknown**	*Dilution Factor:*	**1.0000**
Program:	**AS22 Anions**	*Operator:*	**n.a**
Inj Date/Time:	**24.05.18 13:37**	*Sample ID:*	**4X**
Cal Curve:	**chrom://cmdcdv1/CMDATA/WT/Data/2018/05-2018/WT18E22B.seq**		

No.	Time min	Peak Name	Type	Area µS*min	Height µS	Amount
1	3.24	Fluoride	BMB	0.9584	8.157	5.9901
2	4.80	Chloride	BMB	1.1040	5.975	6.8792
3	5.84	Nitrite-N	BMB	2.2523	10.046	8.0870
4	7.03	Bromide	BMB	0.1382	0.546	2.2987 x 4 x 10 = 91.9 mg/kg
5	7.92	Nitrate-N	BMB	0.6349	2.192	1.8204
7	12.04	Ortho-Phosphate-P	BMB	0.3718	0.790	1.7509
8	13.35	Sulfate	BMB	3.1483	7.265	29.7379
		TOTAL:		8.61	34.97	56.56



RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 10/01/2018 - Closed: 10/24/2018
Reports Printed On: 10/24/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCI-001B Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	179	208	mg/kg	71.9 to 229	ACCEPT.	10/10/18	JLH

SQCI-015B Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	53.6	75.2	mg/kg	51.7 to 90.3	ACCEPT.	10/22/18	SEM

SQCO-007B Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW 8270C -- 1996	6460	8160	ug/kg	1040 to 8980	ACCEPT.	10/7/18	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	9430	10810	ug/kg	3880 to 11900	ACCEPT.	10/7/18	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	7780	6890	ug/kg	1650 to 8150	ACCEPT.	10/7/18	GJP

SQCO-008HB VOCs in Soil - Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	4390	4660	ug/kg	3740 to 4570	ACCEPT.	10/9/18	JLM

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

This PT report shall only be reproduced in full. This report shall not be used to claim approval, certification or endorsement by NSI Lab Solutions. This report has been released only to entities requested by the participant. This report is held in confidence by NSI Lab Solutions with additional reports available by written request of participant.

Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 674 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 006 **Date Initiated:** 07/03/18 **Date Due:** 07/24/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☑ 3 (RCA Required) ☐ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☑ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported 2,4 DB result was above the acceptance limits for the PT Study (See Attached)
Result reported: 1200 mg/Kg Actual Value: 788 mg/Kg Mean Study Result: 494 mg/Kg Acceptance range: 78.8 mg/Kg to 929 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the nonoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

At first there appeared to be an interference with 2,4-DB on one column, causing the standards to fail high. The sample was analyzed multiple times (4/27, 4/29, 4/30, 5/1, 5/3, 5/7, 5/14, 5/17, and was reported on 5/18) because of the standard failing. By the time the sample was reported out, it was most likely concentrated, which caused it to fail high. Looking back at the calibration curve, the interference was also there. The compound was calibrated using area, rather than height (we normally use height) and the interference was not included in the integration. (see the attached printouts) When the standard was integrated the same way as the curve, the data could've been reported from 4/30, 5/1, or 5/3 with passing results. (after that, the results are high - likely due to the concentration of the sample.

Investigator(s): Bethany Annett

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

When a peak is integrated and/or calibrated in an unusual way, a print-out of the peak or curve will be displayed near the instrument to make sure that it is analyzed/integrated the same way in samples and standards as it was in the calibration.

Follow-Up Required? (If required, reference this Report) *Yes* ☑ *No* ☐ will check the next time they have this occur.

Follow-Up Date: 10/24/18 PT Passed ***Follow-Up Complete:*** *Yes* ☑ *No* ☐

VI. Approvals:

Technical : Bethany D. Annett 8.17.18 **Supervisory:** Bethany D. Annett 8.17.18

Quality Assurance: Ken Mueller

Date Closed: 10/24/18

8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<1.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	4/24/18	GJP

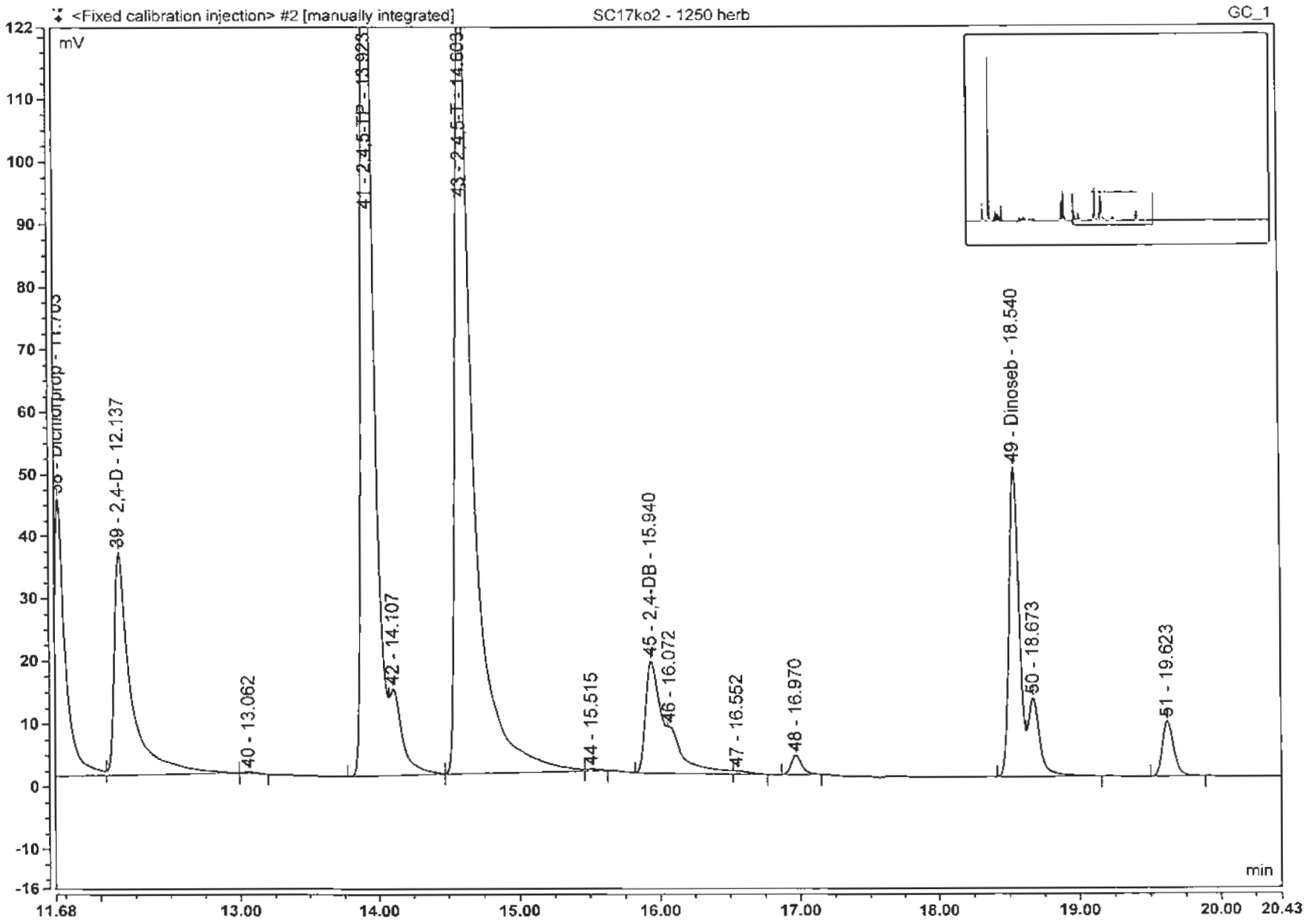
SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW 8151A – 1996	462	283	422	ug/kg	154	42.2 to 744	1.16	ACCEPT.	4/27/18	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	191	172	228	ug/kg	30.9	79.3 to 265	0.615	ACCEPT.	4/27/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A – 1996	1200	494	788	ug/kg	145	78.8 to 929	4.87	NOT ACCEPT.	5/18/18	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<200	ug/kg	0.00	0.00 to 200	n/a	ACCEPT.	4/27/18	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A – 1996	942	562	759	ug/kg	283	75.9 to 1410	1.34	ACCEPT.	5/18/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<75	ug/kg	0.00	0.00 to 75.0	n/a	ACCEPT.	4/27/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	721	463	756	ug/kg	196	75.6 to 1050	1.32	ACCEPT.	5/18/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A – 1996	754	471	694	ug/kg	224	69 4 to 1140	1.26	ACCEPT.	5/18/18	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C – 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/21/18	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0 00	n/a	ACCEPT.	4/21/18	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C – 1996	3460	3617	5720	ug/kg	813	572 to 7400	0.193	ACCEPT.	4/21/18	RDK
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C – 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/21/18	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C – 1996	4180	4458	7630	ug/kg	1009	763 to 8890	0 276	ACCEPT.	4/21/18	RDK

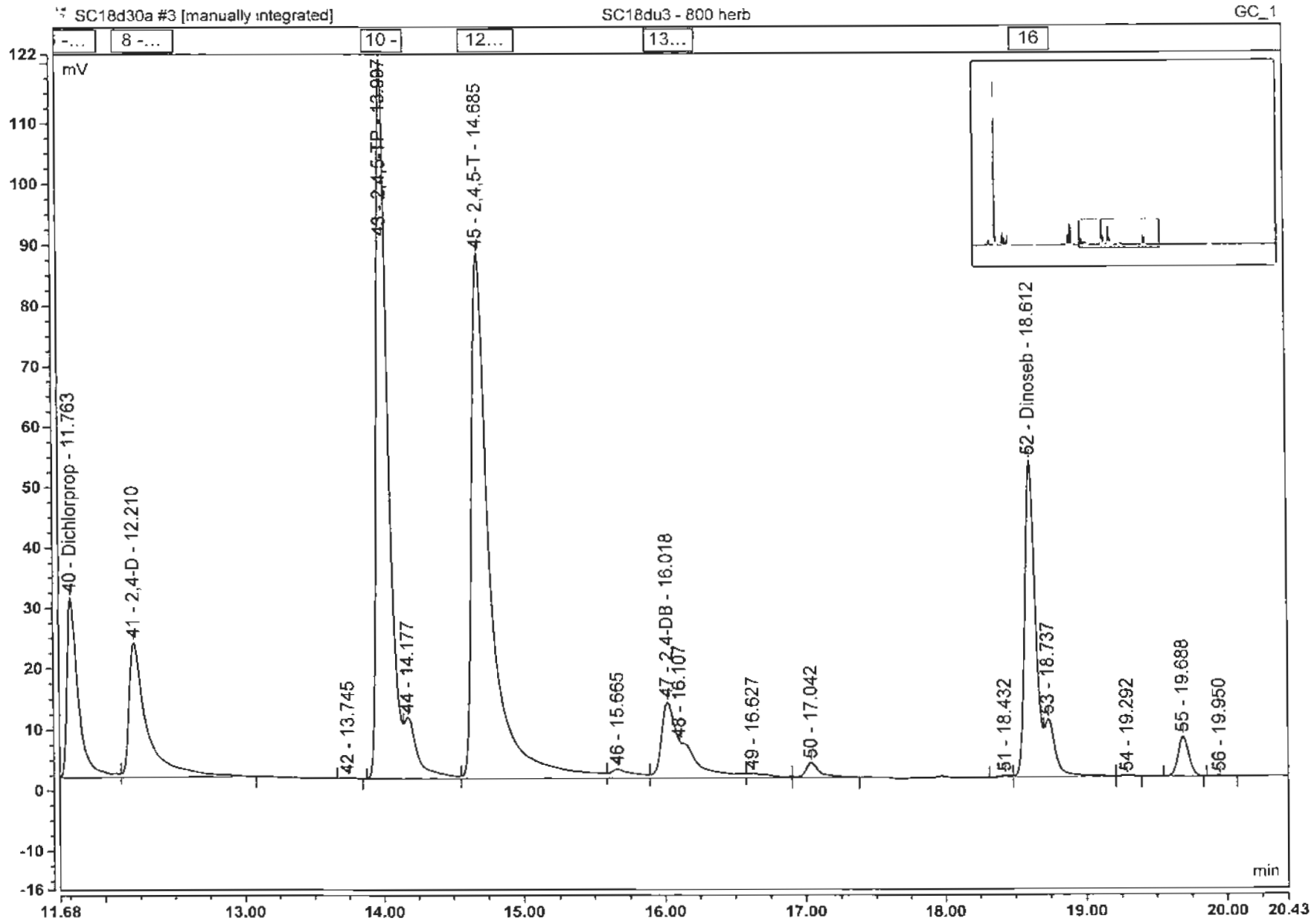
initial calibration



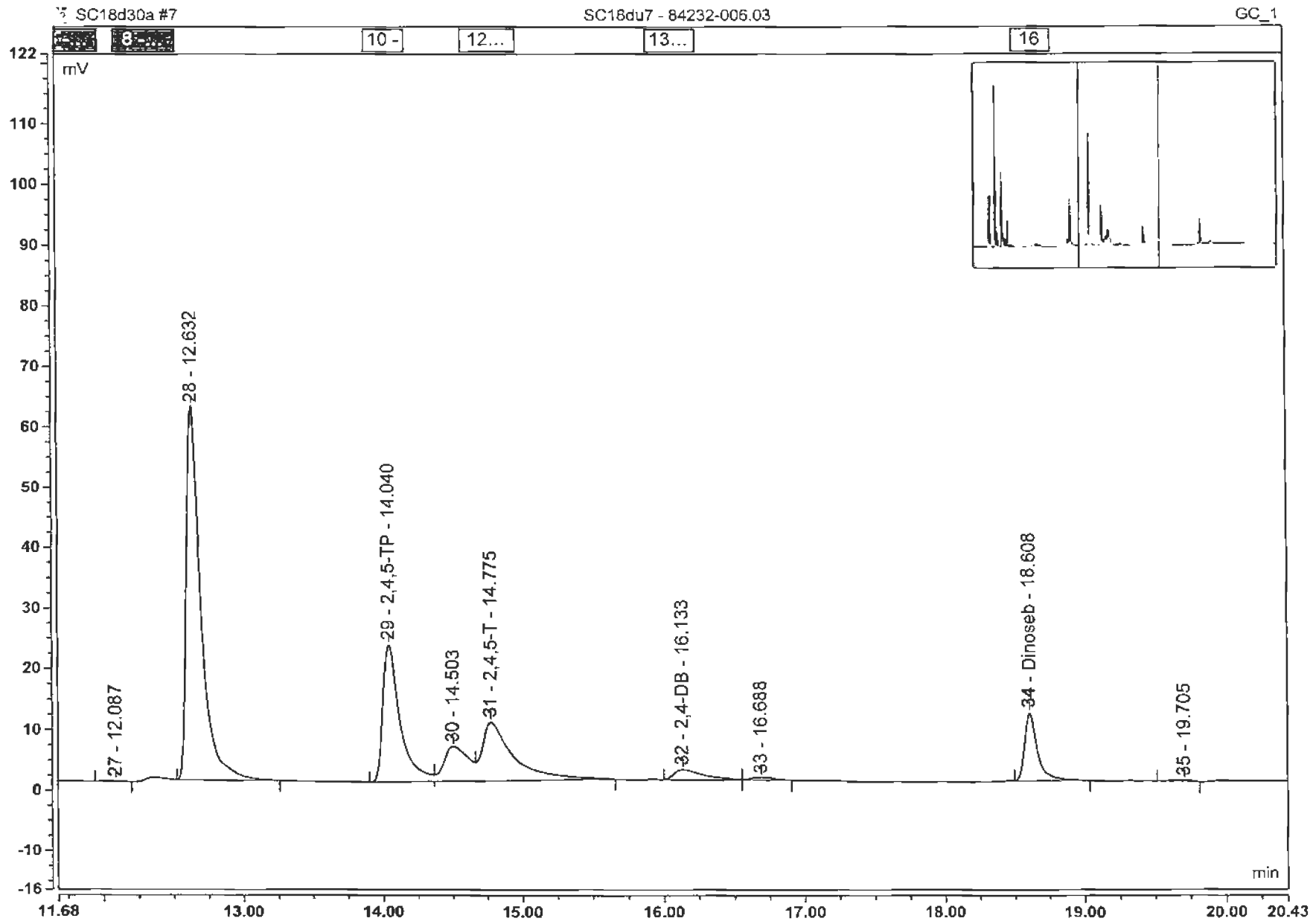
Component Table

Name	Ret.Time	Window	Channel	Stand.Meth.	Eval.Type	Cal.Type	Level "1"	Level "02"	Level "03"
Channel: GC_1 - 9 Items									
Dalapon	3.780	0.049 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
DCAA(S)	10.351	0.185 AN	GC_1	External	Height	Lin, WithOffset, 1/A	3000.000000	2500.000000	2000.000000
Dicamba	10.660	0.184 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dichlorprop	11.906	0.202 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-D	12.461	0.221 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-TP	14.092	0.144 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-T	14.838	0.197 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-DB	16.202	0.176 AN	GC_1	External	Area	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dinoseb	18.742	0.140 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Channel: GC_2 - 9 Items									
Dalapon	4.099	0.086 AG	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
DCAA(S)	11.603	0.177 AN	GC_2	External	Area	Lin, WithOffset, 1/A	3000.000000	2500.000000	2000.000000
Dicamba	12.019	0.194 AN	GC_2	External	Area	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dichlorprop	13.509	0.223 AN	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-D	14.246	0.249 AN	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-TP	16.355	0.151 AN	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-T	17.523	0.241 AN	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-DB	18.807	0.247 AG	GC_2	External	Area	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dinoseb	19.612	0.236 AN	GC_2	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000

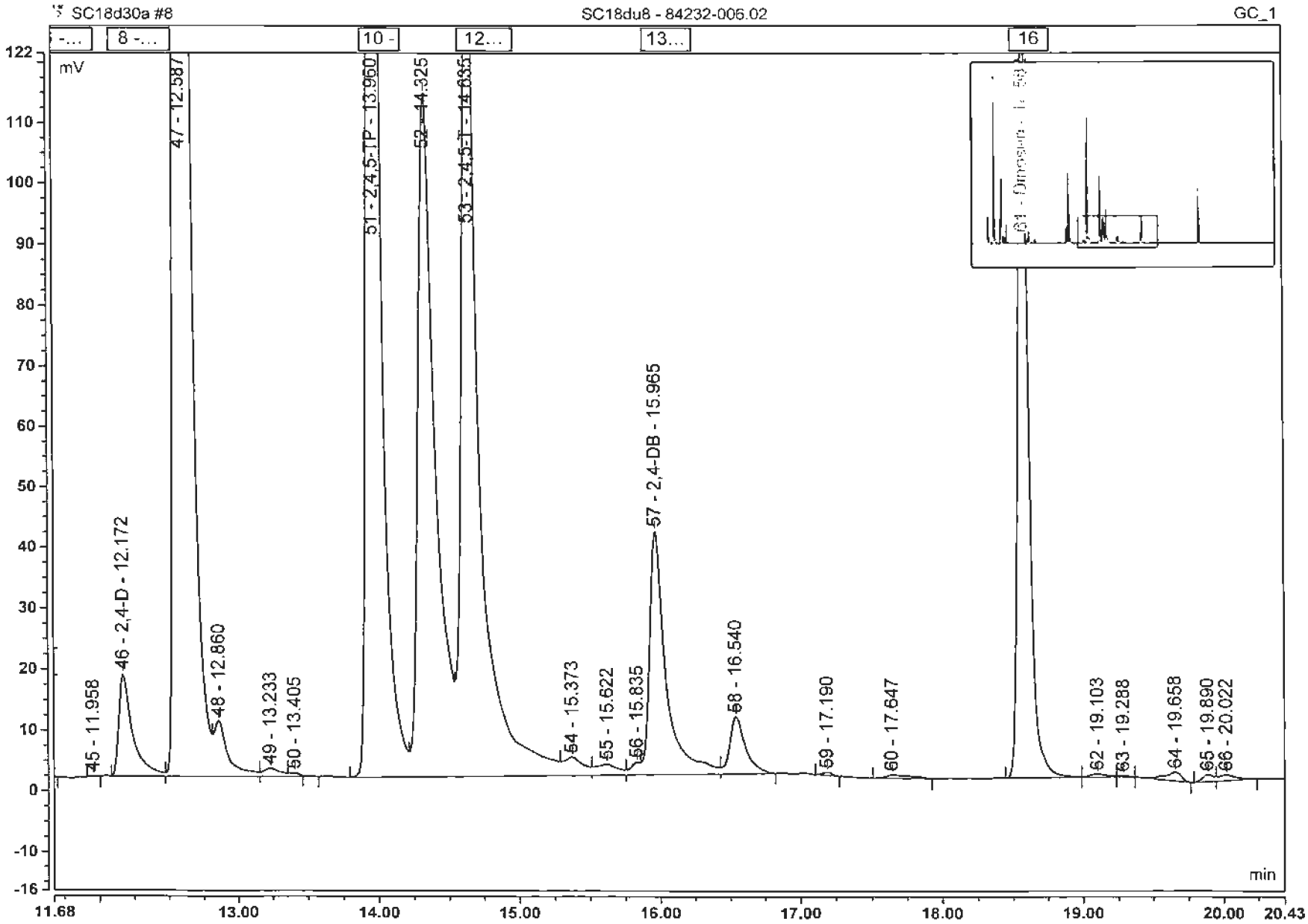
standard


SC18d30a #3 [manually integrated]
SC18du3 - 800 herb
GC_1
mV
min
40 - Dichlorprop - 11.763
41 - 2,4-D - 12.210
42 - 13.745
43 - 2,4,5-TP - 13.997
44 - 14.177
45 - 2,4,5-T - 14.685
46 - 15.665
47 - 2,4-DB - 16.018
48 - 16.107
49 - 16.627
50 - 17.042
51 - 18.432
52 - Dinoseb - 18.612
53 - 18.737
54 - 19.292
55 - 19.688
56 - 19.950
11.68
13.00
14.00
15.00
16.00
17.00
18.00
19.00
20.00
20.43

sample diluted



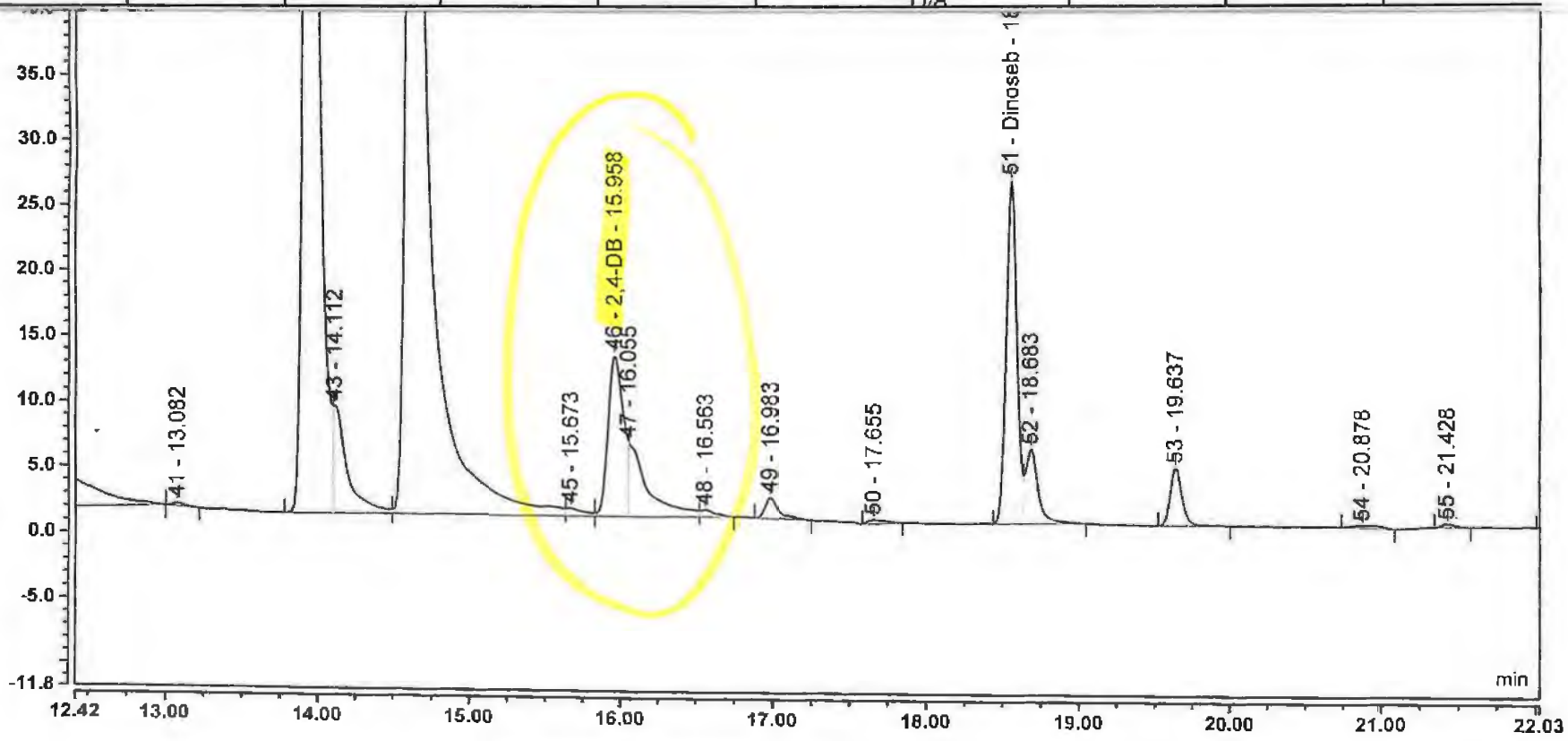
sample straight



To be posted near the instrument.

Component Table

Name	Ret.Time	Window	Channel	Stand.Meth.	Eval.Type	Cal.Type	Level "1"	Level "02"	Level "03"
Channel: GC_1 - 9 Items									
Dalapon	3.780	0.049 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
DCAA(S)	10.300	0.185 AN	GC_1	External	Height	Lin, WithOffset, 1/A	3000.000000	2500.000000	2000.000000
Dicamba	10.631	0.184 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dichlorprop	11.776	0.202 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-D	12.310	0.221 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-TP	14.020	0.144 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4,5-T	14.765	0.197 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
2,4-DB	16.061	0.176 AN	GC_1	External	Area	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000
Dinoseb	18.638	0.140 AN	GC_1	External	Height	Lin, WithOffset, 1/A	1500.000000	1250.000000	1000.000000



[redacted]
Fibertec
environmental
services

Friday, October 12, 2018

Fibertec Project Number:	87067
Project Identification:	Remedial Herbicide QA Sample /
Submittal Date:	10/03/2018

Mr. Ken Mueller
Fibertec, Inc.
1914 Holloway Drive
Holt, Michigan 48842

Dear Mr. Mueller,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 10 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

Natalie Zaleski

By Natalie Zaleski at 2:27 PM, Oct 12, 2018

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Fibertec, Inc.**	Sample Description:	**Acid Herbicide in Soil**	Chain of Custody:	**NA**
Client Project Name:	**Remedial Herbicide QA Sample**	Sample No:	**SQCO-006**	Collect Date:	**10/03/18**
Client Project No:	**NA**	Sample Matrix:	**PT: Solids**	Collect Time:	**NA**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Organochlorine Herbicides **Aliquot ID: 87067-001** **Matrix: PT: Solids**
Method: EPA 8151A **Description: Acid Herbicide in Soil**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
‡ 1,2,4-DB	721		µg/kg	167	25	10/09/18	PS18J08F	10/11/18	SC18J11A	RDK

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
*: Value reported is outside QC limits

Exception Summary:

Accreditation Number(s):

T104704518-18-7 (TX)

87067-001	QAO
PT-KIT-IPC / NONE	1 of 1
CSN	SQCO-006
CSD	Acid Herbicide in Soil

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Certificate of Analysis

Acid Herbicides in Soil QC Sample

Catalog Number: SQCO-006
Lot Number: S0218
Manufacture Date: 01/23/2018
Certified Date: 02/12/2018

Expiration: 02/28/2021
Matrix: Solid
Hazards: Irritant

Analyte	Study Mean (ug/kg)	Gravimetric Concentration (ug/kg)	Acceptance Limits (ug/kg)
2,4,5-T	334	505 ± 0.88	50.5-853
2,4-D	438	946 ± 1.66	94.6-1350
2,4-DB	357	731 ± 1.28	73.1-1190
3,5-Dichlorobenzoic Acid	0.00	0.00 ± 0.00	0.00-0.00
4-Nitrophenol	0.00	0.00 ± 0.00	0.00-0.00
Acifluorfen	0.00	0.00 ± 0.00	0.00-0.00
Bentazon	0.00	0.00 ± 0.00	0.00-0.00
Chloramben	0.00	0.00 ± 0.00	0.00-0.00
Dalapon	265	801 ± 1.40	80.1-880
DCPA	0.00	0.00 ± 0.00	0.00-0.00
Dicamba	525	714 ± 1.25	71.4-1050
Dichloroprop	119	134 ± 0.23	13.4-253
Dinoseb	101	123 ± 0.22	12.3-210
MCPA	0.00	0.00 ± 0.00	0.00-0.00
MCPP	0.00	0.00 ± 0.00	0.00-0.00
Pentachlorophenol	429	580 ± 1.02	58.0-1260
Picloram	0.00	0.00 ± 0.00	0.00-0.00
Silvex(2,4,5-TP)	145	176 ± 0.31	35.5-255

This quality control sample was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 34. Acceptance limits are set at current industry standards. The study mean is set at the mean of an interlaboratory proficiency testing study with outlier rejection. This sample is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

Storage & Instructions For Use

Store the sample concentrate at 2-8°C.
Retrieve a vial and allow to equilibrate to room temperature.
Transfer the entire contents of the vial to your extraction vessel. Rinse the vial with two small aliquots of extraction solvent adding these rinseates to the extraction vessel.
Proceed with extraction and analysis by your approved method.
Determine the concentration of the analytes listed. Report in ug/kg assuming a 30 g sample size. No dry weight correction is required.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 675 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 007 **Date Initiated:** 07/03/18 **Date Due:** 07/24/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☑ 3 (RCA Required) ☐ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☑ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported Isophorone result was above the acceptance limits for the PT Study (See Attached)
Result reported: 5040 mg/Kg Actual Value: 4080 mg/Kg Mean Study Result: 2983 mg/Kg
Acceptance range: 939 to 5020 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the nonoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

Isophorone failed the LCS high (and was flagged accordingly). All of the other instruments that were passing for BNAs failed the ICV high for Isophorone, so the PT could not be analyzed on a different instrument. We have notes by each instrument that failed the ICV high to not report any hits for that compound from that instrument. The failing LCS was not a prep issue, but an instrument issue. The ICV and the LCS are two separate sources, and since they agree, it was determined that the calibration standard was the problem. (We've had a similar issue with 2,4-dinitrophenol being biased high in the calibration standard and had to switch providers for that compound).

Investigator(s): Bethany Annett

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

The initial calibration was biased low for Isophorone, causing the ICV to fail high on several instruments. This issue came up in the internal audit of Semi-volatiles, and it was determined that we should no longer report data (unqualified) when the ICV fails high and the samples are clean. A new stock calibration standard was sonicated before use, and tested to make sure it agreed with the ICV before a calibration curve was made up. The instruments are in the process of being re-calibrated with this new calibration standard, and the ICV passes for all compounds. A new vendor may eventually be needed for the calibration standard, but for now, this technique is working.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐ will close after remedial PT is passed ~ 8/1/18

Follow-Up Date: _____ ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : [signature] **Supervisory:** Bethany Annett 7.30.18

Quality Assurance: _____

Date Closed: 10/24/18

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D21a\
Data File : S518DL04.D
Acq On : 21 Apr 2018 9:55 am
Operator : chemist
Sample : ccv01
Misc : 4/18
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 21 10:19:47 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

CCV

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d4(I)	5.724	152	728035	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.951	136	2863635	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.708	164	1686223	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.223	188	2781619	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.278	240	3123919	20.00 mg/L	0.00
82) Perylene-d12(I)	19.271	264	3034052	20.00 mg/L	0.02
System Monitoring Compounds					
4) 2-Fluorophenol(S)	4.572	112	2094659	48.45 mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =	60.56%
6) Phenol-d6(S)	5.327	99	2444671	46.48 mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =	58.10%
31) 1-Fluoronaphthalene(S)	6.954	146	2888007	24.48 mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =	61.20%
45) 2-Fluorobiphenyl(S)	7.988	172	2470305	25.67 mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =	64.18%
62) 2,4,6-Tribromophenol(S)	9.506	330	712664	52.66 mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =	65.83%
77) 4-Terphenyl-d14(S)	12.024	244	3043541	25.73 mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery =	64.33%

Target Compounds (Multiplier applied to Results = YES)				ppb		Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.563	74	540235	23.23	#	94	23.23
3) Pyridine	3.613	79	1183304	24.26		94	24.26
5) Aniline	5.420	66	577474	23.01		94	23.01
7) Phenol	5.339	94	1407486	24.62		99	24.62
8) Bis(2-chloroethyl)ether	5.436	95	353074	23.14		89	23.14
9) 2-Chlorophenol	5.538	128	1216263	26.18		94	26.18
10) 1,3-Dichlorobenzene	5.681	146	1423442	25.93		98	25.93
11) 1,4-Dichlorobenzene	5.740	146	1404856	25.55		98	25.55
12) 1,2-Dichlorobenzene	5.892	146	1332126	25.44		98	25.44
13) Benzyl Alcohol	5.817	79	895241	24.97		97	24.97
14) 2-Methylphenol	5.892	107	856795	25.06		98	25.06
15) Bis(2-chloroisopropyl)...	5.923	45	1296173	21.73	#	87	21.73
16) N-Nitrosodi-n-propylamine	6.060	70	678993	23.17		92	23.17
17) 3&4-Methylphenol	6.029	107	1334094	25.80		100	25.80
18) Hexachloroethane	6.218	117	512773	25.32		88	25.32
20) Nitrobenzene	6.252	77	1161210	27.22		95	27.22
21) 2,6-Dimethylphenol	6.327	122	1014152	27.01		97	27.01
22) Isophorone	6.479	82	1506280	26.01		95	26.01
23) 2-Nitrophenol	6.560	139	681940	28.87		95	28.87
24) 2,4-Dimethylphenol	6.544	122	1044684	26.40		99	26.40
25) Bis(2-chloroethoxy)met...	6.634	93	1165078	26.11		95	26.11
26) 2,4-Dichlorophenol	6.786	162	1021408	29.46		97	29.46
27) 3,5-Dimethylphenol	6.671	122	1186907	26.01		98	26.01
28) 2,3-Dichlorophenol	6.851	162	808823	28.91		99	28.91
29) 2,3-Dimethylphenol	6.749	107	1161593	27.46		98	27.46
30) 1,2,4-Trichlorobenzene	6.882	180	1099270	28.08		99	28.08
32) Naphthalene	6.976	128	3782872	27.64		98	27.64
33) 3,4-Dimethylphenol	6.842	107	1374956	27.45		99	27.45
34) 3&4-Chlorophenol	6.842	130	757733	56.16		97	56.16
35) 2,6-Dichlorophenol	7.010	162	1026752	28.93		98	28.93
36) 4-Chloroaniline	6.991	65	376078	27.25		97	27.25
37) Hexachlorobutadiene	7.069	225	666973	29.61		99	29.61
38) Bis(2-chloroethoxy)ethane	7.339	63	910124	24.75		96	24.75
39) 4-Chloro-3-methylphenol	7.429	107	948384	29.48		98	29.48
40) 2-Methylnaphthalene	7.646	142	2406608	28.73		99	28.73
42) Hexachlorocyclopentadiene	7.798	237	682846	25.77		100	25.77
43) 2,4,6-Trichlorophenol	7.910	196	715981	28.93		99	28.93
44) 2,4,5-Trichlorophenol	7.954	196	760140	29.58		94	29.58
46) 2-Chloronaphthalene	8.143	162	2211846	27.05		99	27.05
47) 2-Nitroaniline	8.221	65	599475	26.12		89	26.12
48) 1,3-Dinitrobenzene	8.422	168	444975	28.87	#	1	28.87

104%.

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D21a\
Data File : S518DL07.D
Acq On : 21 Apr 2018 11:35 am
Operator : chemist
Sample : ps18d20c.lcs-bna
Misc : d20c bna soil
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 21 11:59:50 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.721	152	743644	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.948	136	2924251	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.711	164	1663220	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.223	188	2683683	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.281	240	3008879	20.00 mg/L	0.00
82) Perylene-d12(I)	19.274	264	2750101	20.00 mg/L	0.02

LCS

System Monitoring Compounds						
4) 2-Fluorophenol(S)	4.588	112	2954990	66.92 mg/L	0.02	
Spiked Amount 80.000	Range 31 - 112			Recovery	=	83.65%
6) Phenol-d6(S)	5.327	99	3617663	67.34 mg/L	0.00	
Spiked Amount 80.000	Range 32 - 113			Recovery	=	84.17%
31) 1-Fluoronaphthalene(S)	6.951	146	4140427	34.37 mg/L	0.00	
Spiked Amount 40.000	Range 46 - 114			Recovery	=	85.92%
45) 2-Fluorobiphenyl(S)	7.988	172	3744559	39.46 mg/L	0.00	
Spiked Amount 40.000	Range 49 - 115			Recovery	=	98.65%
62) 2,4,6-Tribromophenol(S)	9.509	330	1229600	92.11 mg/L	0.00	
Spiked Amount 80.000	Range 25 - 118			Recovery	=	115.14%
77) 4-Terphenyl-d14(S)	12.027	244	4858440	42.64 mg/L	0.00	
Spiked Amount 40.000	Range 48 - 117			Recovery	=	106.60%

Target Compounds (Multiplier applied to Results = YES)				ppb	Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.579	74	775302	32.64	# 92	32.64
3) Pyridine	3.656	79	794574	15.95	94	15.95
5) Aniline	5.411	66	699161	27.28	95	27.28
7) Phenol	5.339	94	1893855	32.43	98	32.43
8) Bis(2-chloroethyl)ether	5.429	95	476396	30.57	89	30.57
9) 2-Chlorophenol	5.535	128	1636670	34.48	94	34.48
10) 1,3-Dichlorobenzene	5.678	146	1780103	31.75	96	31.75
11) 1,4-Dichlorobenzene	5.737	146	1821147	32.42	98	32.42
12) 1,2-Dichlorobenzene	5.889	146	1687040	31.54	98	31.54
13) Benzyl Alcohol	5.814	79	1259355	34.39	98	34.39
14) 2-Methylphenol	5.892	107	1332727	38.15	98	38.15
15) Bis(2-chloroisopropyl)...	5.920	45	1769127	29.04	# 87	29.04
16) N-Nitrosodi-n-propylamine	6.050	70	936231	31.28	92	31.28
17) 3&4-Methylphenol	6.032	107	1717920	32.52	# 91	32.52
18) Hexachloroethane	6.215	117	649941	31.41	87	31.41
20) Nitrobenzene	6.252	77	1573424	~~36.11~~	95	36.11
22) Isophorone	6.470	82	2489375	42.10	94	42.10
23) 2-Nitrophenol	6.556	139	935344	38.78	95	38.78
24) 2,4-Dimethylphenol	6.547	122	1497705	37.06	96	37.06
25) Bis(2-chloroethoxy)met...	6.631	93	1789300	39.26	95	39.26
26) 2,4-Dichlorophenol	6.786	162	1462322	41.31	97	41.31
30) 1,2,4-Trichlorobenzene	6.879	180	1462236	36.58	100	36.58
32) Naphthalene	6.973	128	4663685	33.37	99	33.37
36) 4-Chloroaniline	6.985	65	443041	31.44	# 86	31.44
37) Hexachlorobutadiene	7.066	225	824643	35.85	100	35.85
39) 4-Chloro-3-methylphenol	7.429	107	1449258	44.11	98	44.11
40) 2-Methylnaphthalene	7.646	142	3320250	38.82	100	38.82
42) Hexachlorocyclopentadiene	7.798	237	864169	33.07	99	33.07
43) 2,4,6-Trichlorophenol	7.910	196	1021200	41.84	98	41.84
44) 2,4,5-Trichlorophenol	7.954	196	1117031	44.08	95	44.08
46) 2-Chloronaphthalene	8.143	162	3030199	37.57	99	37.57
47) 2-Nitroaniline	8.221	65	859456	37.97	88	37.97
48) 1,3-Dinitrobenzene	8.429	168	688130	45.26	# 1	45.26
49) Dimethyl Phthalate	8.370	163	3612829	42.23	99	42.23
50) Acenaphthylene	8.575	152	4678580	36.07	99	36.07
51) 2,6-Dinitrotoluene	8.447	165	896487	43.99	90	43.99
52) Acenaphthene	8.745	153	3163496	36.10	# 94	36.10
53) 3-Nitroaniline	8.634	138	843910	45.04	92	45.04
54) 2,4-Dinitrophenol	8.733	184	165665	14.23	# 1	14.23
55) Dibenzofuran	8.913	168	4339240	39.82	99	39.82
56) 4-Nitrophenol	8.767	65	620364	34.53	85	34.53

105%

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D21a\
Data File : S518DL09.D
Acq On : 21 Apr 2018 12:41 pm
Operator : chemist
Sample : 84232-007.01
Misc : d20c bna soil pe
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 21 13:06:14 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

interference or peak separation - not there in the dilution - that's why the diluted value was reported. Sample

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.721	152	760149	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.951	136	2991540	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.711	164	1724614	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.223	188	2622231	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.309	240	3048742	20.00 mg/L	0.04
82) Perylene-d12(I)	19.299	264	2866844	20.00 mg/L	0.05
System Monitoring Compounds					
4) 2-Fluorophenol(S)	4.588	112	2651789	58.75 mg/L	0.02
Spiked Amount 80.000	Range 31 - 112			Recovery =	73.44%
6) Phenol-d6(S)	5.327	99	3379154	61.54 mg/L	0.00
Spiked Amount 80.000	Range 32 - 113			Recovery =	76.92%
31) 1-Fluoronaphthalene(S)	6.954	146	3784363	30.71 mg/L	0.00
Spiked Amount 40.000	Range 46 - 114			Recovery =	76.78%
45) 2-Fluorobiphenyl(S)	7.988	172	3506569	35.63 mg/L	0.00
Spiked Amount 40.000	Range 49 - 115			Recovery =	89.08%
62) 2,4,6-Tribromophenol(S)	9.509	330	1157260	83.60 mg/L	0.00
Spiked Amount 80.000	Range 25 - 118			Recovery =	104.50%
77) 4-Terphenyl-d14(S)	12.030	244	4723122	40.91 mg/L	0.00
Spiked Amount 40.000	Range 48 - 117			Recovery =	102.27%

Target Compounds (Multiplier applied to Results = YES)				ppb	Qvalue		Raw Result
7) Phenol	5.343	94	4789946	80.24		96	80.24
9) 2-Chlorophenol	5.535	128	1420068	29.27		93	29.27
10) 1,3-Dichlorobenzene	5.678	146	2976474	51.94		99	51.94
11) 1,4-Dichlorobenzene	5.740	146	3600358	62.71		99	62.71
14) 2-Methylphenol	5.901	107	4739606	132.74		97	132.74
15) Bis(2-chloroisopropyl)...	5.929	45	5399782	86.71	#	85	86.71
17) 3&4-Methylphenol	6.038	107	6407801	118.67		99	118.67
18) Hexachloroethane	6.218	117	1464601	69.25		89	69.25
20) Nitrobenzene	6.262	77	4712730	105.73		93	105.73
22) Isophorone	6.494	82	3405370m	56.29			56.29
23) 2-Nitrophenol	6.560	139	1046983	42.43	#	72	42.43
24) 2,4-Dimethylphenol	6.557	122	5044144	122.02		92	122.02
25) Bis(2-chloroethoxy)met...	6.640	93	3642853	78.14		95	78.14
26) 2,4-Dichlorophenol	6.789	162	3130748	86.45		98	86.45
32) Naphthalene	6.973	128	3432929	24.01		97	24.01
35) 2,6-Dichlorophenol	7.016	162	5373363	144.95		99	144.95
37) Hexachlorobutadiene	7.072	225	3471576	147.51		99	147.51
39) 4-Chloro-3-methylphenol	7.438	107	4149136	123.44		98	123.44
40) 2-Methylnaphthalene	7.653	142	7927868	90.61		100	90.61
43) 2,4,6-Trichlorophenol	7.916	196	3022046	119.41		99	119.41
44) 2,4,5-Trichlorophenol	7.957	196	1962867	74.69		98	74.69
46) 2-Chloronaphthalene	8.143	162	2297068	27.47		99	27.47
49) Dimethyl Phthalate	8.276	163	10807804	121.82		97	121.82
50) Acenaphthylene	8.378	152	7740508	57.55		97	57.55
51) 2,6-Dinitrotoluene	8.460	165	2787329	131.90		91	131.90
52) Acenaphthene	8.749	153	4369202	48.09	#	95	48.09
54) 2,4-Dinitrophenol	8.733	184	280302	20.70	#	1	20.70
55) Dibenzofuran	8.916	168	4083448	36.14		100	36.14
56) 4-Nitrophenol	8.783	65	1408980	75.63		86	75.63
57) 2,4-Dinitrotoluene	8.876	165	4325054	152.84		91	152.84
58) Fluorene	9.270	166	6030052	61.27		99	61.27
59) Diethyl Phthalate	9.078	149	9676828	109.12		95	109.12
60) 4-Chlorophenyl Phenyle...	9.233	204	4892148	114.55		99	114.55
64) 2-Methyl-4,6-dinitroph...	9.289	198	1664571	87.35	#	83	87.35
67) 4-Bromophenyl Phenylether	9.736	248	4377245	173.00		99	173.00
69) Pentachlorophenol	10.019	266	1559578	79.11		100	79.11
70) Phenanthrene	10.251	178	5186390	39.84		99	39.84
73) Di-n-butyl Phthalate	10.692	149	38987	0.29		99	0.29
74) Fluoranthene	11.586	202	15847012	113.77		96	113.77
76) Pyrene	11.888	202	58768	0.39	#	81	0.39
78) Butyl Benzyl Phthalate	12.800	149	4852072	72.34		93	72.34

3753

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D22a\
Data File : S518DM05.D
Acq On : 22 Apr 2018 1:32 pm
Operator : chemist
Sample : ccv01
Misc : 4/18
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 22 13:57:00 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

CW

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.724	152	748440	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.951	136	2913512	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.708	164	1719840	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.220	188	2823824	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.278	240	3204929	20.00 mg/L	0.00
82) Perylene-d12(I)	19.274	264	3080534	20.00 mg/L	0.02
System Monitoring Compounds					
4) 2-Fluorophenol(S)	4.572	112	2167641	48.77 mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =	60.96%
6) Phenol-d6(S)	5.327	99	2520407	46.62 mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =	58.27%
31) 1-Fluoronaphthalene(S)	6.954	146	2935060	24.46 mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =	61.15%
45) 2-Fluorobiphenyl(S)	7.988	172	2538847	25.87 mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =	64.68%
62) 2,4,6-Tribromophenol(S)	9.506	330	713865	51.72 mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =	64.65%
77) 4-Terphenyl-d14(S)	12.024	244	3079072	25.37 mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery =	63.42%

Target Compounds (Multiplier applied to Results = YES)				ppb		Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.560	74	576129	24.10	#	94	24.10
3) Pyridine	3.610	79	1227142	24.47		94	24.47
5) Aniline	5.420	66	595796	23.10		95	23.10
7) Phenol	5.339	94	1437022	24.45		99	24.45
8) Bis(2-chloroethyl)ether	5.435	95	365422	23.30		89	23.30
9) 2-Chlorophenol	5.538	128	1253594	26.24		94	26.24
10) 1,3-Dichlorobenzene	5.681	146	1475737	26.15		98	26.15
11) 1,4-Dichlorobenzene	5.740	146	1457633	25.78		99	25.78
12) 1,2-Dichlorobenzene	5.892	146	1365566	25.37		98	25.37
13) Benzyl Alcohol	5.817	79	918966	24.93		99	24.93
14) 2-Methylphenol	5.892	107	884221	25.15		99	25.15
15) Bis(2-chloroisopropyl)...	5.923	45	1324657	21.60	#	87	21.60
16) N-Nitrosodi-n-propylamine	6.060	70	707029	23.47		92	23.47
17) 3&4-Methylphenol	6.029	107	1376908	25.90		100	25.90
18) Hexachloroethane	6.215	117	530760	25.49		90	25.49
20) Nitrobenzene	6.252	77	1193466	27.49		95	27.49
21) 2,6-Dimethylphenol	6.323	122	1033054	27.04		97	27.04
22) Isophorone	6.479	82	1534778	26.05		94	26.05
23) 2-Nitrophenol	6.556	139	694068	28.88		94	28.88
24) 2,4-Dimethylphenol	6.547	122	1066092	26.48		99	26.48
25) Bis(2-chloroethoxy)met...	6.634	93	1198321	26.39		95	26.39
26) 2,4-Dichlorophenol	6.786	162	1040617	29.50		97	29.50
27) 3,5-Dimethylphenol	6.671	122	1219036	26.26		99	26.26
28) 2,3-Dichlorophenol	6.851	162	827825	29.08		99	29.08
29) 2,3-Dimethylphenol	6.749	107	1191117	27.68		98	27.68
30) 1,2,4-Trichlorobenzene	6.882	180	1135950	28.53		100	28.53
32) Naphthalene	6.976	128	3794629	27.25		99	27.25
33) 3,4-Dimethylphenol	6.845	107	1383906	27.16		99	27.16
34) 3&4-Chlorophenol	6.836	130	772791	56.30		97	56.30
35) 2,6-Dichlorophenol	7.010	162	1051990	29.14		98	29.14
36) 4-Chloroaniline	6.991	65	380239	27.08		95	27.08
37) Hexachlorobutadiene	7.069	225	676835	29.53		100	29.53
38) Bis(2-chloroethoxy)ethane	7.339	63	932727	24.93		96	24.93
39) 4-Chloro-3-methylphenol	7.429	107	970460	29.65		99	29.65
40) 2-Methylnaphthalene	7.646	142	2470493	28.99		100	28.99
42) Hexachlorocyclopentadiene	7.798	237	706062	26.13		98	26.13
43) 2,4,6-Trichlorophenol	7.910	196	721691	28.59		100	28.59
44) 2,4,5-Trichlorophenol	7.954	196	792625	30.25		97	30.25
46) 2-Chloronaphthalene	8.143	162	2272397	27.25		99	27.25
47) 2-Nitroaniline	8.221	65	615748	26.31		90	26.31
48) 1,3-Dinitrobenzene	8.422	168	447177	28.44	#	1	28.44

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D22a\
Data File : S518DM07.D
Acq On : 22 Apr 2018 2:38 pm
Operator : chemist
Sample : 84232-007.02
Misc : d20c bna soil10x
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 22 15:02:40 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d4(I)	5.721	152	755944	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.944	136	2954553	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.705	164	1742590	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.220	188	2858828	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.269	240	3278286	20.00 mg/L	0.00
82) Perylene-d12(I)	19.265	264	3213533	20.00 mg/L	0.01

dilution

System Monitoring Compounds							
4) 2-Fluorophenol(S)	4.575	112	273736	6.10 mg/L	0.00		
Spiked Amount 80.000	Range 31 - 112			Recovery		=	7.63%#
6) Phenol-d6(S)	5.317	99	355749	6.51 mg/L	0.00		
Spiked Amount 80.000	Range 32 - 113			Recovery		=	8.14%#
31) 1-Fluoronaphthalene(S)	6.948	146	407256	3.35 mg/L	0.00		
Spiked Amount 40.000	Range 46 - 114			Recovery		=	8.38%#
45) 2-Fluorobiphenyl(S)	7.981	172	398099	4.00 mg/L	0.00		
Spiked Amount 40.000	Range 49 - 115			Recovery		=	10.00%#
62) 2,4,6-Tribromophenol(S)	9.500	330	113192	8.09 mg/L	0.00		
Spiked Amount 80.000	Range 25 - 118			Recovery		=	10.11%#
77) 4-Terphenyl-d14(S)	12.018	244	532710	4.29 mg/L	0.00		
Spiked Amount 40.000	Range 48 - 117			Recovery		=	10.73%#

Target Compounds (Multiplier applied to Results = YES)				ppb		Qvalue	Raw Result
7) Phenol	5.330	94	514985	8.67		93	8.67
9) 2-Chlorophenol	5.532	128	145291	3.01		94	3.01
10) 1,3-Dichlorobenzene	5.678	146	323808	5.68		97	5.68
11) 1,4-Dichlorobenzene	5.737	146	399597	7.00		99	7.00
14) 2-Methylphenol	5.886	107	523884	14.75		99	14.75
15) Bis(2-chloroisopropyl)...	5.920	45	661368	10.68		89	10.68
17) 3&4-Methylphenol	6.019	107	720296	13.41		99	13.41
18) Hexachloroethane	6.215	117	150615	7.16		88	7.16
20) Nitrobenzene	6.249	77	498958	11.33		95	11.33
22) Isophorone	6.457	82	449552	7.52		93	7.52
23) 2-Nitrophenol	6.553	139	112232	4.61	#	70	4.61
24) 2,4-Dimethylphenol	6.538	122	607219	14.87		94	14.87
25) Bis(2-chloroethoxy)met...	6.628	93	424098	9.21		95	9.21
26) 2,4-Dichlorophenol	6.780	162	329260	9.21		98	9.21
32) Naphthalene	6.966	128	363725	2.58	#	95	2.58
35) 2,6-Dichlorophenol	7.000	162	636363	17.38		98	17.38
37) Hexachlorobutadiene	7.066	225	425288	18.30		99	18.30
39) 4 Chloro-3-methylphenol	7.426	107	443953	13.37		97	13.37
40) 2 Methylnaphthalene	7.643	142	1054979	12.21		99	12.21
43) 2,4,6-Trichlorophenol	7.907	196	321533	12.57		100	12.57
44) 2,4,5-Trichlorophenol	7.950	196	197263	7.43	#	94	7.43
46) 2-Chloronaphthalene	8.140	162	250095	2.96		97	2.96
49) Dimethyl Phthalate	8.354	163	1289618	14.39		100	14.39
50) Acenaphthylene	8.565	152	954989	7.03		99	7.03
51) 2,6-Dinitrotoluene	8.435	165	288106	13.49		92	13.49
52) Acenaphthene	8.739	153	509127	5.55	#	94	5.55
54) 2,4-Dinitrophenol	8.727	184	18217	5.08	#	1	5.08
55) Dibenzofuran	8.907	168	455884	3.99		98	3.99
56) 4-Nitrophenol	8.758	65	127593	6.78		86	6.78
57) 2,4-Dinitrotoluene	8.851	165	468682	16.39		90	16.39
58) Fluorene	9.258	166	736344	7.40		99	7.40
59) Diethyl Phthalate	9.053	149	1323447	14.77		99	14.77
60) 4-Chlorophenyl Phenyle...	9.217	204	615248	14.26		97	14.26
64) 2-Methyl-4,6 dinitroph...	9.270	198	171645	8.26	#	82	8.26
67) 4-Bromophenyl Phenylether	9.720	248	594447	21.55		99	21.55
69) Pentachlorophenol	10.012	266	93086	4.33		99	4.33
70) Phenanthrene	10.242	178	655602	4.62		98	4.62
74) Fluoranthene	11.561	202	2237414	14.73		97	14.73
78) Butyl Benzyl Phthalate	12.785	149	531706	7.37		94	7.37
79) Benzo(a)anthracene	14.235	228	2052588	12.73		99	12.73
80) Chrysene	14.331	228	1180712	7.75		99	7.75

=5014

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D22a\
Data File : S518DM08.D
Acq On : 22 Apr 2018 3:10 pm
Operator : chemist
Sample : 84232 007.03
Misc : d20c bna soil 5x
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 22 15:35:27 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene d4(I)	5.721	152	732713	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.945	136	2909122	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.705	164	1701481	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.220	188	2779362	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.272	240	3156195	20.00 mg/L	0.00
82) Perylene-d12(I)	19.268	264	3027319	20.00 mg/L	0.02

dil.

System Monitoring Compounds							
4) 2-Fluorophenol(S)	4.579	112	539112	12.39 mg/L	0.00		
Spiked Amount 80.000	Range 31 - 112			Recovery		=	15.49%#
6) Phenol-d6(S)	5.318	99	691469	13.06 mg/L	0.00		
Spiked Amount 80.000	Range 32 - 113			Recovery		=	16.32%#
31) 1-Fluoronaphthalene(S)	6.948	146	795633	6.64 mg/L	0.00		
Spiked Amount 40.000	Range 46 - 114			Recovery		=	16.60%#
45) 2-Fluorobiphenyl(S)	7.982	172	776259	8.00 mg/L	0.00		
Spiked Amount 40.000	Range 49 - 115			Recovery		=	20.00%#
62) 2,4,6-Tribromophenol(S)	9.500	330	220099	16.12 mg/L	0.00		
Spiked Amount 80.000	Range 25 - 116			Recovery		=	20.15%#
77) 4-Terphenyl-d14(S)	12.021	244	1037200	8.68 mg/L	0.00		
Spiked Amount 40.000	Range 48 - 117			Recovery		=	21.70%#

Target Compounds (Multiplier applied to Results = YES)				ppb		Qvalue	Raw Result
7) Phenol	5.330	94	1010652	17.56		93	17.56
9) 2-Chlorophenol	5.532	128	285335	6.10		93	6.10
10) 1,3-Dichlorobenzene	5.678	146	621441	11.25		98	11.25
11) 1,4-Dichlorobenzene	5.737	146	771644	13.94		98	13.94
14) 2-Methylphenol	5.869	107	1018535	29.59		99	29.59
15) Bis(2-chloroisopropyl)...	5.920	45	1270902	21.17		90	21.17
17) 3&4-Methylphenol	6.022	107	1398314	26.87		99	26.87
18) Hexachloroethane	6.213	117	298765	14.66		90	14.66
20) Nitrobenzene	6.249	77	976272	22.52		95	22.52
22) Isophorone	6.460	82	890104	15.13		95	15.13
23) 2-Nitrophenol	6.553	139	223767	9.33	#	72	9.33
24) 2,4-Dimethylphenol	6.541	122	1174001	29.20		94	29.20
25) Bis(2-chloroethoxy)met...	6.628	93	825502	18.21		95	18.21
26) 2,4-Dichlorophenol	6.780	162	653916	18.57		97	18.57
32) Naphthalene	6.966	128	707986	5.09		99	5.09
35) 2,6-Dichlorophenol	7.004	162	1229838	34.12		98	34.12
37) Hexachlorobutadiene	7.066	225	813025	35.52		99	35.52
39) 4 Chloro-3-methylphenol	7.426	107	868878	26.58		97	26.58
40) 2-Methylnaphthalene	7.643	142	2011508	23.64		99	23.64
43) 2,4,6-Trichlorophenol	7.907	196	632097	25.31		100	25.31
44) 2,4,5-Trichlorophenol	7.951	196	391444	15.10		95	15.10
46) 2-Chloronaphthalene	8.137	162	496317	6.02		98	6.02
49) Dimethyl Phthalate	8.357	163	2499411	28.56		99	28.56
50) Acenaphthylene	8.565	152	1833915	13.82		99	13.82
51) 2,6-Dinitrotoluene	8.438	165	575811	27.62		90	27.62
52) Acenaphthene	8.739	153	986668	11.01	#	95	11.01
54) 2,4-Dinitrophenol	8.724	184	53467	7.23	#	1	7.23
55) Dibenzofuran	8.907	168	886968	7.96		98	7.96
56) 4-Nitrophenol	8.755	65	272403	14.82		84	14.82
57) 2,4-Dinitrotoluene	8.854	165	897940	32.16		90	32.16
58) Fluorene	9.258	166	1418267	14.61		99	14.61
59) Diethyl Phthalate	9.056	149	2433539	27.82		98	27.82
60) 4-Chlorophenyl Phenyle...	9.221	204	1177367	27.94		97	27.94
64) 2-Methyl-4,6-dinitroph...	9.270	198	371963	18.42	#	81	18.42
67) 4-Bromophenyl Phenylether	9.720	248	1110236	41.40		99	41.40
69) Pentachlorophenol	10.012	266	245765	11.76		98	11.76
70) Phenanthrene	10.242	178	1248016	9.04		98	9.04
74) Fluoranthene	11.562	202	4269911	28.92		97	28.92
78) Butyl Benzyl Phthalate	12.785	149	1026439	14.78		94	14.78
79) Benzo(a)anthracene	14.238	228	3943257	25.39		99	25.39
80) Chrysene	14.341	228	2294829	15.65		99	15.65

5043

Quantitation Report (QT Reviewed)

Data Path : C:\S5\S5_DATA\S518D0815\
Data File : S518D815.D
Acq On : 8 Apr 2018 8:04 pm
Operator : chemist
Sample : bna ICV
Misc : 3/30
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Apr 11 11:36:13 2018
Quant Method : C:\S5\S5_METHOD\S5BNAB26.M
Quant Title : EPA 8270C
QLast Update : Wed Apr 11 11:34:36 2018
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.724	152	706720	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.351	136	3164239	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	8.711	164	1609200	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	10.223	188	2521081	20.00 mg/L	0.00
75) Chrysene-d12(I)	14.278	240	2958547	20.00 mg/L	0.00
82) Perylene-d12(I)	19.258	264	2643265	20.00 mg/L	0.00
System Monitoring Compounds					
4) 2-Fluorophenol(S)	4.569	112	3640983	86.76 mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =	108.45%#
6) Phenol-d6(S)	5.327	99	4359075	85.38 mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =	106.73%#
31) 1-Fluoronaphthalene(S)	6.954	146	5099421	39.12 mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =	97.80%
45) 2-Fluorobiphenyl(S)	7.988	172	4103689	44.69 mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =	111.72%#
62) 2,4,6-Tribromophenol(S)	9.509	330	1258444	97.43 mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =	121.79%
77) 4-Terphenyl-d14(S)	12.027	244	5015015	44.76 mg/L	0.00
Spiked Amount 40.000	Range 44 - 124			Recovery =	111.90%

Target Compounds (Multiplier applied to Results = YES)				ppb	Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.563	74	988028	43.77	# 93	43.77
3) Pyridine	3.607	79	1876940	39.64	98	39.64
5) Aniline	5.426	66	1031447	42.34	100	42.34
7) Phenol	5.339	94	2342649	42.21	98	42.21
8) Bis(2-chloroethyl)ether	5.439	95	627468	42.36	96	42.36
9) 2-Chlorophenol	5.538	128	1843954	40.88	97	40.88
10) 1,3-Dichlorobenzene	5.681	146	2167758	40.68	99	40.68
11) 1,4-Dichlorobenzene	5.740	146	2233751	41.85	99	41.85
12) 1,2-Dichlorobenzene	5.892	146	2202212	43.33	99	43.33
13) Benzyl Alcohol	5.817	79	1445439	41.54	98	41.54
14) 2-Methylphenol	5.889	107	1629787	49.10	99	49.10
15) Bis(2-chloroisopropyl)...	5.926	45	2381202	41.13	96	41.13
16) N-Nitrosodi-n-propylamine	6.059	70	1243421	40.20	99	40.20
17) 3&4-Methylphenol	6.032	107	1878765	37.42	# 89	37.42
18) Hexachloroethane	6.218	117	822284	41.82	97	41.82
20) Nitrobenzene	6.255	77	1828459	38.78	99	38.78
22) Isophorone	6.472	82	3210725	50.18	96	50.18
23) 2-Nitrophenol	6.559	139	1059349	40.59	98	40.59
24) 2,4-Dimethylphenol	6.544	122	1752757	40.09	96	40.09
25) Bis(2-chloroethoxy)met...	6.634	93	2105625	42.70	99	42.70
26) 2,4-Dichlorophenol	6.786	162	1521543	39.72	99	39.72
30) 1,2,4-Trichlorobenzene	6.879	180	1710910	39.56	100	39.56
32) Naphthalene	6.975	128	5894170	38.97	100	38.97
36) 4-Chloroaniline	6.985	65	613661	40.24	# 86	40.24
37) Hexachlorobutadiene	7.069	225	965794	38.80	100	38.80
39) 4-Chloro-3-methylphenol	7.426	107	1462535	41.14	98	41.14
40) 2-Methylnaphthalene	7.646	142	3936397	42.54	100	42.54
42) Hexachlorocyclopentadiene	7.801	237	1197494	47.36	99	47.36
43) 2,4,6-Trichlorophenol	7.910	196	1044954	44.25	100	44.25
44) 2,4,5-Trichlorophenol	7.950	196	1074483	43.82	98	43.82
46) 2-Chloronaphthalene	8.143	162	3320708	42.55	99	42.55
47) 2-Nitroaniline	8.221	65	900213	41.11	98	41.11
48) 1,3-Dinitrobenzene	8.425	168	623643	42.39	# 1	42.39
49) Dimethyl Phthalate	8.373	163	3438239	41.53	99	41.53
50) Acenaphthylene	8.574	152	5045552	40.21	98	40.21

ICV for samples

Quantitation Report (QT Reviewed)

Data Path : C:\S6\S6_DATA\S618E15a\
Data File : S618EF13.D
Acq On : 15 May 2018 5:37 pm
Operator :
Sample : 40 bna ICV
Misc : 5/8
ALS Vial : 15 Sample Multiplier: 1

Quant Time: May 15 19:09:37 2018
Quant Method : C:\S6\S6_METHOD\S6BNAA99.M
Quant Title :
QLast Update : Tue May 15 19:07:07 2018
Response via : Initial Calibration

25.52
2 high

DAT 5.15.18 other INST ICV. Similar to PE

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.501	152	190703	20.00	mg/L	0.00
19) Naphthalene-d8(I)	7.656	136	854780	20.00	mg/L	0.00
41) Acenaphthene-d10(I)	12.121	164	451106	20.00	mg/L	0.00
63) Phenanthrene-d10(I)	14.929	188	669496	20.00	mg/L	0.00
75) Chrysene-d12(I)	24.379	240	641534	20.00	mg/L	0.02
82) Perylene-d12(I)	28.709	264	635120	20.00	mg/L	0.01
System Monitoring Compounds						
4) 2-Fluorophenol(S)	4.286	112	353436	82.55	mg/L	0.00
Spiked Amount 80.000	Range 22 - 85				Recovery =	103.19%#
6) Phenol-d6(S)	5.032	99	1157065	83.56	mg/L	0.00
Spiked Amount 80.000	Range 11 - 60				Recovery =	104.45%#
31) 1-Fluoronaphthalene(S)	7.675	146	1372018	41.07	mg/L	0.00
Spiked Amount 40.000	Range 44 - 103				Recovery =	102.68%
45) 2-Fluorobiphenyl(S)	10.944	172	1097809	42.52	mg/L	0.00
Spiked Amount 40.000	Range 44 - 109				Recovery =	106.30%
62) 2,4,6-Tribromophenol(S)	13.422	330	276556	93.19	mg/L	0.01
Spiked Amount 80.000	Range 38 - 138				Recovery =	116.49%
77) 4-Terphenyl-d14(S)	20.694	244	1115536	43.42	mg/L	0.00
Spiked Amount 40.000	Range 44 - 124				Recovery =	108.55%

Target Compounds (Multiplier applied to Results = NO)				ppb		Qvalue	Raw Result
2) N-Nitrosodimethylamine	3.323	74	284774	47.92		97	47.92
3) Pyridine	3.353	79	523164	41.66		99	41.66
5) Aniline	5.145	66	286206	42.09		99	42.09
7) Phenol	5.047	94	610474	43.68		100	43.68
8) Bis(2-chloroethyl)ether	5.160	95	160539	43.87		100	43.87
9) 2-Chlorophenol	5.276	128	569978	44.49		100	44.49
10) 1,3-Dichlorobenzene	5.445	146	617436	42.53		100	42.53
11) 1,4-Dichlorobenzene	5.520	146	629959	43.54		100	43.54
12) 1,2-Dichlorobenzene	5.715	146	584357	42.72		100	42.72
13) Benzyl Alcohol	5.617	108	361601	44.03		100	44.03
14) 2-Methylphenol	5.711	107	425651	48.40		100	48.40
15) Bis(2-chloroisopropyl)...	5.763	45	870898	44.41		99	44.41
16) N-Nitrosodi-n-propylamine	5.955	70	325978	42.57		100	42.57
17) 3&4-Methylphenol	5.910	107	548765	39.42	#	89	39.42
18) Hexachloroethane	6.191	117	223792	43.78		99	43.78
20) Nitrobenzene	6.251	77	464845	42.05		100	42.05
22) Isophorone	6.637	82	889831	52.92		100	52.92+
23) 2-Nitrophenol	6.794	139	311666	45.18		99	45.18
24) 2,4-Dimethylphenol	6.783	107	491459	43.98		100	43.98
25) Bis(2-chloroethoxy)met...	6.974	93	588891	46.56		100	46.56
26) 2,4-Dichlorophenol	7.274	162	423826	44.57		100	44.57
30) 1,2,4-Trichlorobenzene	7.499	180	430862	42.44		100	42.44
32) Naphthalene	7.720	128	1683076	41.35		100	41.35
36) 4-Chloroaniline	7.784	65	171633	41.38		97	41.38
37) Hexachlorobutadiene	8.016	225	196787	41.17		99	41.17
39) 4-Chloro-3-methylphenol	9.298	107	428614	45.54		99	45.54
40) 2-Methylnaphthalene	9.988	142	1159568	44.65		100	44.65
42) Hexachlorocyclopentadiene	10.468	237	239808	46.71		99	46.71
43) 2,4,6-Trichlorophenol	10.745	196	261012	45.38		99	45.38
44) 2,4,5-Trichlorophenol	10.820	196	278437	45.25		100	45.25

Quantitation Report (QT Reviewed)

Data Path : C:\SJ\SJ DATA\SJ18G30a\
Data File : SJ18Gu16.D
Acq On : 30 Jul 18 18:26
Operator :
Sample : 40 bna ICV
Misc : 7/17
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 31 10:53:58 2018
Quant Method : C:\SJ\SJ METHODS\SJBNAA16.M
Quant Title :
QLast Update : Tue Jul 31 10:51:06 2018
Response via : Initial Calibration

1 CV.

new way to prepare calib. curve.

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.096	152	91400	20.00 mg/L	0.00
19) Naphthalene-d8(I)	6.522	136	479865	20.00 mg/L	0.00
41) Acenaphthene-d10(I)	11.129	164	281405	20.00 mg/L	0.00
63) Phenanthrene-d10(I)	13.687	188	399501	20.00 mg/L	0.00
75) Chrysene-d12(I)	21.652	240	271899	20.00 mg/L	0.00
82) Perylene-d12(I)	26.175	264	279117	20.00 mg/L	0.00
System Monitoring Compounds					
4) 2-Fluorophenol(S)	3.702	112	673775	96.66 mg/L	0.00
Spiked Amount 80.000	Range 22 - 85			Recovery =	120.83%#
6) Phenol-d6(S)	4.765	99	906963	94.11 mg/L	0.00
Spiked Amount 80.000	Range 11 - 60			Recovery =	117.64%#
31) 1-Fluoronaphthalene(S)	6.541	146	750389	37.10 mg/L	0.00
Spiked Amount 40.000	Range 44 - 103			Recovery =	92.75%
45) 2-Fluorobiphenyl(S)	8.758	172	671945	32.40 mg/L	0.00
Spiked Amount 40.000	Range 44 - 109			Recovery =	81.00%
62) 2,4,6-Tribromophenol(S)	12.686	330	243133	70.76 mg/L	0.00
Spiked Amount 80.000	Range 38 - 138			Recovery =	88.45%
77) 4-Terphenyl-d14(S)	17.750	244	501501	37.21 mg/L	0.01
Spiked Amount 40.000	Range 44 - 124			Recovery =	93.03%

Target Compounds (Multiplier applied to Results = NO)				ppb	Qvalue		Raw Result
2) N-Nitrosodimethylamine	1.442	74	382009m	45.41			45.41
3) Pyridine	1.419	79	653540m	48.71			48.71
5) Aniline	4.775	93	611917	45.83	#	55	45.83
7) Phenol	4.777	94	525722	45.61	#	56	45.61
8) Bis(2-chloroethyl)ether	4.854	95	120634	46.53	#	47	46.53
9) 2-Chlorophenol	4.889	128	348212	45.89	#	78	45.89
10) 1,3-Dichlorobenzene	5.038	146	311859	39.97	#	84	39.97
11) 1,4-Dichlorobenzene	5.114	146	319932	42.12	#	83	42.12
12) 1,2-Dichlorobenzene	5.265	146	284481	39.55	#	83	39.55
13) Benzyl Alcohol	5.257	108	243931	46.69	#	74	46.69
14) 2-Methylphenol	5.369	107	325465	49.27	#	89	49.27
15) Bis(2-chloroisopropyl)...	5.387	45	527403	43.71	#	79	43.71
16) N-Nitrosodi-n-propylamine	5.524	70	381327	41.39	#	75	41.39
17) 3&4-Methylphenol	5.528	107	409066	40.20	#	88	40.20
18) Hexachloroethane	5.600	117	125392	40.02		91	40.02
20) Nitrobenzene	5.687	77	423969	34.69	#	77	34.69
22) Isophorone	5.958	82	891013	45.53	#	95	45.53
23) 2-Nitrophenol	6.036	139	162838	38.87	#	79	38.87
24) 2,4-Dimethylphenol	6.098	107	482284	40.59		98	40.59
25) Bis(2-chloroethoxy)met...	6.210	93	491966	39.64	#	73	39.64
26) 2,4-Dichlorophenol	6.342	162	217229	42.99	#	85	42.99
30) 1,2,4-Trichlorobenzene	6.442	180	213633	35.02		96	35.02
32) Naphthalene	6.555	128	1112893	32.56		99	32.56
36) 4 Chloroaniline	6.638	65	211546	38.82	#	67	38.82
37) Hexachlorobutadiene	6.731	225	69965	38.91		99	38.91
39) 4-Chloro-3-methylphenol	7.488	107	478599	42.22	#	81	42.22
40) 2-Methylnaphthalene	7.777	142	703126	41.09		99	41.09
42) Hexachlorocyclopentadiene	8.150	237	86725	34.77		98	34.77
43) 2,4,6-Trichlorophenol	8.499	196	137586	33.43		99	33.43
44) 2,4,5-Trichlorophenol	8.598	196	142254	34.29	#	82	34.29
46) 2-Chloronaphthalene	9.078	162	558784	30.91	#	77	30.91
47) 2-Nitroaniline	9.498	65	311841	33.02	#	71	33.02
48) 1,3-Dinitrobenzene	10.455	168	92658m	33.49			33.49
49) Dimethyl Phthalate	10.408	163	708364	32.68	#	97	32.68
50) Acenaphthylene	10.654	152	971486	29.55		99	29.55

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 676 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 009 **Date Initiated:** 07/03/18 **Date Due:** 07/17/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☑ 3 (RCA Required) ☐ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Wet Chemistry ☐ Metals ☐ Digestions ☑ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported Isopropylbenzene result was above the acceptance limits for the PT Study (See Attached)
Result reported: 2940 mg/Kg Actual Value: 2500 mg/Kg Mean Study Result: 2327 mg/Kg
Acceptance range: 1720 to 2880 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the nonoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See attached document and e-mails.

Investigator(s): Liana Solis, Heather Smith

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

See attached document.

Follow-Up Required? (If required, reference this Report) *Yes* ☑ *No* ☐

Follow-Up Date: After SM-119 is passed ***Follow-Up Complete:*** *Yes* ☑ *No* ☐

VI. Approvals:

Technical : LS **Supervisory:** Liana Solis

Quality Assurance: Ken Mueller

Date Closed: 12/25/19

				Result	Mean	Assay			Acceptance Limits				
Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	4570	4322	4270	ug/kg	362	3200 to 5340	0.685	ACCEPT.	4/20/18	NSB
Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Chloroform	10184802	GC-MS	SW 8260B -- 1996	10800	9076	9270	ug/kg	712	6490 to 12000	2.42	ACCEPT.	4/20/18	NSB
Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	<600	ug/kg	0.00	0.00 to 600	n/a	ACCEPT.	4/20/18	NSB
cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	9080	7119	7330	ug/kg	856	4400 to 10300	2.29	ACCEPT.	4/20/18	NSB
cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	6300	4689	5100	ug/kg	681	3060 to 7140	2.07	ACCEPT.	4/20/18	NSB
Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	8640	7595	7840	ug/kg	870	5490 to 10200	1.20	ACCEPT.	4/20/18	NSB
Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	4670	4762	5020	ug/kg	291	3010 to 7020	0.316	ACCEPT	4/20/18	NSB
Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	5900	5208	5390	ug/kg	545	3770 to 7000	1.27	ACCEPT.	4/20/18	NSB
Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	2940	2327	2500	ug/kg	225	1720 to 2880	2.72	NOT ACCEPT.	4/20/18	NSB
Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	8950	7380	7800	ug/kg	2128	5460 to 10100	0.738	ACCEPT.	4/20/18	NSB
Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	10200	9056	9090	ug/kg	1607	5450 to 12700	0.712	ACCEPT.	4/20/18	NSB
Naphthalene	10184802	GC-MS	SW 8260B -- 1996	2470	2608	2760	ug/kg	370	1290 to 4000	0.373	ACCEPT.	4/20/18	NSB
n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	4/20/18	NSB
n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB
Styrene	10184802	GC-MS	SW 8260B -- 1996	9820	8476	9050	ug/kg	957	5430 to 12700	1.40	ACCEPT.	4/20/18	NSB
T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/20/18	NSB

III. Investigation of Non-Conformance

The preparation and storage instructions for the PT sample were reviewed and confirmed to have been followed correctly. Both the 50x and 500x dilutions match each other within reason. The retention times for both the 50x and 500x dilutions match. The matrix was checked and there was no matrix interference with Isopropylbenzene. The numbers on the report were entered in correctly.

The PT sample was run in batch VJ18D19A. The QC run before the PT sample was not near failing, although it was slightly high. Isopropylbenzene was 12% high in the CCV, 23% high in the LCS, and 20% high in the LCD. Isopropylbenzene was also slightly high, but not failing in the MS/MSD run after the PT sample. It was 25% high in the MS, and 30% high in the LCD. Isopropylbenzene showed no RPD issues. It varied by 2% between the LCS and LCD and varied by 4% in the MS/MSD. It was also noted that 4-Isopropyltoluene showed a similar pattern to Isopropylbenzene where it was slightly high in the CCV, and increasingly higher in the LCS/LCD and MS/MSD.

The batch VJ18D19A was run under the most recent calibration curve VJMETC86. The calibration curve ran on April 18, 2018. The ion source was last cleaned on March 22, 2018. The sparge tube was replaced and the filaments were switched and the instrument was retuned as maintenance done on April 18, 2018 to correct for an issue of failing surrogates before the calibration curve was run. The calibration curve had several higher %RSD's that were in the double digits. Isopropylbenzene had an RSD of 11.98%. The internal standard Chlorobenzene-d5, that Isopropylbenzene is quantified under, was approximately 15% low in the ICV compared to the level 50 point in the calibration curve. The spread of the internal standard Chlorobenzene-d5 was 7.97%.

Isopropylbenzene is not known to have issues with reproducibility, response, recovery, stability, and/or chromatography. The EPA 8260D method has a multi-laboratory study in Table 2 for the relative standard deviation of recoveries by analyte. Isopropylbenzene in this study has an RSD of 11% for soil samples. Our reproducibility of Isopropylbenzene in the QC for the PT sample does not seem to be the reason for the failure nor is it outside the norm of what is expected.

The CCV standard is from ECS and the LCS standard is from Phenova. It was noted that Isopropylbenzene along with 4-Isopropyltoluene were following the same trend of hitting at the correct level in the CCV, but higher in the LCS/LCD and MS/MSD in both waters and soils. To check if this occurrence way isolated to only VJ, or if it was occurring on multiple instruments for either water or soil matrix, batches VI18F20A and VB18D19A were also investigated and match this observed pattern. Current batches in July 2018 are still showing this pattern. The likely reason that this is occurring is due to the Isopropylbenzene and 4-Isopropyltoluene being low in CCV standard. To test the hypothesis that the Isopropylbenzene and 4-Isopropyltoluene are low in the CCV and at the expected concentration in the LCS standard, a standard with Isopropylbenzene and 4-Isopropyltoluene has been purchased from a third source, Absolute Standards, to compare to our current stock standards.

The NYSDEC Stars VOA standard was purchased from Absolute Standards and received in lab on July 10, 2018 and run on July 11, 2018 beside the CCV and LCS standards each at a concentration of 50 ug/L. The three standards were run on VJ, the same instrument the soil PT sample was run on, and VM, a water instrument. The NYSDEC Stars VOA contains 16 analytes including Isopropylbenzene and 4-Isopropyltoluene. Both runs on the soil instrument VJ and on

the water instrument VM show the same pattern of the CCV standard being noticeably lower than the LCS and third source standard. (See figures 9-12.)

ECS, the provider of the CCV standard was contacted on July 16, 2018. On July 20, 2018 Jeffrey Akers from ECS responded saying they compared the subject lot to another lot of the ECS-A-033 and to singles of the 4-Isopropyltoluene and Isopropylbenzene and they found the batch within spec.

On August 6, 2018 Jeff Akers reported in an e-mail that the ECS/ SPEX lab was not seeing the pattern of ECS-A-033 being lower in 4-Isopropyltoluene and Isopropylbenzene when compared to other ECS sources of 4-Isopropyltoluene and Isopropylbenzene. Jeff Akers requested information on what standards Fibertec was using for their second source comparison. ECS obtained the same NYSDEC Stars VOA standard from Absolute, but did not obtain the Phenova standard despite receiving permission to obtain the custom blend from Fibertec and Phenova.

On August 20, 2018 Liana Solis had a conference call with Jeff Akers, Dana Ostrowski, Dr. Alan Katz, and Kevin McKeown. The team from ECS was still unable to recreate the issue, so they mailed a different lot of the ECS-A-033 and singles of 4-Isopropyltoluene and Isopropylbenzene. The ECS-A-033 lot from the failed PT was TS170410012, the lot mailed from ECS was TS180207040.

The two lots of ECS-A-033 had different levels of Isopropylbenzene, but the same levels of 4-Isopropyltoluene. The new lot of ECS-A-033 (lot: TS180207040) has Isopropylbenzene at a level that matched the NYSDEC Stars VOA standard from Absolute and the Phenomenex Custom VOA standard AL0-130022. To act as an interim fix until the issue with both compounds would be resolved, the volatiles lab discarded all ECS-A-033 from lot TS170410012 and replaced it with standard from lot TS180207040.

Figure 1 is an overlay of internal standard that Isopropylbenzene is quantified under in VJ18D19A, the batch the PT sample was run under. The internals do not show signs of bouncing between injections and are fairly stable, so the jumping between the CCV and LCS standards is not caused by the internal changing.

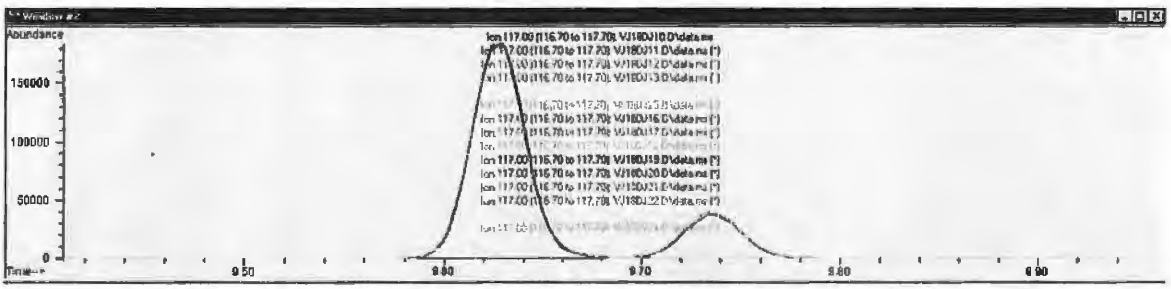


Figure 1

Figures 2-8 Key:
File VJ18DJ16 is the file with the CCV.
File VJ18DJ17 is the file with the LCS.
File VJ18DJ18 is the file with the LCD.
File VJ18DJ28 is the file with the MS.
File VJ18DJ29 is the file with the MSD.

Figure 2 is the overlay of the primary ion 105 for Isopropylbenzene for the 5 QC injections.

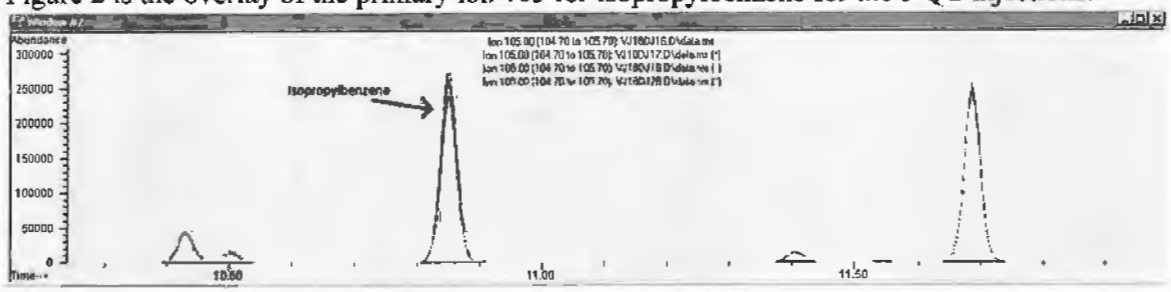


Figure 2

Figure 3 is the overlay of ion 77 in Isopropylbenzene for the 5 QC injections.

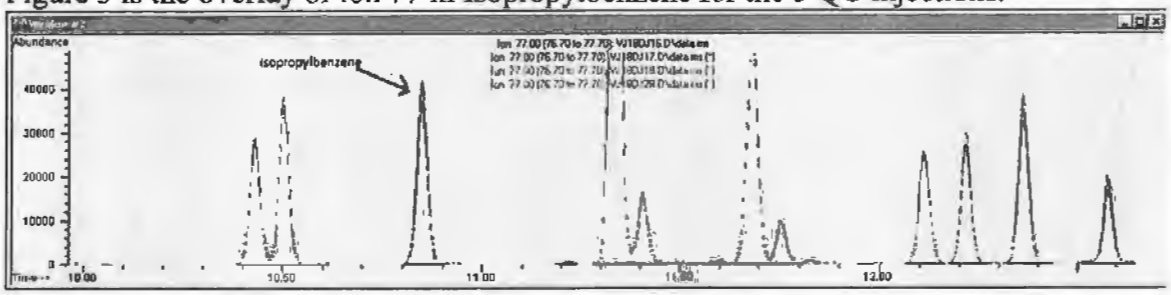


Figure 3

Figure 4 is the overlay of ion 79 in Isopropylbenzene for the 5 QC injections.

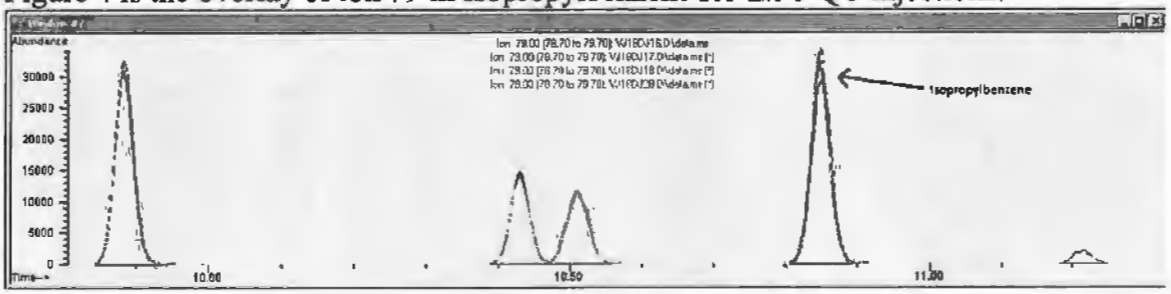


Figure 4

Figure 5 is the overlay of ion 120 in Isopropylbenzene for the 5 QC injections.

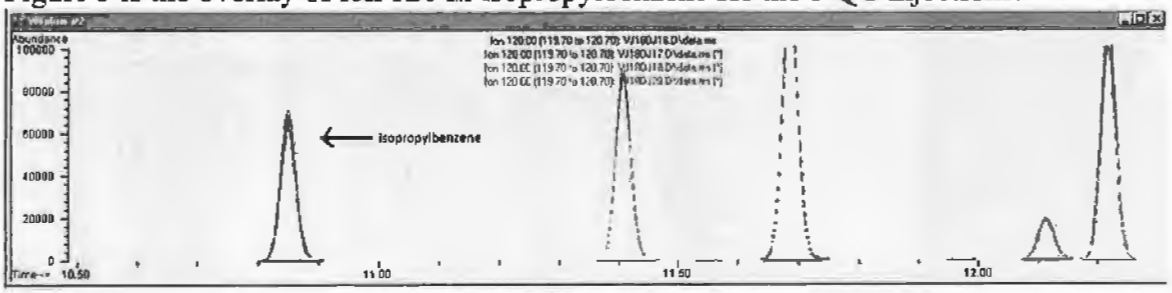


Figure 5

Figure 6 is the overlay of the primary ion 119 in 4-Isopropyltoluene for the 5 QC injections.

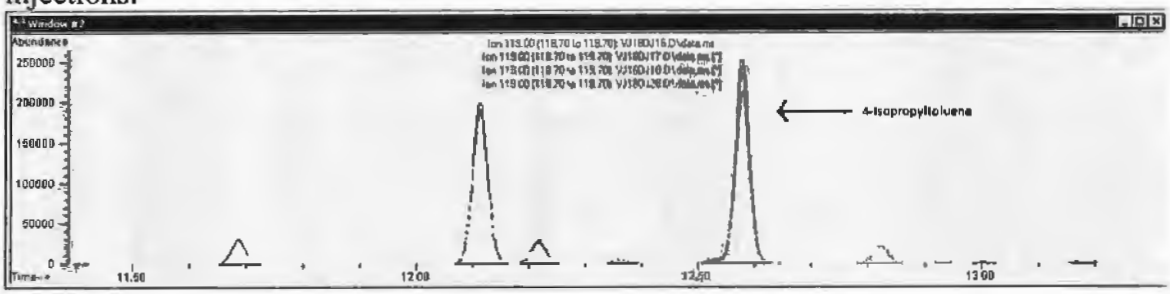


Figure 6

Figure 7 is the overlay of ion 91 in 4-Isopropyltoluene for the 5 QC injections.

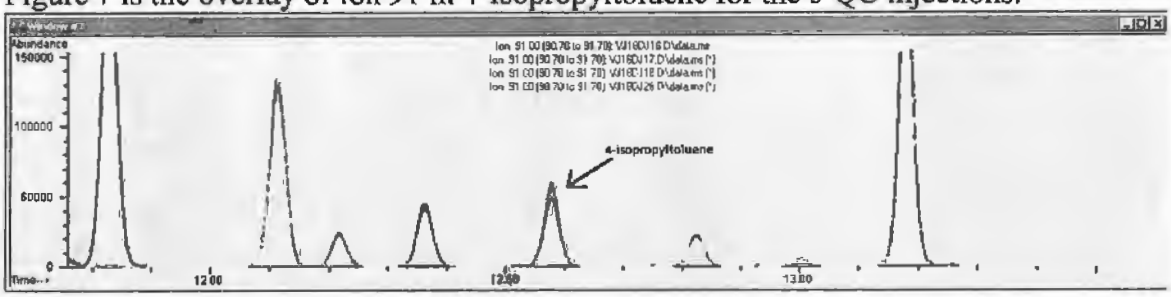


Figure 7

Figure 8 is the overlay of ion 134 in 4-Isopropyltoluene for the 5 QC injections.

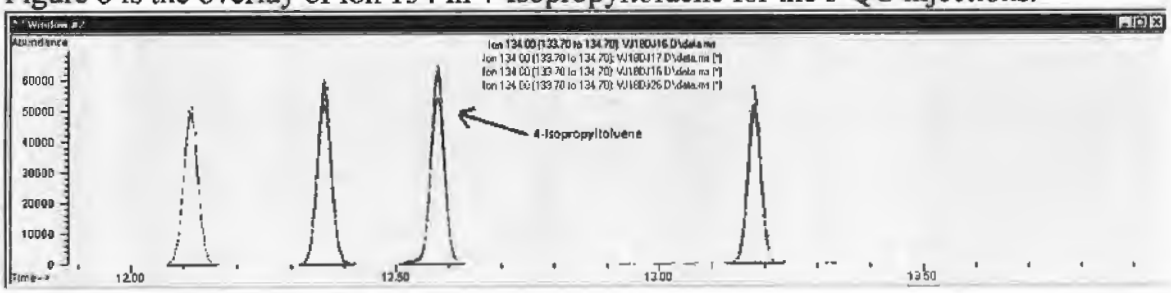


Figure 8

In Figures 2-8, all of the ions follow the same pattern and all behave in the same way with the CCV injection always having the lowest response.

Figures 9-10 Key:
File VJ18GB51 is the file with the NYSDEC Stars VOA standard.
File VJ18GB52 is the file with the LCS.
File VJ18GB53 is the file with the CCV.

Figure 9 is an overlay of 4-Isopropyltoluene in the CCV, LCS, and third source (NYSDEC Stars VOA) standard on the soil instrument VJ.

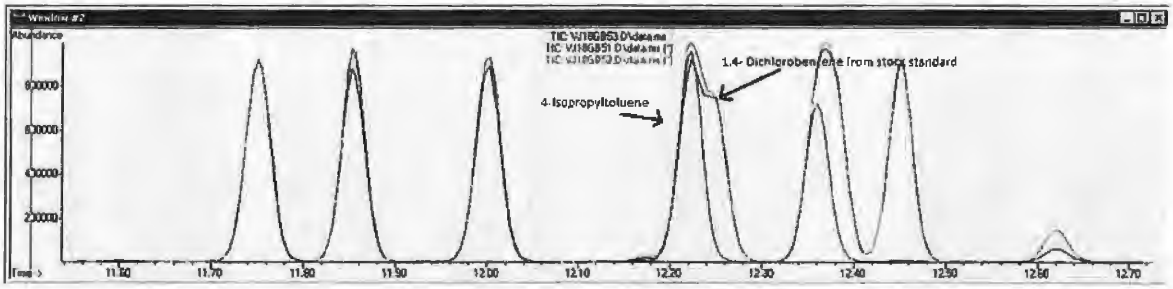


Figure 9

Figure 10 is an overlay of in Isopropylbenzene in the CCV, LCS, and third source (NYSDEC Stars VOA) standard on the soil instrument VJ.

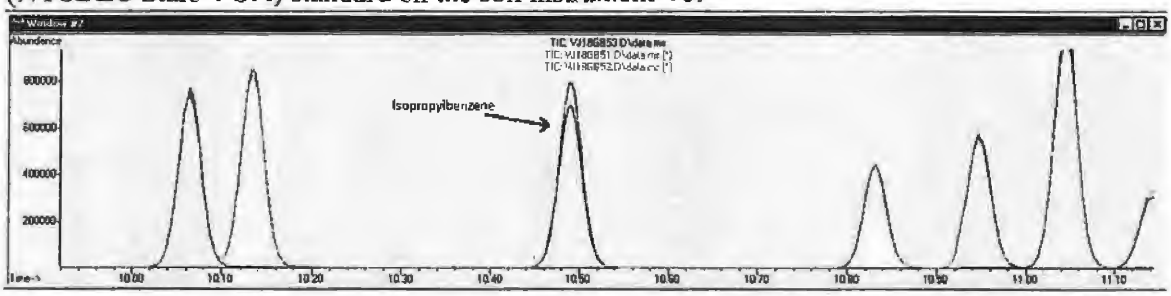


Figure 10

Figures 11-12 Key:
File VM18GB45 is the file with the LCS.
File VM18GB46 is the file with the CCV.
File VM18GB47 is the file with the NYSDEC Stars VOA standard.

Figure 11 is an overlay of 4-Isopropyltoluene in the CCV, LCS, and third source (NYSDEC Stars VOA) standard on the water instrument VM.

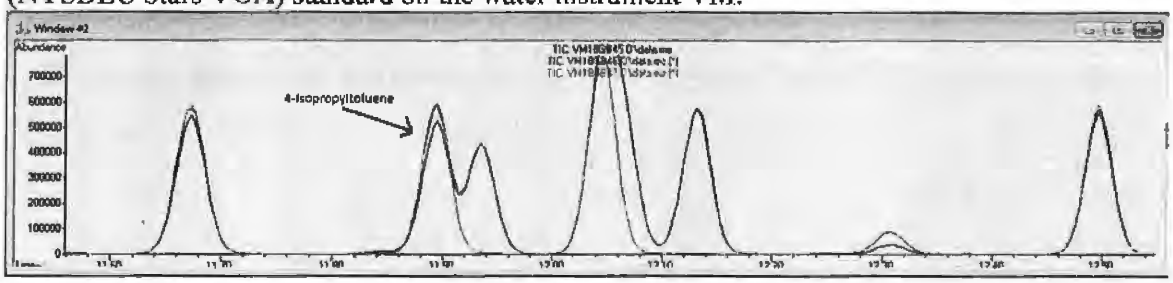


Figure 11

Figure 12 is an overlay of Isopropylbenzene in the CCV, LCS, and third source (NYSDEC Stars VOA) standard on the water instrument VM.

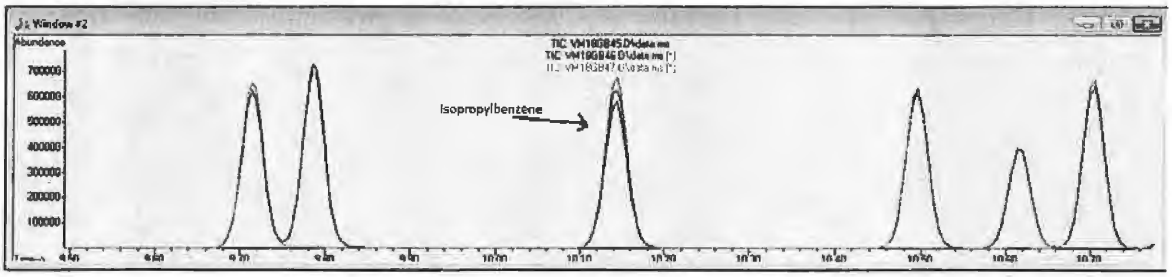


Figure 12

IV. Corrective/Prevention Action Plan and/or Action Taken

To prevent Isopropylbenzene from failing in future PT samples, we are switching our calibration standard provider from ECS to Phenova. Phenova has created a custom standard mix that is a different lot from our current Phenova secondary LCS standard. We are making this switch because of evidence that the ECS standard was the issue and between July and September ECS was relatively uncooperative with solving this issue while Phenova was more than willing to work with us and help troubleshoot. Not only did Phenova work with us to create a standard to be our secondary source standard, they also offered to allow their custom standard to be used by their competitor ECS to assist us with our investigation. The new Phenova standards for our calibration and secondary source will come from two different lots of standards. Right now, Phenova has been the only company willing to work with Fibertec to get the custom list of compounds that the volatiles lab needs. In the future, we would like to get two separate standard providers again so that we do not run into the same issue of the same company's standards agreeing with their own standards. The new standards have been added as a note to file for both V-245 and V-254.

Primary Source Stock Solutions

Phenova AL0-130022; Custom 8260 Primary Standard, 2,000 µg/mL in methanol.

1,1,1,2-Tetrachloroethane	2-Chlorotoluene	Isopropylbenzene
1,1,1-Trichloroethane	2-Methylnaphthalene	m&p-Xylene (4,000 µg/mL)
1,1,2,2-Tetrachloroethane	Acrylonitrile	Methyl Iodide
1,1,2-Trichloroethane	Benzene	Methylene Chloride
1,1-Dichloroethane	Bromobenzene	m-Xylene
1,1-Dichloroethene	Bromochloromethane	Naphthalene
1,2,3-Trichlorobenzene	Bromodichloromethane	n-Butylbenzene
1,2,3-Trichloropropane	Bromoform	n-Propylbenzene
1,2,3-Trimethylbenzene	Carbon Disulfide	o-Xylene
1,2,4-Trichlorobenzene	Carbon Tetrachloride	4-Isopropyltoluene
1,2,4-Trimethylbenzene	Chlorobenzene Chloroform	p-Xylene
1,2-Dibromo-3-chloropropane	cis-1,2-Dichloroethene	sec-Butylbenzene
1,2-Dichlorobenzene	cis-1,3-Dichloropropene	Styrene
1,2-Dichloroethane	Cyclohexane	tert-Butylbenzene
1,2-Dichloropropane	Dibromochloromethane	Tetrachloroethene
1,2-Dichloropropene	Dibromomethane	Tetrahydrofuran
1,3,5-Trimethylbenzene	Diethyl Ether	Toluene
1,3-Dichlorobenzene	Ethylbenzene	trans-1,2-Dichloroethene
1,3-Dichloropropane	Ethylene Dibromide	trans-1,3-Dichloropropene
1,4-Dichlorobenzene	Hexachlorobutadiene	trans-1,4-Dichloro-2-butene
2,2-Dichloropropane	Hexachloroethane	Trichloroethene

Phenova AL0-101211: Ketones Primary Standard, 2,000 µg/mL in methanol.

Acetone	2-Hexanone
2-Butanone	4-Methyl-2-Pentanone

Phenova AL0-101208: California Oxygenates Primary Standard, 2,000 µg/mL in methanol.

Diisopropyl Ether	MTBE	t-Butanol (10,000 µg/mL)
ETBE	TAME	

Phenova AL0-101206: Gases Primary Standard, 2,000 µg/mL in methanol

Bromomethane	Chloromethane	Trichlorofluoromethane
Chloroethane	Dichlorodifluoromethane	Vinyl chloride

Phenova AL0-130526:: Vinyl acetate, Primary Standard, 2,000 µg/mL in methanol.

Phenova AL0-101227: 2-Chloroethyl Vinyl Ether Primary Standard, 2,000 µg/mL in methanol

Phenova AL0-130529: Acrolein Primary Standard, 2,000 µg/mL in methanol

Ultra STM-341N : Internal standards, 2,000 µg/mL in methanol.

Chlorobenzene-d5	1,4-Difluorobenzene
1,4-Dichlorobenzene-d4	Pentafluorobenzene

Absolute AS-23002 : Surrogate standards, 2,000 µg/mL in methanol.

4-Bromofluorobenzene	Toluene-d8
Dibromofluoromethane	1,2-Dichloroethane-d4

Secondary Source Stock Solutions

Phenova AL0-130501: Custom 8260 Secondary Standard, 2,000 µg/mL in methanol.

1,1,1,2-Tetrachloroethane	2-Chlorotoluene	Isopropylbenzene
1,1,1-Trichloroethane	2-Methylnaphthalene	Methylene Chloride
1,1,2,2-Tetrachloroethane	Acrylonitrile	Methyl Iodide
1,1,2-Trichloroethane	Benzene	m&p-Xylene (4,000 µg/mL)
1,1-Dichloroethane	Bromobenzene	m-Xylene
1,1-Dichloroethene	Bromochloromethane	Naphthalene
1,2,3-Trichlorobenzene	Bromodichloromethane	n-Butylbenzene
1,2,3-Trichloropropane	Bromoform	n-Propylbenzene
1,2,3-Trimethylbenzene	Carbon Disulfide	o-Xylene
1,2,4-Trichlorobenzene	Carbon Tetrachloride	4-Isopropyltoluene
1,2,4-Trimethylbenzene	Chlorobenzene	p-Xylene
1,2-Dibromo-3-chloropropane	Chloroform	sec-Butylbenzene
	cis-1,2-Dichloroethene	Styrene
1,2-Dichlorobenzene	cis-1,3-Dichloropropene	tert-Butylbenzene
1,2-Dichloroethane	Cyclohexane	Tetrachloroethene
1,2-Dichloropropane	Dibromochloromethane	Tetrahydrofuran
1,2-Dichloropropene	Dibromomethane	Toluene
1,3,5-Trimethylbenzene	Diethyl Ether	trans-1,2-Dichloroethene
1,3-Dichlorobenzene	Ethylbenzene	trans-1,3-Dichloropropene
1,3-Dichloropropane	Ethylene Dibromide	trans-1,4-Dichloro-2-butene
1,4-Dichlorobenzene	Hexachlorobutadiene	Trichloroethene
2,2-Dichloropropane	Hexachloroethane	

Phenova AL0-130538: Ketones Secondary Standard, 2,000 µg/mL in methanol.

Acetone	2-Hexanone
2-Butanone	4-Methyl-2-Pentanone

Phenova AL0-130539: California Oxygenates Secondary Standard, 2,000 µg/mL in methanol.

Diisopropyl Ether	MTBE	t-butanol (10,000 µg/mL)
ETBE	TAME	

Phenova AL0-130540: Secondary Gases Standard, 2,000 µg/mL in methanol

Bromomethane	Chloromethane	Trichlorofluoromethane
Chloroethane	Dichlorodifluoromethane	Vinyl chloride

Phenova AL0-130527: Vinyl acetate Secondary standard, 2,000 µg/mL in methanol.

Phenova AL0-130528: 2-Chloroethyl Vinyl Ether Secondary Standard, 2,000 µg/mL in methanol

Phenova AL0-130530: Acrolein Secondary Standard, 2,000 µg/mL in methanol

Intermediate Standard Solutions and Internal/Surrogate Standard Solution

Intermediate Solution Name	Stock Standard Solution	Spike	MeOH	Final Volume	Concentration	Expiration
Full List CCV/ICal Standard Intermediate Solutions	Phenova AL0-130022 (2000 µg/mL)	1.0 mL	To Volume	20 mL	100 µg/mL (200 µg/mL m&p-xylene) (500 µg/mL t-butanol)	2 weeks from date made
	Phenova AL0-101211 (2000 µg/mL)	1.0 mL				
	Phenova AL0-101208 (2000 µg/mL)	1.0 mL				
	Phenova AL0-101206 (2000 µg/mL)	1.0 mL				
Full List LCS/ICV Standard Intermediate Solutions	Phenova AL0-130501 (2000 µg/mL)	1.0 mL	To Volume	20 mL	100 µg/mL (200 µg/mL m&p-xylene) (500 µg/mL t-butanol)	2 weeks from date made
	Phenova AL0-130538 (2000 µg/mL)	1.0 mL				
	Phenova AL0-130539 (2000 µg/mL)	1.0 mL				
	Phenova AL0-130540 (2000 µg/mL)	1.0 mL				
Vinyl Acetate CCV/ ICal Standard Intermediate Solutions	Phenova AL0-130526 (2000 µg/mL)	100 µL	1.90 mL	2.0 mL	100 µg/mL	2 weeks from date made
Vinyl Acetate & LCS/ICV Standard Intermediate Solutions	Phenova AL0-130527 (2000 µg/mL)	100 µL	1.90 mL	2.0 mL	100 µg/mL	2 weeks from date made
TTO CCV/ICal Standard Intermediate Solutions	Phenova AL0-130529 (2,000 µg/mL)	100 µL	1.80 mL	2.0 mL	100 µg/mL	2 weeks from date made
	Phenova AL0-130529 (2000 µg/mL)	100 µL				

TTO LCS/ICV Standard Intermediate Solutions	Phenova AL0-130530 (2,000 µg/mL Phenova AL0-130528 (2000 µg/mL)	100 µL 100 µL	1.80 mL	2.0 mL	100 µg/mL	2 weeks from date made
Internal Standard / Surrogate Standard Solution	STM-341N (2000 µg/mL) ST-23002 (2000 µg/mL)	0.50 mL 0.50 mL	To Volume	20 mL	50 µg/mL	2 weeks from date made

The following intermediate solution is made for making the low level calibration solutions only:

Intermediate Solution Name	Stock Standard Solution	Spike	MeOH	Final Volume	Concentration	Expiration
Full List or TTO 10µg/L CCV/ICal Standard Intermediate Solutions	Full List or TTO 100 µg/mL CCV/ICal Standard Intermediate Solution	0.10 mL	0.90 mL	1.0 mL	10 µg/mL	Same as Intermediate Solution

Standards with 20 mL final volume: Pre-rinse a 20 mL volumetric flask with methanol. Fill approximately half way with methanol. Add the standard(s) listed with a gas-tight syringe. Fill to volume with methanol, and invert completely at least three times. Transfer into 1mL or 2 mL autosampler vials, cap, and label. Store in the freezer at ≤ -10 °C.

NOTE: The IS/SS solution is kept in the 20 mL volumetric flask and stored in the freezer at ≤ -10 °C. The IS/SS solution can be transferred directly into the autosampler standard vial for the Centurion autosampler.

Standards with 2.0 mL final volume – Add the methanol to a 2 mL autosampler vial. Add the standard(s) listed. Cap the vial, and invert to mix. Label the vial.

Labeling: Vials and volumetrics must be labeled prior to storage with the unique ID of the standard, expiration date, and the analyst's initials.

Fibertec

Liana Solis <lsolis@fibertec.us>

Problem with ECS standards?

22 messages

Heather Smith <hsmith@fibertec.us> Mon, Jul 16, 2018 at 2:05 PM
To: Jeff Akers <jakers@spex.com>, Liana Solis <lsolis@fibertec.us>, Heather Smith <hsmith@fibertec.us>

Hello Jeff,

I believe we have a problem with one of the ECS-C-033 that we are receiving from you. It appears that this standard is running low for two compounds.

We recently failed a PT study high for Isopropylbenzene and have noticed that we are also running on the high side for 4-isopropyltoluene, and it appears that we are calibrating low, thus reporting high for these compounds.

We use the ECS product for our ICAL/CCV and then run Phenova as a second-source for the ICV/LCS. Additionally, we purchased a third-source standard last week from Absolute for comparison. It appears that the Phenova and Absolute standards match each other reasonably well for both compounds and are substantially higher than ECS.

Attached is data from the three standards run under our soil calibration curve and then under our water calibration curve.

We have noted this trend going on for a couple of months now. Please help us to get this corrected, and let us know what other information you might need from us. Feel free to call us at the number below as needed. Liana would be the best one to speak with, as she has done most of the research on this issue.

Thanks,

Heather

Heather Smith
Volatiles Group Leader
Fibertec Environmental Services
Celebrating 30 Years of Excellence, 1987-2017
1914 Holloway Drive
Holt, MI 48842
P: 517-699-0345 ext. 215
F: 517-699-0388
E: hsmith@fibertec.us
W: fibertec.us

---------- Forwarded message ---------
From: **Fibertec, Inc.** <scan@fibertec.us>
Date: Mon, Jul 16, 2018 at 1:51 PM
Subject: Attached Image
To: Heather <hsmith@fibertec.us>

4380_001.pdf
1055K

Jeff Akers <jakers@spex.com> Mon, Jul 16, 2018 at 4:38 PM
To: Heather Smith <hsmith@fibertec.us>, Liana Solis <lsolis@fibertec.us>

Hi Heather and Liana,

Sorry to hear you are having a problem with the standard. I see you have a few recent orders, do you have the lot number for the batch number for the problem batch?

Below is the list of standard questions from our lab. I think your message and the data file covers everything. I'll get a complaint started with our lab.

1. What is the Catalog #? Lot#? Expiration Date?
2. What analytes are running too high(%) or too low (%)? If other problem, please describe in detail.
3. What commercial standard was this compared to? If SPEX CertiPrep standard, please provide catalog #, lot#, Expiration date.
4. If other than SPEX CertiPrep, list concentration and elements of standard or supplier name and

   catalog #?

5. What instrument was used? Please provide Make/Model.
6. Any other information that would be helpful to the lab?

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Heather Smith <hsmith@fibertec.us>
Sent: Monday, July 16, 2018 2:05 PM
To: Jeff Akers <jakers@spex.com>; Liana Solis <lsolis@fibertec.us>; Heather Smith <hsmith@fibertec.us>
Subject: Problem with ECS standards?

[Quoted text hidden]

Liana Solis <lsolis@fibertec.us> Tue, Jul 17, 2018 at 10:59 AM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>

Hi Jeff,

Below are tha answers to your standard questions.

1. What is the Catalog #? Lot#? Expiration Date?

Catalog number: ECS-A-033
Lot number: TS170410012
Expiration Date: 4/9/2020

2. What analytes are running too high(%) or too low (%)? If other problem, please describe in detail.

Isopropylbenzene and 4-Isopropyltoluene are too low, approximately 20% to 30% low when compared to other standards.

3. What commercial standard was this compared to? If SPEX CertiPrep standard, please provide catalog #, lot#, Expiration date

The standard was compared to standards from Phenomenex and Absolute Standards.

4. If other than SPEX CertiPrep, list concentration and elements of standard or supplier name and catalog #?

Phenomenex Custom VOA standard
Catalog number: AL0-130022

Absolute NYSDEC Stars VOA standard
Catalog number: 92028

5. What instrument was used? Please provide Make/Model.

Was run on multiple Instruments: Agilent 7890A and Agilent 6890N

6. Any other information that would be helpful to the lab?

See original e-mail from Heather Smith.

Let me know if you have any additional questions.

Thank you,
Liana Solis
[Quoted text hidden]

---

2 attachments

SPEX CertiPrep **image001.jpg** 2K

SPEX CertiPrep **image001.jpg** 2K

Jeff Akers <jakers@spex.com> Fri, Jul 20, 2018 at 5:00 PM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>

Hi Liana and Heather,

I had a quick update from our lab. We compared the subject batch to another batch of the ECS-A-033 and to singles of the 4-Isopropyltoluene & Isopropylbenzene. We found the batch within spec. We are continuing to look at what may have caused the results you are seeing.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

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From: Liana Solis <lsolis@fibertec.us>
Sent: Tuesday, July 17, 2018 11:00 AM
To: Jeff Akers <jakers@spex.com>
Cc: Heather Smith <hsmith@fibertec.us>
Subject: Re: Problem with ECS standards?

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[Quoted text hidden]

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Heather Smith <hsmith@fibertec.us> Thu, Jul 26, 2018 at 2:12 PM
To: Jeff Akers <jakers@spex.com>
Cc: Liana Solis <lsolis@fibertec.us>

Hello Jeff,

Is the investigation progressing OK?

Heather
Heather Smith
Project Manager
Volatiles Group Leader
Fibertec Environmental Services
Celebrating 30 Years of Excellence, 1987-2017
1914 Holloway Drive
Holt, MI 48842
P: 517-699-0345 ext. 215
F: 517-699-0388
E: hsmith@fibertec.us
W: fibertec.us

[Quoted text hidden]

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2 attachments

SPEX CertiPrep **image002.jpg** 2K

SPEX CertiPrep **image002.jpg** 2K

Liana Solis <lsolis@fibertec.us> Wed, Aug 1, 2018 at 11:38 AM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>

Hi Jeff,

Could you please provide me with an update on your current investigation by this Friday (August 3)?

Thank you,

Liana
[Quoted text hidden]
—
Liana Solis
Interim Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345
lsolis@fibertec.us

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SPEX CertiPrep **image002.jpg**
2K

Jeff Akers <jakers@spex.com> Fri, Aug 3, 2018 at 1:25 PM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>

Hi Liana,

We did not find the same issue you are having with the lot, we found it within specification and compared to our new lot and to our single compound standards of the 4-Isopropyltoluene & Isopropyl benzene. Attached is the complaint report from our file and copies of our chromatogram and data sheet for the lot and data sheets from the single compound standards. I would be happy to send you out the lot of ECS-A-033 we compared the lot TS170410012 too.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Wednesday, August 1, 2018 11:38 AM
To: Jeff Akers <jakers@spex.com>
Cc: Heather Smith <hsmith@fibertec.us>
Subject: Re: Problem with ECS standards?

Hi Jeff,

Could you please provide me with an update on your current investigation by this Friday (August 3)?

Thank you,

Liana

On Fri, Jul 20, 2018 at 5:00 PM Jeff Akers <jakers@spex.com> wrote:

> Hi Liana and Heather,
>
> I had a quick update from our lab. We compared the subject batch to another batch of the ECS-A-033 and to singles of the 4-Isopropyltoluene & Isopropylbenzene. We found the batch within spec. We are continuing to look at what may have caused the results you are seeing.
>
> Best Regards,
>
> Jeff
>
> **Jeffrey Akers**
>
> **Territory Manager**
>
> **203 Norcross Avenue**
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> > **203 Norcross Avenue**
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2 attachments

Fibertec Environmental Sevices.pdf
98K

Img-180802101805.pdf
1382K

Jeff Akers <jakers@spex.com> Mon, Aug 6, 2018 at 6:39 AM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>

Hi Heather and Liana,

I checked with our lab on the batches of raw material used and received the following

The ECS-A-033 Lot#TS170410012 and Lot#TS180802004 were each manufactured from different lots of Isopropyl benzene and the same lot for 4-Isopropyltoluene.

- ECS-A-033 and the single of Isopropyl benzene we compared against the complaint lot were made from different lots of raw material, we believe there is no issue with either material
- ECS-A-033 and the single of 4-Isopropyltoluene we compared against the complaint lot were made from the same lots of raw material, we have compared the single to a lot manufactured in 2013 and still passed QC

When we bring in raw material we check to make sure the purity matches the suppliers COA and that it is the correct material as part of our ISO quality procedures. We do not compare our standards to third party standards in our QC. Do you have the item numbers of the Phenomenex or Absolute Standards you are running. I would like for our lab to procure these and test them to see if we can replicate your results.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Jeff Akers
Sent: Friday, August 3, 2018 1:25 PM
To: 'Liana Solis' <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>
Subject: RE: Problem with ECS standards?

[Quoted text hidden]

Heather Smith <hsmith@fibertec.us> Mon, Aug 6, 2018 at 8:58 AM
To: Liana Solis <lsolis@fibertec.us>

Liana,

Oy! The info he's asking for here was in one of your initial e-mails to him, which is still attached to this conversation!!

When you provide this information to him (again), ask him whether he can have the testing against those standards done this week so that we can start moving forward. Go ahead and ask him to have the laboratory provide the raw data from the runs that he is talking about here and also the runs that they want to do against the other vendors. As we are both aware, "Passing" and "Good" are two very different things, and it sounds like we may need to evaluate that ourselves.

Heather

Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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2 attachments

image003.jpg
2K

image002.jpg
2K

Liana Solis <lsolis@fibertec.us> Mon, Aug 6, 2018 at 10:32 AM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>

HI Jeff,

Here is the information on the other standards we compared the ECS-A-033 to:
Phenomenex Custom VOA standard
Catalog number: AL0-130022

Absolute NYSDEC Stars VOA standard
Catalog number: 92028

Thank you,
Liana
[Quoted text hidden]

4 attachments

image003.jpg
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image002.jpg
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image003.jpg
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image002.jpg
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Heather Smith <hsmith@fibertec.us> Mon, Aug 6, 2018 at 10:39 AM
To: Liana Solis <lsolis@fibertec.us>
Cc: Jeff Akers <jakers@spex.com>

Jeff,

It's been a few weeks since we started this investigation with SPEX. Would you please see if you can get comparison results against these other standards completed this week?

Thanks,

Heather

Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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[Quoted text hidden]

Jeff Akers <jakers@spex.com> Mon, Aug 6, 2018 at 1:38 PM
To: Heather Smith <hsmith@fibertec.us>, Liana Solis <lsolis@fibertec.us>

Hi Heather and Liana,

I will speak with our lab director today.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Heather Smith <hsmith@fibertec.us>
Sent: Monday, August 6, 2018 10:39 AM
To: Liana Solis <lsolis@fibertec.us>
Cc: Jeff Akers <jakers@spex.com>
Subject: Re: Problem with ECS standards?

Jeff,

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[Quoted text hidden]
[Quoted text hidden]

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Jeff Akers
Sent: Friday, August 3, 2018 1:25 PM
To: 'Liana Solis' <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>
Subject: RE: Problem with ECS standards?

Hi Liana,

We did not find the same issue you are having with the lot, we found it within specification and compared to our new lot and to our single compound standards of the 4-Isopropyltoluene & Isopropyl benzene. Attached is the complaint report from our file and copies of our chromatogram and data sheet for the lot and data sheets from the single compound standards. I would be happy to send you out the lot of ECS-A-033 we compared the lot TS170410012 too.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

203 Norcross Avenue

[Quoted text hidden]

[Quoted text hidden]

Heather Smith <hsmith@fibertec.us> Fri, Aug 10, 2018 at 1:10 PM
To: Jeff Akers <jakers@spex.com>
Cc: Liana Solis <lsolis@fibertec.us>

Hi Jeff,

What is the update?

I am really hoping that we can resolve this issue with SPEX, as we have had good history working with you and with ECS prior to SPEX. If your comparison against the outside sources yields different results than we saw, that will help point us in the right direction. However, I am confident that you will see the same trend that we saw on multiple instruments with the three sources of standards.

If we are unable to get this resolved in a timely fashion, I may unfortunately have to pull all of my business from SPEX. I was looking at our alternate sources of standards, and due to the combinations and overlap we would need to use, it would force us to this end point.

Please let us know if you need anything else from Fibertec.

Heather

Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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2 attachments

SPEX CertiPrep **image003.jpg**
2K

SPEX CertiPrep **image003.jpg**
2K

Jeff Akers <jakers@spex.com> Fri, Aug 10, 2018 at 4:01 PM
To: Heather Smith <hsmith@fibertec.us>
Cc: Liana Solis <lsolis@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Heather,

We are working on this complaint. I checked in with our lab manager and was informed the following; *We are studying qc data behind all lots of ECS-A-033 we've manufactured. We are finding a number of things that may support your observations. We're giving this issue top priority and will get back to you as soon as we understand exactly what occurred. Hopefully this will be next week.* We would like to set up a call next Friday if works for you.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Heather Smith <hsmith@fibertec.us>
Sent: Friday, August 10, 2018 1:10 PM
To: Jeff Akers <jakers@spex.com>
Cc: Liana Solis <lsolis@fibertec.us>

[Quoted text hidden]

[Quoted text hidden]

Heather Smith <hsmith@fibertec.us> Fri, Aug 10, 2018 at 4:29 PM
To: Jeff Akers <jakers@spex.com>
Cc: Liana Solis <lsolis@fibertec.us>, kmckeown@spex.com

Thanks, Jeff.

It is encouraging to hear that you are seeing some things that support our observations. That sounds like it is heading in the right direction.

I will be out of the office next Thursday and Friday, but Liana will be here to take your call.

Thank you for your help and for treating this as a priority.

Heather
Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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2 attachments



image003.jpg
2K

image003.jpg
2K

Liana Solis <lsolis@fibertec.us> Tue, Aug 14, 2018 at 2:50 PM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Hi Jeff,

I am available all day on Friday, please let me know what time you would like to set up the call.

Thank you,
Liana

[Quoted text hidden]

2 attachments

SPEX CertiPrep **image003.jpg** 2K

SPEX CertiPrep **image003.jpg** 2K

Jeff Akers <jakers@spex.com> Wed, Aug 15, 2018 at 4:00 PM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Liana,

Does 1:30 work for you?

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Tuesday, August 14, 2018 2:51 PM
To: Jeff Akers <jakers@spex.com>
Cc: Heather Smith <hsmith@fibertec.us>; Kevin McKeown <kmckeown@spex.com>

[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]

203 Norcross Avenue

[Quoted text hidden]

[Quoted text hidden]

Liana Solis <lsolis@fibertec.us> Wed, Aug 15, 2018 at 4:06 PM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Yes, 1:30 works for me.

Thank you,
Liana
[Quoted text hidden]

---

2 attachments

SPEX CertiPrep **image003.jpg** 2K

SPEX CertiPrep **image003.jpg** 2K

Jeff Akers <jakers@spex.com> Thu, Aug 16, 2018 at 4:35 PM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Liana,

We'll call you at 1:30, what the best number to use?

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Wednesday, August 15, 2018 4:07 PM

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[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]

203 Norcross Avenue

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

Liana Solis <lsolis@fibertec.us> Thu, Aug 16, 2018 at 4:40 PM
To: jakers@spex.com
Cc: Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Please call me at 517-699-0345. I do not have a direct extension, but they will page me when you call.

Thank you,
Liana
[Quoted text hidden]

---

2 attachments

SPEX CertiPrep **Image003.jpg**
2K

SPEX CertiPrep **Image003.jpg**
2K

Jeff Akers <jakers@spex.com> Fri, Aug 17, 2018 at 11:16 AM
To: Liana Solis <lsolis@fibertec.us>, Alan Katz <AKatz@spex.com>, Dana Ostrowski <dostrowski@spexcsp.com>
Cc: Heather Smith <hsmith@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Liana,

Thanks for rescheduling, we'll call Monday at 1:30 when Dana is back to health and in the office. Have a great weekend!

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Thursday, August 16, 2018 4:41 PM

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[Quoted text hidden]

[Quoted text hidden]
[Quoted text hidden]

[Quoted text hidden]

203 Norcross Avenue

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

Jeff Akers <jakers@spex.com> Mon, Aug 20, 2018 at 4:10 PM
To: Liana Solis <lsolis@fibertec.us>, Alan Katz <AKatz@spex.com>, Dana Ostrowski <dostrowski@spexcsp.com>
Cc: Heather Smith <hsmith@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Liana,

Very nice to speak with you today. We will send a different batch of the ECS-A-033 out to you as well as the two single compound standards for the 2 analytes of interest. Dana and Alan where wondering what your LCS concentration is if you could share. Also if you could share your sales rep contact at Phenomenex is. I will try and order that custom mix. We will compare against our mix and the Absolute item we purchased.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Jeff Akers
Sent: Friday, August 17, 2018 11:14 AM
To: 'Liana Solis' <lsolis@fibertec.us>; Alan Katz <AKatz@spex.com>; Dana Ostrowski <dostrowski@spexcsp.com>
Cc: Heather Smith <hsmith@fibertec.us>; Kevin McKeown <kmckeown@spex.com>
Subject: RE: Problem with ECS standards?

Hi Liana,

Thanks for rescheduling, we'll call Monday at 1:30 when Dana is back to health and in the office. Have a great weekend!

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Thursday, August 16, 2018 4:41 PM
To: Jeff Akers <jakers@spex.com>
Cc: Heather Smith <hsmith@fibertec.us>; Kevin McKeown <kmckeown@spex.com>
Subject: Re: Problem with ECS standards?

Please call me at 517-699-0345. I do not have a direct extension, but they will page me when you call.

Thank you,

Liana

On Thu, Aug 16, 2018 at 4:35 PM Jeff Akers <jakers@spex.com> wrote:

> Hi Liana,
>
> We'll call you at 1:30, what the best number to use?

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

cid:image003.jpg@01D4357E.D5D69BB0

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[Quoted text hidden]

[redacted]
Fibertec

Liana Solis <lsolis@fibertec.us>

ECS/SPEX standards vs Phenomenex

5 messages

Liana Solis <lsolis@fibertec.us> Mon, Aug 20, 2018 at 2:31 PM
To: JoshW@phenova.com

Hi Josh,

I believe my supervisor Heather Smith has reached out to you recently regarding some issues we are having with our current ECS standards not matching our Phenomenex standard.

I have been communicating with ECS's team to try to recreate the issue we are seeing. They said that they cannot request the custom standard we buy from Phenova without Fibertec's consent, so I would like to give them permission to purchase the same standard we buy from you:
Phenomenex Custom VOA standard
Catalog number: AL0-130022

Are there any other steps I need to take to make this happen?

Thank you,
Liana
--
Liana Solis
Interim Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345
lsolis@fibertec.us

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Wyeth, Josh <JoshW@phenova.com> Mon, Aug 20, 2018 at 5:17 PM
To: Liana Solis <lsolis@fibertec.us>

Liana:

Could you please call at number below at your convenience to discuss? Thanks.

Sincerely,

Josh Wyeth
Technical Sales Manager

Phenova
A Phenomenex Company
6390 Joyce Dr., Suite 100
Golden, CO 80403
Tel: (866) 942-2978
Fax: (866) 283-0269

Direct: (720) 642-6552

Cell: (720) 933-8427
Email: joshw@phenova.com

Website: http://www.phenova.com

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From: Liana Solis <lsolis@fibertec.us>
Sent: Monday, August 20, 2018 12:31 PM
To: Wyeth, Josh <JoshW@phenova.com>
Subject: ECS/SPEX standards vs Phenomenex

[Quoted text hidden]
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Wyeth, Josh <JoshW@phenova.com> Thu, Aug 23, 2018 at 5:54 PM
To: Liana Solis <lsolis@fibertec.us>

Liana:

Sorry for the delay. We will be happy to assist in any way we can for your corrective action. Just let me know what else you need me to do. Thanks.

Sincerely,

Josh Wyeth
Technical Sales Manager

Phenova
A Phenomenex Company
6390 Joyce Dr., Suite 100
Golden, CO 80403
Tel: (866) 942-2978
Fax: (866) 283-0269

Direct: (720) 642-6552

Cell: (720) 933-8427
Email: joshw@phenova.com

Website: http://www.phenova.com

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From: Liana Solis <lsolis@fibertec.us>
Sent: Monday, August 20, 2018 12:31 PM
To: Wyeth, Josh <JoshW@phenova.com>
Subject: ECS/SPEX standards vs Phenomenex

Hi Josh,

[Quoted text hidden]
Please be advised that this email may contain confidential information. If you are not the intended recipient, please notify us by email by replying to the sender and delete this message. The sender disclaims that the content of this email constitutes an offer to enter into, or the acceptance of, any agreement; provided that the foregoing does not invalidate the binding effect of any digital or other electronic reproduction of a manual signature that is included in any attachment.

Liana Solis <lsolis@fibertec.us> Fri, Aug 24, 2018 at 4:01 PM
To: JoshW@phenova.com

Thank you so much Josh!

I will keep you updated once we are ready to finalize our corrective action.

I appreciate all your help,
Liana
[Quoted text hidden]

Wyeth, Josh <JoshW@phenova.com> Fri, Aug 24, 2018 at 4:03 PM
To: Liana Solis <lsolis@fibertec.us>

Liana:

Sounds perfect. Have a great weekend!

Regards,

Josh Wyeth
Technical Sales Manager

Phenova
A Phenomenex Company
6390 Joyce Dr., Suite 100
Golden, CO 80403
Tel: (866) 942-2978
Fax: (866) 283-0269

Direct: (720) 642-6552

Cell: (720) 933-8427
Email: joshw@phenova.com

Website: http://www.phenova.com

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From: Liana Solis <lsolis@fibertec.us>
Sent: Friday, August 24, 2018 2:01 PM
To: Wyeth, Josh <JoshW@phenova.com>
Subject: Re: ECS/SPEX standards vs Phenomenex

[Quoted text hidden]

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Fibertec

Liana Solis <lsolis@fibertec.us>

Follow up from 8/20/18 phone call about ECS-A-033

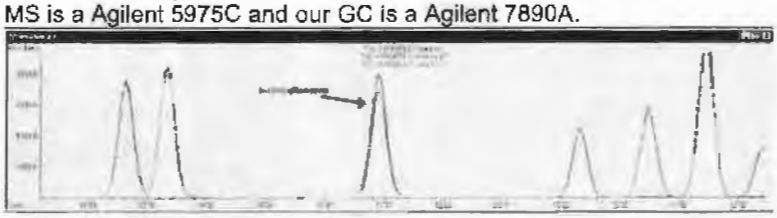
10 messages

Liana Solis <lsolis@fibertec.us> Mon, Aug 20, 2018 at 5:58 PM
To: AKatz@spex.com, dostrowski@spexcsp.com, jakers@spex.com, Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Hi Jeff,

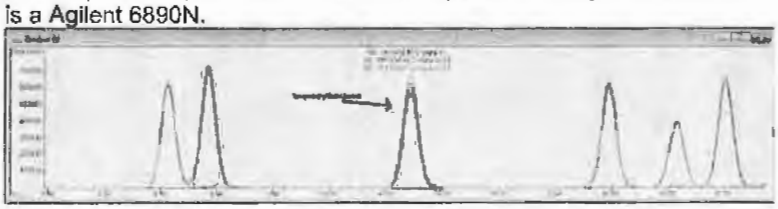
Thank you for allowing me to chat with you and your group me today and for sending the other lot of ECS-A-033 and single compound standards for us to test. I have attached our CCV and LCS standard concentrations and components as "LCS-CCV-std.pdf" for Alan and Dana.

I am attaching some chromatogram overlays in addition to the raw data.
The following image is an overlay of three standards with IPB from one of our soils instruments. Our concentrator is an EST Encon Purge and Trap concentrator. We have a Supelco 20080-u purge/trap K vocarb Encon trap installed in it. Our MS is a Agilent 5975C and our GC is a Agilent 7890A.



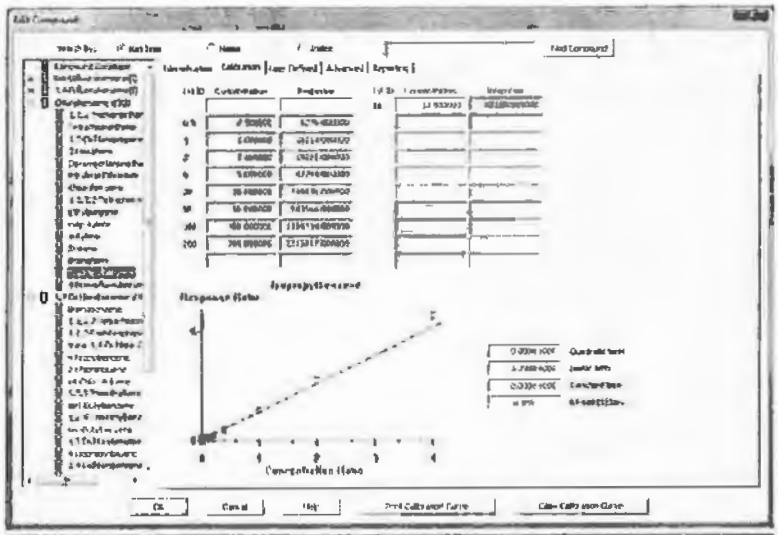
File VJ18GB51 (blue) is the file with the NYSDEC Stars VOA standard 92028.
File VJ18GB52 (red) is the file with the Phenomenex AL0-130022.
File VJ18GB53 (black) is the file with the ECS-A-033.
The raw data for these three files are "3standards-raw.pdf"

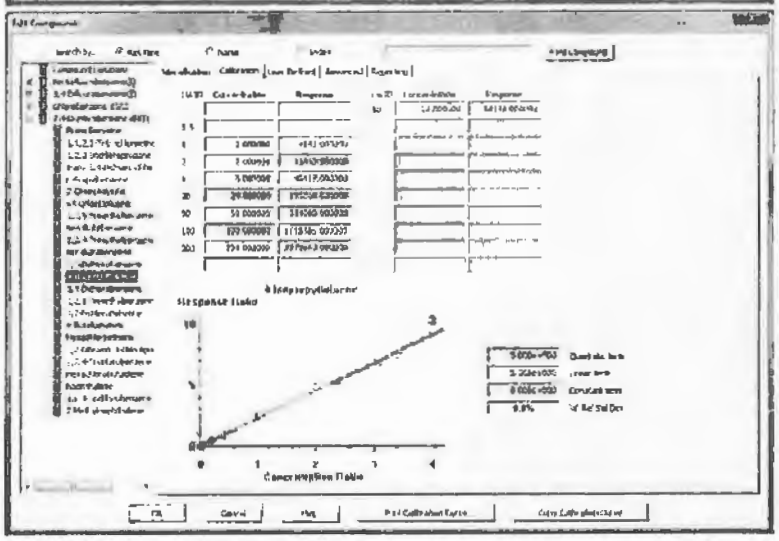
The following image is an overlay of three standards with IPB from one of our water instruments. Our concentrator is an OI Analytical Eclipse model 4660. Our trap is a OI Analytical Silica Gel/ CMS Trap. Our MS is a Agilent 5975 and our GC is a Agilent 6890N.



File VM18GB45 (black) is the file with the Phenomenex AL0-130022.
File VM18GB46 (blue) is the file with the ECS-A-033.
File VM18GB47 (red) is the file with the NYSDEC Stars VOA standard 92028.
The raw data for these three files are "3standards-raw.pdf"

The following images are response factors for IPB and 4-IPT from a calibration curve last month that we ran on one of our water instruments using the ECS-A-033 standard. This instrument also has an EST Encon Purge and Trap concentrator. We have a EST S70300-EV1 trap installed. Our MS is a Agilent 5975 and our GC is a Agilent 6890N.





I am attaching our initial calibration verification for this curve called "rawdata-ICV.pdf" and our report for compering the percent difference from the ICV to the response of our 50 level response in the image above. The verification standard is the Phenomenex AL0-130022 standard.

I am attaching our data from April where our IPB failed high in our PT sample, but passed in our QC. The raw data for the QC for the batch is "PTbatch-raw.pdf" and the PT sample is labeled "PTraw.pdf". The final result we should have achieved is "PTresults-IPB.pdf".Our raw value should have calculated out to 50ug/L for the dilution it was run at.

I have e-mailed our Phenomenex contact Josh Wyeth and will have a phone call with him tomorrow. He can be contacted at: JoshW@phenova.com

I would also be interested to see your raw data from your tests.

Let me know if there is any other data you would like to see or if there is any other information you need.

Thank you,
Liana
–
Liana Solis
Interim Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345
lsolis@fibertec.us

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7 attachments

rawdata-ICV.pdf
154K

ICV-report.pdf
171K

3standards-raw.pdf
1155K

PTraw.pdf
98K

PTbatch-raw.pdf
446K

PTresults-IPB.pdf
8K

LCS-CCV-std.pdf
153K

Dana Ostrowski <dostrowski@spexcsp.com> Tue, Aug 21, 2018 at 10:10 AM
To: Liana Solis <lsolis@fibertec.us>, Alan Katz <AKatz@spex.com>, Jeff Akers <jakers@spex.com>, Heather Smith <hsmith@fibertec.us>, Kevin McKeown <kmckeown@spex.com>

Hi Liana,

I have attached the raw data and the overlay for the two peaks about which you are concerned. I am comparing our ECS standard to a lot of the Absolute Standard that we ordered. I performed a 2x dilution on both standards, to make a final concentration of 500ug/mL. I just want to confirm, you are using the ECS-A-033 to make your ICV and CCV? The LCS is made from the 2nd and 3rd source? Would you mind sending me the raw data for your curve along with any manual integrations that you may have made?

Thank you,

Dana Ostrowski

Organic QC Team Leader

From: Liana Solis [mailto:lsolis@fibertec.us]
Sent: Monday, August 20, 2018 5:59 PM
To: Alan Katz; Dana Ostrowski; Jeff Akers; Heather Smith; Kevin McKeown
Subject: Follow up from 8/20/18 phone call about ECS-A-033

[Quoted text hidden]

ECS-A-033.pdf
723K

Liana Solis <lsolis@fibertec.us> Tue, Aug 21, 2018 at 12:09 PM
To: dostrowski@spexcsp.com
Cc: AKatz@spex.com, jakers@spex.com, Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Hi Dana,

I am using the ECS-A-033 to make our CCV. Our LCS and ICV are from the same Phenomenex source. I have attached our curve. Manual integrations are denoted by an "m". I have included the "Not Reviewed" and "QT Reviewed" files so you can see the differences the manual integrations have made on the responses.

Thank you,
Liana
[Quoted text hidden]

---

9 attachments



image002.png
24K



image004.jpg
6K



image006.jpg
20K



image008.jpg
20K



image002.png
24K

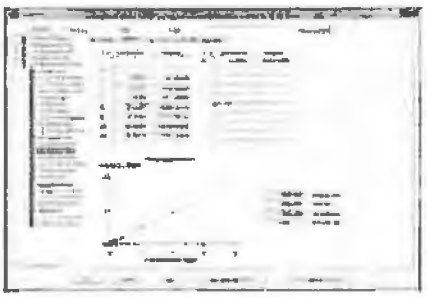


image008.jpg
20K

image006.jpg
20K



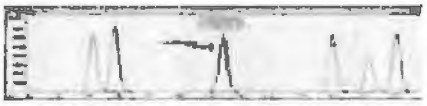


Image004.jpg
6K

curve-VBWATC28.pdf
4150K

Liana Solis <lsolis@fibertec.us> Thu, Aug 23, 2018 at 4:16 PM
To: dostrowski@spexcsp.com
Cc: AKatz@spex.com, jakers@spex.com, Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Thank you for sending the standards so quickly! I wanted to provide an initial update. We are currently running more tests on additional instruments, but I was able to run both ECS-a-033 lots, the singles, Phenomenex, and Absolute standards. I see a difference between isopropylbenzene in the two ECS lots. If I see this same pattern on my tests tonight, I would like to look into replacing our remaining vials of ECS-A-033 lot TS170410012 with lot TS180207040 or another available lot. Lot TS180207040 matches both Phenornenex and Absolute standards better than lot TS170410012.

I am still seeing a difference from both ECS-A-033 lots with the Phenomenex and Absolute standards for 4-Isopropyltoluene. The two lots of ECS-A-033 match for 4IPT and Phenomenex and Absolute match each other for 4IPT.

I will send another update when the standards finish running on our other instruments.

Thank you,
Liana

[Quoted text hidden]

---

2 attachments



IPB-ECS-A-033.png
9K

ECStests-082318.pdf
2162K

Liana Solis <lsolis@fibertec.us> Wed, Aug 29, 2018 at 10:46 AM
To: dostrowski@spexcsp.com
Cc: AKatz@spex.com, jakers@spex.com, Heather Smith <hsmith@fibertec.us>, kmckeown@spex.com

Were you able to get in touch with Josh Wyeth from Phenova?

I am attaching some more runs from two different instruments.

Thank you,
Liana
[Quoted text hidden]

---

2 attachments

standards-VB18H28A.pdf
2295K

standards-VI18H28A.pdf
2142K

Heather Smith <hsmith@fibertec.us> Wed, Aug 29, 2018 at 12:45 PM
To: Liana Solis <lsolis@fibertec.us>

Liana,

Tomorrow, can you give me an update on where we stand with ECS?

Thanks,

Heather
Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

The Choice of Environmental Professionals since 1987

[Quoted text hidden]

Liana Solis <lsolis@fibertec.us> Wed, Aug 29, 2018 at 1:44 PM
To: Heather Smith <hsmith@fibertec.us>

Yes
[Quoted text hidden]

Jeff Akers <jakers@spex.com> Thu, Sep 6, 2018 at 12:41 PM
To: Liana Solis <lsolis@fibertec.us>
Cc: Heather Smith <hsmith@fibertec.us>

Hi Heather,

Thank you for your call, sorry I missed you. I was out of the office last week at a conference and vacation. I will be meeting with our lab team this afternoon to see where we are on this and get a report worked up for you.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Liana Solis <lsolis@fibertec.us>
Sent: Wednesday, August 29, 2018 10:47 AM
To: Dana Ostrowski <dostrowski@spexcsp.com>
Cc: Alan Katz <AKatz@spex.com>; Jeff Akers <jakers@spex.com>; Heather Smith <hsmith@fibertec.us>; Kevin McKeown <kmckeown@spex.com>
Subject: Re: Follow up from 8/20/18 phone call about ECS-A-033

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[Quoted text hidden]

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[Quoted text hidden]
[Quoted text hidden]

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File VJ18GB51 (blue) is the file with the NYSDEC Stars VOA standard 92028.

File VJ18GB52 (red) is the file with the Phenomenex AL0-130022.

File VJ18GB53 (black) is the file with the ECS-A-033.

The rew data for these three files are "3standards-raw.pdf"

The following image is an overlay of three standards with IPB from one of our water instruments. Our concentrator is an OI Analytical Eclipse model 4660. Our trap is a OI Analytical Silica Gel/ CMS Trap. Our MS is a Agilent 5975 and our GC is a Agilent 6890N.

File VM18GB45 (black) is the file with the Phenomenex AL0-130022.

File VM18GB46 (blue) is the file with the ECS-A-033.

File VM18GB47 (red) is the file with the NYSDEC Stars VOA standard 92028.

The raw data for these three files are "3standards-raw.pdf"

The following images are response factors for IPB and 4-IPT from a calibration curve last month that we ran on one of our water instruments using the ECS-A-033 standard. This instrument also has an EST Encon Purge and Trap concentrator. We have a EST S70300-EV1 trap installed. Our MS is a Agilent 5975 and our GC is a Agilent 6890N.

I am attaching our initial calibration verification for this curve called "rawdata-ICV.pdf" and our report for comparing the percent difference from the ICV to the response of our 50 level response in the image above. The verification standard is the Phenomenex AL0-130022 standard.

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[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

[Quoted text hidden]

Heather Smith <hsmith@fibertec.us> Thu, Sep 6, 2018 at 4:14 PM
To: Jeff Akers <jakers@spex.com>, Liana Solis <lsolis@fibertec.us>

Thanks, Jeff. Can I expect to hear from you tomorrow?

fyi, Liana will be out on vacation next week. Please keep the ball rolling with me. I want to have this wrapped up before she gets back.

Heather
Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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[Quoted text hidden]

---

2 attachments

image002.jpg
2K

SPEX CertiPrep **Image002.jpg**
2K

Jeff Akers <jakers@spex.com> Fri, Sep 7, 2018 at 2:52 PM
To: Heather Smith <hsmith@fibertec.us>, Liana Solis <lsolis@fibertec.us>

Hi Heather,

I spoke with Dana in our lab who reviewed all of Liana's data and ran the standards here. We were unable to procure the Phenomex custom but did purchase and run the Absolute item. We got good recovery against it. What are you limits? I see you are averaging around 55% on our standard and in the low to mid 60% on the Phenomex and Absolute items. I see you got better results with the TS180207040 batch then the TS170410012. Would you like more of this to run or we could make a fresh batch for you to try. Dana and I would be happy to talk to you next week.

Best Regards,

Jeff

Jeffrey Akers

Territory Manager

SPEX CertiPrep

203 Norcross Avenue

Metuchen, NJ 08840

Phone: 732-623-0404

Fax: 732-603-9647

jakers@spexcsp.com

www.spexcertiprep.com

From: Heather Smith <hsmith@fibertec.us>
Sent: Thursday, September 6, 2018 4:14 PM
To: Jeff Akers <jakers@spex.com>; Liana Solis <lsolis@fibertec.us>

[Quoted text hidden]

[Quoted text hidden]

Fibertec

Liana Solis <lsolis@fibertec.us>

Problem with ECS standards?

1 message

Heather Smith <hsmith@fibertec.us> Mon, Jul 16, 2018 at 2:05 PM
To: Jeff Akers <jakers@spex.com>, Liana Solis <lsolis@fibertec.us>, Heather Smith <hsmith@fibertec.us>

Hello Jeff,

I believe we have a problem with one of the ECS-C-033 that we are receiving from you. It appears that this standard is running low for two compounds.

We recently failed a PT study high for Isopropylbenzene and have noticed that we are also running on the high side for 4-isopropyltoluene, and it appears that we are calibrating low, thus reporting high for these compounds.

We use the ECS product for our ICAL/CCV and then run Phenova as a second-source for the ICV/LCS. Additionally, we purchased a third-source standard last week from Absolute for comparison. It appears that the Phenova and Absolute standards match each other reasonably well for both compounds and are substantially higher than ECS.

Attached is data from the three standards run under our soil calibration curve and then under our water calibration curve.

We have noted this trend going on for a couple of months now. Please help us to get this corrected, and let us know what other information you might need from us. Feel free to call us at the number below as needed. Liana would be the best one to speak with, as she has done most of the research on this issue.

Thanks,

Heather

Heather Smith
Volatiles Group Leader
Fibertec Environmental Services
Celebrating 30 Years of Excellence, 1987-2017
1914 Holloway Drive
Holt, MI 48842
P: 517-699-0345 ext. 215
F: 517-699-0388
E: hsmith@fibertec.us
W: fibertec.us

---------- Forwarded message ---------
From: **Fibertec, Inc.** <scan@fibertec.us>
Date: Mon, Jul 16, 2018 at 1:51 PM
Subject: Attached Image
To: Heather <hsmith@fibertec.us>

4380_001.pdf
1055K

[redacted]
Fibertec

Liana Solis <lsolis@fibertec.us>

CAR for IPB, ECS update 180910

1 message

Heather Smith <hsmith@fibertec.us> Mon, Sep 10, 2018 at 3:26 PM
To: Heather Smith <hsmith@fibertec.us>, Liana Solis <lsolis@fibertec.us>

Phone conference with ECS. Jeff, Shannon, Dana. Dana sounds pretty green in the field. Didn't fully understand the conversation, and she's leading their battle.

They seem pretty content with their results. They were able to match up the results of the Absolute standard with theirs within 5%. They "were unable to obtain" the Phenomenex standard, even though we had provided them with the information and the permissions to do so. I reinstated those permissions with a group e-mail this afternoon.

They run a direct injection. 0.5uL of 1000ppm on an Agilent 5973. 1mm inlet liner, single goose-neck, with glass wool. I forgot to ask about the split on the instrument. Area counts are around 3.5 million.

They run one injection of the test lot against a reference lot.

Tonight they will dilute the standards in MeOH to more closely match ours and then try again. Data expected to me tomorrow from Dana.

Meanwhile, I am contacting Phenova regarding second-source lots and potential recommendations for other companies to work with.

Heather
Heather Smith
Project Manager, Volatiles Group Leader

Fibertec Environmental Services
1914 Holloway Drive
Holt, MI 48842
517-699-0345 x215
hsmith@fibertec.us

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Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 677 /PAR)

Client: Internal **Project/Document Control Number:** 84232

Sample Number(s): 018A **Date Initiated:** 07/03/18 **Date Due:** 07/17/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☐ 2 (RCA Recommended) ☑ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☑ Other Result Entry in Website

☐ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported 4-Methyl Phenol result was above the acceptance limits for the PT Study (See Attached)
Result reported: 0.100 mg/Kg Actual Value: 0 mg/Kg Mean Study Result: 0 mg/Kg Acceptance range: 0 to 0 mg/Kg
Please investigate the cause of this error and provide a corrective action plan to prevent the nonoccurence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The result that was listed on the analytical report was Non-Detect with a RL of 0.100 mg/Kg. When the result was entered on-line, the "<" sign was not entered in the form. This resulted in what appeared to be a value at the RL rather than less than the RL. After the results were entered on-line, a report with all entered values was downloaded and given to the QA Assistant along with a copy of the analytical report to check for any transcription errors. The missing "<" sign was not picked up during the review.

Investigator(s): Ken Mueller

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

The initial upload review will be done by the QAO by comparing the analytical report results with the results on the summary report generated by from the data upload. The comparison will be done by making "tick" marks next to each parameter. Any parameters that have a result of "U" on the report need to have a "<" assigned on the summary report. These must also be marked to show that it has been reviewed. This will be done by both the QAO and the second reviewer. A final review of all ND results will be done to ensure that all "<" signs have been entered and entered on the correct parameters.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: 7/30/18 ***Follow-Up Complete:*** ***Yes*** ☑ ***No*** ☐

VI. Approvals:

Technical : Daryl Stansbury **Supervisory:** DLS

Quality Assurance: Ken Mueller

Date Closed: 7/30/18

Hexachlorobutadiene	-- Not Reported --
n-Hexane	-- Not Reported --
Tetrahydrofuran	-- Not Reported --
Methyl acetate	-- Not Reported --
Methyl cyclohexane	-- Not Reported --
Vinyl acetate	-- Not Reported --
1,4-Dioxane	-- Not Reported --
3,3-Dimethyl-1-butanol	-- Not Reported --
1,3,5-Trichlorobenzene	-- Not Reported --

-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	304	341	350	ug/kg	47.0	96.4 to 586	0.787	ACCEPT.	4/26/18	BDA

-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-117

Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	2.71	2.10	14.8	mg/L	1.50	0.210 to 15.5	0.407	ACCEPT.	4/26/18	RDK
Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	12.9	8.39	14.4	mg/L	3.24	1.44 to 18.1	1.39	ACCEPT.	4/27/18	RDK
Pyridine	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	0.509	0.442	0.760	mg/L	0.0760	0.210 to 0.840	0.882	ACCEPT.	4/26/18	RDK
4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	0.100	0.00	0	mg/L	0.00	0.00	n/a	NOT ACCEPT.	4/26/18	RDK
Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6.98	4.60	8.10	mg/L	2.76	0.460 to 8.91	0.862	ACCEPT.	4/26/18	RDK
2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/26/18	RDK
2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	0.867	0.549	0.940	mg/L	0.266	0.0940 to 1.03	1.20	ACCEPT.	4/26/18	RDK
3+4-Methylphenol	-- Not Reported --												
Total Cresol	-- Not Reported --												

-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-117

SM-117-Remedial PT Study

SM-PTX536

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 10/01/2018 - Closed: 10/24/2018
Reports Printed On: 10/24/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCI-001B Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	179	208	mg/kg	71.9 to 229	ACCEPT.	10/10/18	JLH

SQCI-015B Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	53.6	75.2	mg/kg	51.7 to 90.3	ACCEPT.	10/22/18	SEM

SQCO-007B Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW 8270C -- 1996	6460	8160	ug/kg	1040 to 8980	ACCEPT.	10/7/18	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	9430	10810	ug/kg	3880 to 11900	ACCEPT.	10/7/18	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	7780	6890	ug/kg	1650 to 8150	ACCEPT.	10/7/18	GJP

SQCO-008HB VOCs in Soil - Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-PTX536

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	4390	4660	ug/kg	3740 to 4570	ACCEPT.	10/9/18	JLM

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

This PT report shall only be reproduced in full. This report shall not be used to claim approval, certification or endorsement by NSI Lab Solutions. This report has been released only to entities requested by the participant. This report is held in confidence by NSI Lab Solutions with additional reports available by written request of participant.

Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

UST-092

Spring, 2018

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-092 - Shipped: 04/18/2018 - Closed: 06/01/2018
Reports Printed On: 06/21/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI00129
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-092

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	203	305	304	mg/kg	88.8	0.00 to 702	1.15	ACCEPT.	4/23/18	TKT

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-092

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	356	452	546	mg/kg	181	165 to 926	0.530	ACCEPT.	4/25/18	BDA

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

WP-247

Summer, 2018

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-247 - Shipped: 07/17/2018 - Closed: 08/30/2018
Reports Printed On: 09/07/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693
1-800-234-7837

This evaluation report is being submitted to:
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Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

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NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	92.8	86.6	93.0	mg/L	16.7	49.8 to 136	0.371	ACCEPT.	8/13/18	AMG
1555	CBOD	20135255	GALV	SM 5210 B - 2001	70.9	81.2	84.3	mg/L	14.9	38.9 to 130	0.691	ACCEPT.	8/20/18	SEM
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	139	143	151	mg/L	12.0	120 to 177	0.333	ACCEPT.	8/8/18	AMG
2040	TOC	20137615	TOC-IR	SM 5310 B 22nd ED 2011	56.8	57.6	59.8	mg/L	4.59	50.0 to 69.1	0.174	ACCEPT.	8/8/18	SEM
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	56.8	57.6	59.8	mg/L	4.59	50.0 to 69.1	0.174	ACCEPT.	8/8/18	SEM

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	24.9	26.3	26.0	mg/L	7.60	13.5 to 34.5	0.184	ACCEPT.	8/1/18	SEM

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.673	0.773	0.808	mg/L	0.143	0.525 to 1.09	0.699	ACCEPT.	8/3/18	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.361	0.418	0.403	mg/L	0.0390	0.252 to 0.554	1.46	ACCEPT.	8/3/18	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.84	1.80	2.19	mg/L	0.400	1.11 to 3.27	0.100	ACCEPT.	8/7/18	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.84	1.80	2.19	mg/L	0.400	1.11 to 3.27	0.100	ACCEPT.	8/7/18	SEM

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	1.73	1.65	1.85	mg/L	0.229	1.36 to 2.17	0.349	ACCEPT.	8/3/18	SEM
1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	1.77	1.65	1.85	mg/L	0.229	1.36 to 2.17	0.524	ACCEPT.	8/3/18	SEM

1945 Residual Free Chlorine -- Not Reported --

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	492	476	467	ug/L	40.2	369 to 568	0.398	ACCEPT.	8/15/18	NRV
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	492	476	467	ug/L	40.2	369 to 568	0.398	ACCEPT.	8/15/18	NRV
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	463	467	467	ug/L	35.9	375 to 544	0.111	ACCEPT.	8/15/18	NRV
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	463	467	467	ug/L	35.9	375 to 544	0.111	ACCEPT.	8/15/18	NRV
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	371	404	417	ug/L	25.2	346 to 483	1.31	ACCEPT.	8/15/18	NRV
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	371	404	417	ug/L	25.2	346 to 483	1.31	ACCEPT.	8/15/18	NRV
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	679	723	733	ug/L	27.2	623 to 843	1.62	ACCEPT.	8/15/18	NRV
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	679	723	733	ug/L	27.2	623 to 843	1.62	ACCEPT.	8/15/18	NRV
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	296	296	300	ug/L	12.7	255 to 345	0	ACCEPT.	8/15/18	NRV
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	296	296	300	ug/L	12.7	255 to 345	0	ACCEPT.	8/15/18	NRV
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	758	810	817	ug/L	39.9	694 to 940	1.30	ACCEPT.	8/15/18	NRV
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	758	810	817	ug/L	39.9	694 to 940	1.30	ACCEPT.	8/15/18	NRV
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	678	696	700	ug/L	36.4	595 to 805	0.495	ACCEPT.	8/15/18	NRV
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	678	696	700	ug/L	36.4	595 to 805	0.495	ACCEPT.	8/15/18	NRV
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	477	510	517	ug/L	26.9	439 to 595	1.23	ACCEPT.	8/15/18	NRV
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	477	510	517	ug/L	26.9	439 to 595	1.23	ACCEPT.	8/15/18	NRV
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	693	705	700	ug/L	37.8	595 to 805	0.317	ACCEPT.	8/15/18	NRV
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	693	705	700	ug/L	37.8	595 to 805	0.317	ACCEPT.	8/15/18	NRV
1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1680	1656	1650	ug/L	78.3	1400 to 1900	0.307	ACCEPT.	8/15/18	NRV
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	1680	1656	1650	ug/L	78.3	1400 to 1900	0.307	ACCEPT.	8/15/18	NRV

1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	468	449	450	ug/L	20.5	383 to 518	0.927	ACCEPT.	8/15/18	NRV
1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	468	449	450	ug/L	20.5	383 to 518	0.927	ACCEPT.	8/15/18	NRV
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1620	1690	1680	ug/L	79.8	1430 to 1940	0.877	ACCEPT.	8/15/18	NRV
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	1620	1690	1680	ug/L	79.8	1430 to 1940	0.877	ACCEPT.	8/15/18	NRV
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	157	149	150	ug/L	6.38	125 to 174	1.25	ACCEPT.	8/15/18	NRV
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	157	149	150	ug/L	6.38	125 to 174	1.25	ACCEPT.	8/15/18	NRV
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1240	1231	1230	ug/L	58.9	1090 to 1380	0.153	ACCEPT.	8/15/18	NRV
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	1240	1231	1230	ug/L	58.9	1090 to 1380	0.153	ACCEPT.	8/15/18	NRV
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	179	196	200	ug/L	12.2	170 to 230	1.39	ACCEPT.	8/15/18	NRV
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	179	196	200	ug/L	12.2	170 to 230	1.39	ACCEPT.	8/15/18	NRV
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	786	774	767	ug/L	40.3	652 to 882	0.298	ACCEPT.	8/15/18	NRV
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	786	774	767	ug/L	40.3	652 to 882	0.298	ACCEPT.	8/15/18	NRV
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	455	443	450	ug/L	29.3	383 to 518	0.410	ACCEPT.	8/15/18	NRV
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	455	443	450	ug/L	29.3	383 to 518	0.410	ACCEPT.	8/15/18	NRV
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	583	575	583	ug/L	35.6	482 to 675	0.225	ACCEPT.	8/15/18	NRV
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	583	575	583	ug/L	35.6	482 to 675	0.225	ACCEPT.	8/15/18	NRV
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1570	1554	1550	ug/L	82.8	1320 to 1780	0.193	ACCEPT.	8/16/18	NRV
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	1570	1554	1550	ug/L	82.8	1320 to 1780	0.193	ACCEPT.	8/16/18	NRV
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1470	1590	1620	ug/L	109	1370 to 1860	1.10	ACCEPT.	8/15/18	NRV
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	1470	1590	1620	ug/L	109	1370 to 1860	1.10	ACCEPT.	8/15/18	NRV

PEI-034-2 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1290	1205	1300	ug/L	245	910 to 1690	0.347	ACCEPT.	8/16/18	NRV

1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	1290	1205	1300	ug/L	245	910 to 1690	0.347	ACCEPT.	8/16/18	NRV
1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	159	162	167	ug/L	18.2	142 to 192	0.165	ACCEPT.	8/15/18	NRV
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	159	162	167	ug/L	18.2	142 to 192	0.165	ACCEPT.	8/15/18	NRV

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105015	ISE	SM 4500-H+ B 22nd ED 2011	7.82	7.87	7.83	units	0.0753	7.63 to 8.03	0.664	ACCEPT.	7/27/18	AMG
1900	pH	10244403	ISE	SW-846 9040C - 2002	7.82	7.87	7.83	units	0.0753	7.63 to 8.03	0.664	ACCEPT.	7/27/18	AMG

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051212	GRAV	SM 2540 D-2011 2011	25.0	25.4	24.5	mg/L	3.28	16.3 to 30.1	0.122	ACCEPT.	7/26/18	AMG
1950	Total Solids	20049416	GRAV	SM 2540 B-2011 2011	688	693	698	mg/L	21.7	628 to 768	0.230	ACCEPT.	7/26/18	AMG

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	5.37	5.34	5.32	mg/L	1.05	2.24 to 7.78	0.0286	ACCEPT.	8/6/18	SEM

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 - 1994	21.8	26.5	28.8	ug/L	3.52	20.2 to 37.4	1.34	ACCEPT.	8/2/18	NRV
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	21.8	26.5	28.8	ug/L	3.52	20.2 to 37.4	1.34	ACCEPT.	8/2/18	NRV

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	18.2	18.2	19.1	NTU	1.73	15.9 to 22.3	0	ACCEPT.	7/31/18	SEM
2055	Turbidity	20042619	TURB	SM 2130 B 22nd Ed 2011	18.2	18.2	19.1	NTU	1.73	15.9 to 22.3	0	ACCEPT.	7/31/18	SEM

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	531	485	519	ug/L	134	435 to 596	0.343	ACCEPT.	7/31/18	AMG
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	531	485	519	ug/L	134	435 to 596	0.343	ACCEPT.	7/31/18	AMG

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	3.19	2.96	2.93	mg/L	0.184	2.53 to 3.34	1.25	ACCEPT.	7/31/18	AMS
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	3.19	2.96	2.93	mg/L	0.184	2.53 to 3.34	1.25	ACCEPT.	7/31/18	AMS

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.86	2.89	2.95	mg/L	0.201	2.30 to 3.55	0.149	ACCEPT.	7/31/18	AMS
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	2.86	2.89	2.95	mg/L	0.201	2.30 to 3.55	0.149	ACCEPT.	7/31/18	AMS

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1120	1111	1150	ug/L	76.2	973 to 1320	0.118	ACCEPT.	8/16/18	NRV
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1120	1111	1150	ug/L	76.2	973 to 1320	0.118	ACCEPT.	8/16/18	NRV

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	103	119	115	mg/L	31.3	55.0 to 157	0.511	ACCEPT.	8/14/18	AMG
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	103	119	115	mg/L	31.3	55.0 to 157	0.511	ACCEPT.	8/14/18	AMG

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	43.0	47.6	46.8	mg/L	1.95	40.5 to 53.3	2.36	ACCEPT.	7/31/18	AMS
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	43.0	47.6	46.8	mg/L	1.95	40.5 to 53.3	2.36	ACCEPT.	7/31/18	AMS

1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.42	2.39	2.39	mg/L	0.189	1.91 to 2.78	0.159	ACCEPT.	7/31/18	AMS
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	2.42	2.39	2.39	mg/L	0.189	1.91 to 2.78	0.159	ACCEPT.	7/31/18	AMS
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	27.7	28.0	27.7	mg/L	1.60	22.2 to 33.2	0.188	ACCEPT.	8/15/18	NRV
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	27.7	28.0	27.7	mg/L	1.60	22.2 to 33.2	0.188	ACCEPT.	8/15/18	NRV
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	91.0	87.2	89.1	mg/L	4.59	71.3 to 107	0.828	ACCEPT.	8/15/18	NRV
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	91.0	87.2	89.1	mg/L	4.59	71.3 to 107	0.828	ACCEPT.	8/15/18	NRV
1610	Specific Conductance (at 25C)	20048413	COND	SM 2510 B 22nd Ed 2011	484	470	470	umhos/cm	17.5	423 to 517	0.800	ACCEPT.	8/3/18	AMG
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	484	470	470	umhos/cm	17.5	423 to 517	0.800	ACCEPT.	8/3/18	AMG
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	31.0	34.2	34.0	mg/L	1.73	27.6 to 39.2	1.85	ACCEPT.	7/31/18	AMS
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	31.0	34.2	34.0	mg/L	1.73	27.6 to 39.2	1.85	ACCEPT.	7/31/18	AMS
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	118	124	126	mg/L	4.38	107 to 145	1.37	ACCEPT.	8/6/18	AMG
1505	Total Alkalinity (CaCO3)	20045618	TITR	SM 2320 B-2011 2011	128	124	126	mg/L	4.38	107 to 145	0.913	ACCEPT.	7/27/18	AMG
1955	Total Dissolved Solids (TDS)	20050424	GRAV	SM 2540 C 22nd Ed 2011	402	396	396	mg/L	49.2	351 to 441	0.122	ACCEPT.	8/2/18	AMS

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	49.1	48.9	50.4	mg/L	2.77	42.8 to 58.0	0.0722	ACCEPT.	8/15/18	NRV
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	49.1	48.9	50.4	mg/L	2.77	42.8 to 58.0	0.0722	ACCEPT.	8/15/18	NRV
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	122	120	126	mg/L	6.50	107 to 145	0.308	ACCEPT.	8/15/18	NRV
1550	Calcium Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	122	120	126	mg/L	6.50	107 to 145	0.308	ACCEPT.	8/15/18	NRV
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	122	120	126	mg/L	6.50	107 to 145	0.308	ACCEPT.	8/15/18	NRV
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	29.6	29.0	30.0	mg/L	1.87	25.5 to 34.5	0.321	ACCEPT.	8/15/18	NRV
1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	29.6	29.0	30.0	mg/L	1.87	25.5 to 34.5	0.321	ACCEPT.	8/15/18	NRV
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	244	239	249	mg/L	13.1	212 to 286	0.382	ACCEPT.	8/15/18	NRV

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	244	239	249	mg/L	13.1	212 to 286	0.382	ACCEPT.	8/15/18	NRV
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	244	239	249	mg/L	13.1	212 to 286	0.382	ACCEPT.	8/15/18	NRV

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	17.7	16.7	16.7	mg/L	1.45	13.4 to 19.8	0.690	ACCEPT.	8/15/18	SEM
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.21	8.30	8.28	mg/L	0.672	6.81 to 9.71	0.134	ACCEPT.	7/31/18	AMS
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	8.21	8.30	8.28	mg/L	0.672	6.81 to 9.71	0.134	ACCEPT.	7/31/18	AMS
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.21	8.34	8.28	mg/L	0.542	6.86 to 9.63	0.240	ACCEPT.	7/31/18	AMS
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	8.21	8.34	8.28	mg/L	0.542	6.86 to 9.63	0.240	ACCEPT.	7/31/18	AMS
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	0.909	0.807	0.796	mg/L	0.0900	0.677 to 0.915	1.13	ACCEPT.	7/31/18	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	0.909	0.807	0.796	mg/L	0.0900	0.677 to 0.915	1.13	ACCEPT.	7/31/18	AMS

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	2.49	3.29	3.31	mg/L	0.358	2.72 to 3.87	2.23	NOT ACCEPT.	8/1/18	AMG
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	2.49	3.29	3.31	mg/L	0.358	2.72 to 3.87	2.23	NOT ACCEPT.	8/1/18	AMG
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP

8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8900	Arochlor 1248	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8905	Arochlor 1254	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8910	Arochlor 1260	10103603	GC-ECD	EPA 608	6.75	6.92	8.28	ug/L	1.36	3.02 to 11.2	0.125	ACCEPT.	7/30/18	GJP
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	6.75	6.92	8.28	ug/L	1.36	3.02 to 11.2	0.125	ACCEPT.	7/30/18	GJP
8912	Arochlor 1262	10103603	GC-ECD	EPA 608	<1.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8913	Arochlor 1268	10103603	GC-ECD	EPA 608	<1.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10107401	GC-MS	EPA 625	74.0	67.6	85.2	ug/L	8.50	31.3 to 107	0.753	ACCEPT.	8/1/18	RDK
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	74.0	67.6	85.2	ug/L	8.50	31.3 to 107	0.753	ACCEPT.	8/1/18	RDK
6840	2,4,6-Trichlorophenol	10107401	GC-MS	EPA 625	94.4	80.8	103	ug/L	9.04	38.4 to 125	1.50	ACCEPT.	8/1/18	RDK
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	94.4	80.8	103	ug/L	9.04	38.4 to 125	1.50	ACCEPT.	8/1/18	RDK
6000	2,4-Dichlorophenol	10107401	GC-MS	EPA 625	135	111	147	ug/L	12.2	47.8 to 175	1.97	ACCEPT.	8/1/18	RDK
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	135	111	147	ug/L	12.2	47.8 to 175	1.97	ACCEPT.	8/1/18	RDK
6130	2,4-Dimethylphenol	10107401	GC-MS	EPA 625	42.0	39.1	47.3	ug/L	8.18	13.9 to 59.9	0.355	ACCEPT.	8/1/18	RDK
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	42.0	39.1	47.3	ug/L	8.18	13.9 to 59.9	0.355	ACCEPT.	8/1/18	RDK
6175	2,4-Dinitrophenol	10107401	GC-MS	EPA 625	199	186	192	ug/L	34.5	19.2 to 253	0.377	ACCEPT.	8/1/18	RDK
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	199	186	192	ug/L	34.5	19.2 to 253	0.377	ACCEPT.	8/1/18	RDK
6005	2,6-Dichlorophenol	10107401	GC-MS	EPA 625	118	106	132	ug/L	11.5	40.8 to 164	1.04	ACCEPT.	8/1/18	RDK
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	118	106	132	ug/L	11.5	40.8 to 164	1.04	ACCEPT.	8/1/18	RDK
5800	2-Chlorophenol	10107401	GC-MS	EPA 625	35.8	32.5	45.5	ug/L	4.63	13.9 to 55.4	0.713	ACCEPT.	8/1/18	RDK
5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	35.8	32.5	45.5	ug/L	4.63	13.9 to 55.4	0.713	ACCEPT.	8/1/18	RDK
6360	2-Methyl-4,6-Dinitrophenol	10107401	GC-MS	EPA 625	74.2	73.2	80.7	ug/L	8.90	24.5 to 114	0.112	ACCEPT.	8/1/18	RDK
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	74.2	73.2	80.7	ug/L	8.90	24.5 to 114	0.112	ACCEPT.	8/1/18	RDK
6400	2-Methylphenol	10107401	GC-MS	EPA 625	114	97.2	147	ug/L	10.4	33.3 to 171	1.62	ACCEPT.	8/1/18	RDK

6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	114	97.2	147	ug/L	10.4	33.3 to 171	1.62	ACCEPT.	8/1/18	RDK
6490	2-Nitrophenol	10107401	GC-MS	EPA 625	110	90.0	120	ug/L	12.5	39.4 to 145	1.60	ACCEPT.	8/1/18	RDK
6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	110	90.0	120	ug/L	12.5	39.4 to 145	1.60	ACCEPT.	8/1/18	RDK
5700	4-Chloro-3-methylphenol	10107401	GC-MS	EPA 625	48.7	40.0	49.6	ug/L	5.21	19.0 to 61.5	1.67	ACCEPT.	8/1/18	RDK
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	48.7	40.0	49.6	ug/L	5.21	19.0 to 61.5	1.67	ACCEPT.	8/1/18	RDK
6410	4-Methylphenol	10107401	GC-MS	EPA 625	104	95.2	149	ug/L	15.9	14.9 to 192	0.553	ACCEPT.	8/1/18	RDK
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	104	95.2	149	ug/L	15.9	14.9 to 192	0.553	ACCEPT.	8/1/18	RDK
6500	4-Nitrophenol	10107401	GC-MS	EPA 625	83.7	78.1	162	ug/L	19.8	16.2 to 217	0.283	ACCEPT.	8/1/18	RDK
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	83.7	78.1	162	ug/L	19.8	16.2 to 217	0.283	ACCEPT.	8/1/18	RDK
6605	Pentachlorophenol	10107401	GC-MS	EPA 625	97.5	98.6	129	ug/L	10.9	43.6 to 174	0.101	ACCEPT.	8/1/18	RDK
6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	97.5	98.6	129	ug/L	10.9	43.6 to 174	0.101	ACCEPT.	8/1/18	RDK
6625	Phenol	10107401	GC-MS	EPA 625	67.6	66.6	177	ug/L	16.4	17.7 to 237	0.0610	ACCEPT.	8/1/18	RDK
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	67.6	66.6	177	ug/L	16.4	17.7 to 237	0.0610	ACCEPT.	8/1/18	RDK
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10103603	GC-ECD	EPA 608	13.6	13.6	14.9	ug/L	3.01	6.06 to 20.0	0	ACCEPT.	8/2/18	GJP
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	13.6	13.6	14.9	ug/L	3.01	6.06 to 20.0	0	ACCEPT.	8/2/18	GJP

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10103603	GC-ECD	EPA 608	49.9	49.9	52.6	ug/L	5.53	11.5 to 77.4	0	ACCEPT.	7/31/18	GJP
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	49.9	49.9	52.6	ug/L	5.53	11.5 to 77.4	0	ACCEPT.	7/31/18	GJP

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	9.16	7.38	9.80	ug/L	2.14	2.26 to 14.0	0.832	ACCEPT.	8/9/18	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	5.75	3.97	5.06	ug/L	1.23	0.506 to 7.89	1.45	ACCEPT.	8/9/18	RDK

8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	9.55	7.88	9.72	ug/L	2.30	2.36 to 13.5	0.726	ACCEPT.	8/9/18	RDK
8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	6.17	5.91	7.23	ug/L	1.41	1.69 to 10.7	0.184	ACCEPT.	8/9/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/18	RDK
8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/2/18	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	3080	3245	4630	ug/L	776	1260 to 5770	0.213	ACCEPT.	7/27/18	BDA

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	852	1963	2180	ug/L	922	802 to 3840	1.20	ACCEPT.	8/10/18	TKT

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10107207	GC-MS	EPA 624	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5160	1,1,1-Trichloroethane	10107207	GC-MS	EPA 624	33.4	29.3	30.8	ug/L	3.33	18.5 to 43.1	1.23	ACCEPT.	7/26/18	AJH
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	33.4	29.3	30.8	ug/L	3.33	18.5 to 43.1	1.23	ACCEPT.	7/26/18	AJH
5110	1,1,2,2-Tetrachloroethane	10107207	GC-MS	EPA 624	30.5	31.4	32.1	ug/L	3.60	20.8 to 43.3	0.250	ACCEPT.	7/26/18	AJH
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	30.5	31.4	32.1	ug/L	3.60	20.8 to 43.3	0.250	ACCEPT.	7/26/18	AJH
5165	1,1,2-Trichloroethane	10107207	GC-MS	EPA 624	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	21.3	21.1	22.1	ug/L	2.79	7.66 to 35.1	0.0717	ACCEPT.	7/26/18	AJH

5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	21.3	21.1	22.1	ug/L	2.79	7.66 to 35.1	0.0717	ACCEPT.	7/26/18	AJH
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	<4.30	0.00	<4.3	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<4.30	0.00	<4.3	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	88.2	79.1	83.6	ug/L	6.67	54.4 to 113	1.36	ACCEPT.	7/26/18	AJH
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	88.2	79.1	83.6	ug/L	6.67	54.4 to 113	1.36	ACCEPT.	7/26/18	AJH
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	99.7	92.2	94.9	ug/L	9.21	59.9 to 130	0.814	ACCEPT.	7/26/18	AJH
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	99.7	92.2	94.9	ug/L	9.21	59.9 to 130	0.814	ACCEPT.	7/26/18	AJH
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	137	114	122	ug/L	18.1	69.8 to 176	1.27	ACCEPT.	7/26/18	AJH
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	137	114	122	ug/L	18.1	69.8 to 176	1.27	ACCEPT.	7/26/18	AJH
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	136	137	144	ug/L	14.3	86.5 to 202	0.0699	ACCEPT.	7/26/18	AJH
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	106	106	111	ug/L	13.3	77.8 to 145	0	ACCEPT.	7/26/18	AJH
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	106	106	111	ug/L	13.3	77.8 to 145	0	ACCEPT.	7/26/18	AJH
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	148	140	140	ug/L	15.4	99.3 to 179	0.519	ACCEPT.	7/26/18	AJH
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	148	140	140	ug/L	15.4	99.3 to 179	0.519	ACCEPT.	7/26/18	AJH
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	55.3	50.2	51.7	ug/L	4.21	36.2 to 67.1	1.21	ACCEPT.	7/26/18	AJH
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	55.3	50.2	51.7	ug/L	4.21	36.2 to 67.1	1.21	ACCEPT.	7/26/18	AJH
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	35.8	34.7	34.3	ug/L	3.75	24.0 to 44.6	0.293	ACCEPT.	7/26/18	AJH
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	35.8	34.7	34.3	ug/L	3.75	24.0 to 44.6	0.293	ACCEPT.	7/26/18	AJH
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	60.0	57.5	60.6	ug/L	6.95	42.4 to 78.7	0.360	ACCEPT.	7/26/18	AJH
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	60.0	57.5	60.6	ug/L	6.95	42.4 to 78.7	0.360	ACCEPT.	7/26/18	AJH
4410	2-Butanone	10107207	GC-MS	EPA 624	<25.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4860	2-Hexanone	10107207	GC-MS	EPA 624	<4.40	0.00	<4.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4860	2-Hexanone	10184802	GC-MS	SW-846 8260B - 1996	<4.40	0.00	<4.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4995	4-Methyl-2-pentanone	10107207	GC-MS	EPA 624	48.9	46.1	48.8	ug/L	3.86	21.7 to 74.1	0.725	ACCEPT.	7/26/18	AJH
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846 8260B - 1996	48.9	46.1	48.8	ug/L	3.86	21.7 to 74.1	0.725	ACCEPT.	7/26/18	AJH

4315	Acetone	10107207	GC-MS	EPA 624	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4315	Acetone	10184802	GC-MS	SW-846 8260B - 1996	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4325	Acrolein	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4325	Acrolein	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4340	Acrylonitrile	10107207	GC-MS	EPA 624	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4340	Acrylonitrile	10184802	GC-MS	SW-846 8260B - 1996	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4375	Benzene	10107207	GC-MS	EPA 624	26.3	24.0	24.5	ug/L	2.31	17.1 to 31.8	0.996	ACCEPT.	7/26/18	AJH
4375	Benzene	10184802	GC-MS	SW-846 8260B - 1996	26.3	24.0	24.5	ug/L	2.31	17.1 to 31.8	0.996	ACCEPT.	7/26/18	AJH
4395	Bromodichloromethane	10107207	GC-MS	EPA 624	<6.00	0.00	<6.0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4395	Bromodichloromethane	10184802	GC-MS	SW-846 8260B - 1996	<6.00	0.00	<6.0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4400	Bromoform	10107207	GC-MS	EPA 624	45.1	44.2	46.0	ug/L	4.29	27.6 to 64.4	0.210	ACCEPT.	7/26/18	AJH
4400	Bromoform	10184802	GC-MS	SW-846 8260B - 1996	45.1	44.2	46.0	ug/L	4.29	27.6 to 64.4	0.210	ACCEPT.	7/26/18	AJH
4950	Bromomethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4950	Bromomethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4450	Carbon disulfide	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4450	Carbon disulfide	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4455	Carbon tetrachloride	10107207	GC-MS	EPA 624	144	121	130	ug/L	18.1	73.8 to 175	1.27	ACCEPT.	7/26/18	AJH
4455	Carbon tetrachloride	10184802	GC-MS	SW-846 8260B - 1996	144	121	130	ug/L	18.1	73.8 to 175	1.27	ACCEPT.	7/26/18	AJH
4475	Chlorobenzene	10107207	GC-MS	EPA 624	70.9	65.3	68.5	ug/L	7.77	48.0 to 89.1	0.721	ACCEPT.	7/26/18	AJH
4475	Chlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	70.9	65.3	68.5	ug/L	7.77	48.0 to 89.1	0.721	ACCEPT.	7/26/18	AJH
4485	Chloroethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4485	Chloroethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4505	Chloroform	10107207	GC-MS	EPA 624	91.1	82.1	84.2	ug/L	7.17	59.0 to 110	1.26	ACCEPT.	7/26/18	AJH
4505	Chloroform	10184802	GC-MS	SW-846 8260B - 1996	91.1	82.1	84.2	ug/L	7.17	59.0 to 110	1.26	ACCEPT.	7/26/18	AJH
4960	Chloromethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4960	Chloromethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4645	cis-1,2-Dichloroethene	10107207	GC-MS	EPA 624	20.7	18.9	20.3	ug/L	1.99	13.9 to 27.3	0.905	ACCEPT.	7/26/18	AJH
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	20.7	18.9	20.3	ug/L	1.99	13.9 to 27.3	0.905	ACCEPT.	7/26/18	AJH
4680	cis-1,3-Dichloropropene	10107207	GC-MS	EPA 624	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4575	Dibromochloromethane	10107207	GC-MS	EPA 624	101	89.5	98.9	ug/L	24.6	59.3 to 138	0.467	ACCEPT.	7/26/18	AJH
4575	Dibromochloromethane	10184802	GC-MS	SW-846	101	89.5	98.9	ug/L	24.6	59.3 to 138	0.467	ACCEPT.	7/26/18	AJH

				8260B - 1996										
4595	Dibromomethane	10107207	GC-MS	EPA 624	85.9	89.1	86.2	ug/L	12.6	56.0 to 116	0.254	ACCEPT.	7/26/18	AJH
4595	Dibromomethane	10184802	GC-MS	SW-846	85.9	89.1	86.2	ug/L	12.6	56.0 to 116	0.254	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4625	Dichlorodifluoromethane	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4765	Ethylbenzene	10107207	GC-MS	EPA 624	33.8	33.9	36.1	ug/L	3.21	25.2 to 46.9	0.0312	ACCEPT.	7/26/18	AJH
4765	Ethylbenzene	10184802	GC-MS	SW-846	33.8	33.9	36.1	ug/L	3.21	25.2 to 46.9	0.0312	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4585	Ethylene dibromide	10107207	GC-MS	EPA 624	74.9	73.6	73.5	ug/L	4.39	47.8 to 99.2	0.296	ACCEPT.	7/26/18	AJH
4585	Ethylene dibromide	10184802	GC-MS	SW-846	74.9	73.6	73.5	ug/L	4.39	47.8 to 99.2	0.296	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4975	Methylene chloride	10107207	GC-MS	EPA 624	110	106	106	ug/L	15.9	63.6 to 148	0.252	ACCEPT.	7/26/18	AJH
4975	Methylene chloride	10184802	GC-MS	SW-846	110	106	106	ug/L	15.9	63.6 to 148	0.252	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5000	MTBE	10107207	GC-MS	EPA 624	65.0	59.4	63.0	ug/L	5.72	42.1 to 86.0	0.979	ACCEPT.	7/26/18	AJH
5000	MTBE	10184802	GC-MS	SW-846	65.0	59.4	63.0	ug/L	5.72	42.1 to 86.0	0.979	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5005	Naphthalene	10107207	GC-MS	EPA 624	47.2	50.3	53.7	ug/L	8.56	24.8 to 72.4	0.362	ACCEPT.	7/26/18	AJH
5005	Naphthalene	10184802	GC-MS	SW-846	47.2	50.3	53.7	ug/L	8.56	24.8 to 72.4	0.362	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5100	Styrene	10107207	GC-MS	EPA 624	101	88.3	90.1	ug/L	9.30	58.6 to 122	1.37	ACCEPT.	7/26/18	AJH
5100	Styrene	10184802	GC-MS	SW-846	101	88.3	90.1	ug/L	9.30	58.6 to 122	1.37	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5115	Tetrachloroethene	10107207	GC-MS	EPA 624	<4.30	0.00	<4.3	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5115	Tetrachloroethene	10184802	GC-MS	SW-846	<4.30	0.00	<4.3	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5140	Toluene	10107207	GC-MS	EPA 624	41.8	41.2	43.3	ug/L	3.80	30.3 to 56.2	0.158	ACCEPT.	7/26/18	AJH
5140	Toluene	10184802	GC-MS	SW-846	41.8	41.2	43.3	ug/L	3.80	30.3 to 56.2	0.158	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5240	m+p-Xylene	10107207	GC-MS	EPA 624	42.7	43.9	44.8	ug/L	3.23	26.9 to 62.7	0.372	ACCEPT.	7/26/18	AJH
5240	m+p-Xylene	10184802	GC-MS	SW-846	42.7	43.9	44.8	ug/L	3.23	26.9 to 62.7	0.372	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5250	o-Xylene	10107207	GC-MS	EPA 624	22.6	23.4	24.8	ug/L	2.18	14.9 to 34.8	0.367	ACCEPT.	7/26/18	AJH
5250	o-Xylene	10184802	GC-MS	SW-846	22.6	23.4	24.8	ug/L	2.18	14.9 to 34.8	0.367	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5260	Total Xylenes	10107207	GC-MS	EPA 624	65.3	67.8	69.6	ug/L	7.25	41.8 to 97.5	0.345	ACCEPT.	7/26/18	AJH
5260	Total Xylenes	10184802	GC-MS	SW-846	65.3	67.8	69.6	ug/L	7.25	41.8 to 97.5	0.345	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	118	103	108	ug/L	14.8	64.7 to 151	1.01	ACCEPT.	7/26/18	AJH
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846	118	103	108	ug/L	14.8	64.7 to 151	1.01	ACCEPT.	7/26/18	AJH
				8260B - 1996										
4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	75.8	70.1	73.2	ug/L	8.81	47.6 to 98.8	0.647	ACCEPT.	7/26/18	AJH
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846	75.8	70.1	73.2	ug/L	8.81	47.6 to 98.8	0.647	ACCEPT.	7/26/18	AJH
				8260B - 1996										
5170	Trichloroethene	10107207	GC-MS	EPA 624	45.7	39.1	42.6	ug/L	4.78	27.0 to 56.1	1.38	ACCEPT.	7/26/18	AJH

5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	45.7	39.1	42.6	ug/L	4.78	27.0 to 56.1	1.38	ACCEPT.	7/26/18	AJH
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	34.4	30.6	30.5	ug/L	4.29	12.2 to 48.7	0.886	ACCEPT.	7/26/18	AJH
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	34.4	30.6	30.5	ug/L	4.29	12.2 to 48.7	0.886	ACCEPT.	7/26/18	AJH
5225	Vinyl acetate	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5235	Vinyl chloride	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	7/26/18	AJH
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	147	125	189	ug/L	18.6	38.9 to 219	1.18	ACCEPT.	8/1/18	RDK
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	147	125	189	ug/L	18.6	38.9 to 219	1.18	ACCEPT.	8/1/18	RDK
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	96.9	90.3	123	ug/L	11.7	33.7 to 146	0.564	ACCEPT.	8/1/18	RDK
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	96.9	90.3	123	ug/L	11.7	33.7 to 146	0.564	ACCEPT.	8/1/18	RDK
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	32.0	30.4	42.0	ug/L	4.36	4.20 to 53.3	0.367	ACCEPT.	8/1/18	RDK
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	32.0	30.4	42.0	ug/L	4.36	4.20 to 53.3	0.367	ACCEPT.	8/1/18	RDK
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	102	89.8	146	ug/L	13.3	14.6 to 168	0.917	ACCEPT.	8/1/18	RDK
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	102	89.8	146	ug/L	13.3	14.6 to 168	0.917	ACCEPT.	8/1/18	RDK
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	<5.00	0.00	<3.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	<3.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	175	146	177	ug/L	19.3	78.0 to 214	1.50	ACCEPT.	8/1/18	RDK
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	175	146	177	ug/L	19.3	78.0 to 214	1.50	ACCEPT.	8/1/18	RDK
6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	182	144	188	ug/L	28.0	76.2 to 226	1.36	ACCEPT.	8/1/18	RDK
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	182	144	188	ug/L	28.0	76.2 to 226	1.36	ACCEPT.	8/1/18	RDK
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	149	125	179	ug/L	19.0	47.7 to 207	1.26	ACCEPT.	8/1/18	RDK
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	149	125	179	ug/L	19.0	47.7 to 207	1.26	ACCEPT.	8/1/18	RDK

6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	83.1	71.9	95.5	ug/L	8.35	35.7 to 118	1.34	ACCEPT.	8/1/18	RDK
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	83.1	71.9	95.5	ug/L	8.35	35.7 to 118	1.34	ACCEPT.	8/1/18	RDK
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5500	Acenaphthene	10107401	GC-MS	EPA 625	106	104	129	ug/L	15.4	45.3 to 157	0.130	ACCEPT.	8/1/18	RDK
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	106	104	129	ug/L	15.4	45.3 to 157	0.130	ACCEPT.	8/1/18	RDK
5505	Acenaphthylene	10107401	GC-MS	EPA 625	127	126	161	ug/L	20.0	57.0 to 202	0.0500	ACCEPT.	8/1/18	RDK
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	127	126	161	ug/L	20.0	57.0 to 202	0.0500	ACCEPT.	8/1/18	RDK
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5555	Anthracene	10107401	GC-MS	EPA 625	120	114	142	ug/L	15.9	60.8 to 170	0.377	ACCEPT.	8/1/18	RDK
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	120	114	142	ug/L	15.9	60.8 to 170	0.377	ACCEPT.	8/1/18	RDK
5595	Benzidine	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	117	100	121	ug/L	11.4	58.1 to 146	1.49	ACCEPT.	8/1/18	RDK
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	117	100	121	ug/L	11.4	58.1 to 146	1.49	ACCEPT.	8/1/18	RDK
5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	88.6	73.4	101	ug/L	13.5	36.6 to 129	1.13	ACCEPT.	8/1/18	RDK
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	88.6	73.4	101	ug/L	13.5	36.6 to 129	1.13	ACCEPT.	8/1/18	RDK
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	181	154	184	ug/L	24.3	70.4 to 236	1.11	ACCEPT.	8/3/18	BDA
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	181	154	184	ug/L	24.3	70.4 to 236	1.11	ACCEPT.	8/3/18	BDA

5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	175	146	189	ug/L	24.8	69.4 to 246	1.17	ACCEPT.	8/3/18	BDA
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	175	146	189	ug/L	24.8	69.4 to 246	1.17	ACCEPT.	8/3/18	BDA
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	71.2	58.4	71.2	ug/L	7.92	17.4 to 104	1.62	ACCEPT.	8/1/18	RDK
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	71.2	58.4	71.2	ug/L	7.92	17.4 to 104	1.62	ACCEPT.	8/1/18	RDK
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	29.1	24.3	28.6	ug/L	2.90	7.33 to 37.2	1.66	ACCEPT.	8/1/18	RDK
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	29.1	24.3	28.6	ug/L	2.90	7.33 to 37.2	1.66	ACCEPT.	8/1/18	RDK
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	76.2	69.4	97.6	ug/L	8.41	25.3 to 118	0.809	ACCEPT.	8/1/18	RDK
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	76.2	69.4	97.6	ug/L	8.41	25.3 to 118	0.809	ACCEPT.	8/1/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	121	101	146	ug/L	11.4	42.3 to 174	1.75	ACCEPT.	8/1/18	RDK
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	121	101	146	ug/L	11.4	42.3 to 174	1.75	ACCEPT.	8/1/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	185	148	176	ug/L	25.2	61.8 to 227	1.47	ACCEPT.	8/1/18	RDK
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	185	148	176	ug/L	25.2	61.8 to 227	1.47	ACCEPT.	8/1/18	RDK
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	<13.4	0.00	<13.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<13.4	0.00	<13.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5680	Carbazole	10107401	GC-MS	EPA 625	122	110	121	ug/L	25.1	12.1 to 133	0.478	ACCEPT.	8/1/18	RDK
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	122	110	121	ug/L	25.1	12.1 to 133	0.478	ACCEPT.	8/1/18	RDK
5855	Chrysene	10107401	GC-MS	EPA 625	26.1	25.1	27.1	ug/L	3.71	12.9 to 36.2	0.270	ACCEPT.	8/1/18	RDK
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	26.1	25.1	27.1	ug/L	3.71	12.9 to 36.2	0.270	ACCEPT.	8/1/18	RDK
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	<6.90	0.00	<6.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	<6.90	0.00	<6.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5905	Dibenzofuran	10107401	GC-MS	EPA 625	92.4	82.4	106	ug/L	10.4	41.1 to 121	0.962	ACCEPT.	8/1/18	RDK
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	92.4	82.4	106	ug/L	10.4	41.1 to 121	0.962	ACCEPT.	8/1/18	RDK
6070	Diethyl phthalate	10107401	GC-MS	EPA 625	162	148	184	ug/L	21.5	35.4 to 246	0.651	ACCEPT.	8/1/18	RDK
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	162	148	184	ug/L	21.5	35.4 to 246	0.651	ACCEPT.	8/1/18	RDK
6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	<11.5	0.00	<11.5	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<11.5	0.00	<11.5	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	49.2	42.0	45.0	ug/L	5.87	17.5 to 63.0	1.23	ACCEPT.	8/1/18	RDK
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	49.2	42.0	45.0	ug/L	5.87	17.5 to 63.0	1.23	ACCEPT.	8/1/18	RDK

6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	87.2	72.1	88.0	ug/L	12.0	25.7 to 124	1.26	ACCEPT.	8/1/18	RDK
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	87.2	72.1	88.0	ug/L	12.0	25.7 to 124	1.26	ACCEPT.	8/1/18	RDK
6265	Fluoranthene	10107401	GC-MS	EPA 625	135	121	141	ug/L	16.4	63.2 to 171	0.854	ACCEPT.	8/1/18	RDK
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	135	121	141	ug/L	16.4	63.2 to 171	0.854	ACCEPT.	8/1/18	RDK
6270	Fluorene	10107401	GC-MS	EPA 625	33.4	31.2	37.7	ug/L	3.91	16.2 to 48.7	0.563	ACCEPT.	8/1/18	RDK
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	33.4	31.2	37.7	ug/L	3.91	16.2 to 48.7	0.563	ACCEPT.	8/1/18	RDK
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	<8.80	0.00	<8.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<8.80	0.00	<8.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	84.9	74.5	122	ug/L	11.1	14.4 to 144	0.937	ACCEPT.	8/1/18	RDK
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	84.9	74.5	122	ug/L	11.1	14.4 to 144	0.937	ACCEPT.	8/1/18	RDK
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	48.3	60.1	140	ug/L	24.6	14.0 to 182	0.480	ACCEPT.	8/1/18	RDK
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	48.3	60.1	140	ug/L	24.6	14.0 to 182	0.480	ACCEPT.	8/1/18	RDK
4840	Hexachloroethane	10107401	GC-MS	EPA 625	108	96.9	153	ug/L	13.8	15.3 to 168	0.804	ACCEPT.	8/1/18	RDK
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	108	96.9	153	ug/L	13.8	15.3 to 168	0.804	ACCEPT.	8/1/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	140	105	139	ug/L	17.1	40.1 to 168	2.05	ACCEPT.	8/1/18	RDK
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	140	105	139	ug/L	17.1	40.1 to 168	2.05	ACCEPT.	8/1/18	RDK
6320	Isophorone	10107401	GC-MS	EPA 625	96.2	66.6	88.8	ug/L	11.5	32.4 to 111	2.57	ACCEPT.	8/1/18	RDK
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	96.2	66.6	88.8	ug/L	11.5	32.4 to 111	2.57	ACCEPT.	8/1/18	RDK
5005	Naphthalene	10107401	GC-MS	EPA 625	58.6	53.7	73.8	ug/L	7.04	17.6 to 89.2	0.696	ACCEPT.	8/1/18	RDK
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	58.6	53.7	73.8	ug/L	7.04	17.6 to 89.2	0.696	ACCEPT.	8/1/18	RDK
5015	Nitrobenzene	10107401	GC-MS	EPA 625	160	135	188	ug/L	14.3	61.7 to 221	1.75	ACCEPT.	8/1/18	RDK
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	160	135	188	ug/L	14.3	61.7 to 221	1.75	ACCEPT.	8/1/18	RDK
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	40.5	39.7	80.4	ug/L	18.2	8.04 to 96.7	0.0440	ACCEPT.	8/1/18	RDK
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	40.5	39.7	80.4	ug/L	18.2	8.04 to 96.7	0.0440	ACCEPT.	8/1/18	RDK
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	92.8	96.6	127	ug/L	12.0	41.4 to 160	0.317	ACCEPT.	8/1/18	RDK
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846 8270C - 1996	92.8	96.6	127	ug/L	12.0	41.4 to 160	0.317	ACCEPT.	8/1/18	RDK
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846 8270C - 1996	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6615	Phenanthrene	10107401	GC-MS	EPA 625	43.1	39.9	48.0	ug/L	4.62	22.4 to 60.1	0.693	ACCEPT.	8/1/18	RDK
6615	Phenanthrene	10185805	GC-MS	SW-846 8270C - 1996	43.1	39.9	48.0	ug/L	4.62	22.4 to 60.1	0.693	ACCEPT.	8/1/18	RDK
6665	Pyrene	10107401	GC-MS	EPA 625	93.3	83.5	98.5	ug/L	10.2	40.3 to 129	0.961	ACCEPT.	8/1/18	RDK

6665	Pyrene	10185805	GC-MS	SW-846 8270C - 1996	93.3	83.5	98.5	ug/L	10.2	40.3 to 129	0.961	ACCEPT.	8/1/18	RDK
5095	Pyridine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
5095	Pyridine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/1/18	RDK
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												
6420	1,4-Naphthoquinone	-- Not Reported --												
6425	1-Naphthylamine	-- Not Reported --												
6430	2-Naphthylamine	-- Not Reported --												
6510	4-Nitroquinoline-1-oxide	-- Not Reported --												
6555	N-Nitrosomorpholine	-- Not Reported --												
6560	N-Nitrosopiperidine	-- Not Reported --												
6565	N-Nitrosopyrrolidine	-- Not Reported --												
6570	5-Nitro-o-toluidine	-- Not Reported --												
6580	n-Octadecane	-- Not Reported --												
6590	Pentachlorobenzene	-- Not Reported --												
6595	Pentachlorohexane	-- Not Reported --												

6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
7065	Atrazine	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10103603	GC-ECD	EPA 608	9.56	9.19	12.5	ug/L	1.83	4.44 to 16.9	0.202	ACCEPT.	8/20/18	GJP
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	9.56	9.19	12.5	ug/L	1.83	4.44 to 16.9	0.202	ACCEPT.	8/20/18	GJP
7110	alpha-BHC	10103603	GC-ECD	EPA 608	7.89	7.59	9.65	ug/L	0.834	4.23 to 13.2	0.360	ACCEPT.	8/20/18	GJP
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	7.89	7.59	9.65	ug/L	0.834	4.23 to 13.2	0.360	ACCEPT.	8/20/18	GJP
7115	beta-BHC	10103603	GC-ECD	EPA 608	3.47	3.60	4.28	ug/L	0.555	2.01 to 6.00	0.234	ACCEPT.	8/20/18	GJP
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	3.47	3.60	4.28	ug/L	0.555	2.01 to 6.00	0.234	ACCEPT.	8/20/18	GJP
7355	4,4'-DDD	10103603	GC-ECD	EPA 608	8.29	8.13	9.75	ug/L	1.21	4.96 to 13.2	0.132	ACCEPT.	8/20/18	GJP
7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	8.29	8.13	9.75	ug/L	1.21	4.96 to 13.2	0.132	ACCEPT.	8/20/18	GJP
7360	4,4'-DDE	10103603	GC-ECD	EPA 608	5.17	4.88	5.88	ug/L	0.638	2.53 to 7.95	0.455	ACCEPT.	8/20/18	GJP
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	5.17	4.88	5.88	ug/L	0.638	2.53 to 7.95	0.455	ACCEPT.	8/20/18	GJP
7365	4,4'-DDT	10103603	GC-ECD	EPA 608	4.92	4.50	5.21	ug/L	0.766	2.06 to 7.52	0.548	ACCEPT.	8/20/18	GJP

7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	4.92	4.50	5.21	ug/L	0.766	2.06 to 7.52	0.548	ACCEPT.	8/20/18	GJP
7105	delta-BHC	10103603	GC-ECD	EPA 608	8.63	8.30	9.88	ug/L	0.918	4.30 to 13.7	0.359	ACCEPT.	8/20/18	GJP
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	8.63	8.30	9.88	ug/L	0.918	4.30 to 13.7	0.359	ACCEPT.	8/20/18	GJP
7470	Dieldrin	10103603	GC-ECD	EPA 608	2.43	2.59	3.09	ug/L	0.386	1.55 to 4.15	0.415	ACCEPT.	8/20/18	GJP
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	2.43	2.59	3.09	ug/L	0.386	1.55 to 4.15	0.415	ACCEPT.	8/20/18	GJP
7510	Endosulfan I	10103603	GC-ECD	EPA 608	7.93	7.28	9.17	ug/L	1.21	3.49 to 12.3	0.537	ACCEPT.	8/21/18	GJP
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	7.93	7.28	9.17	ug/L	1.21	3.49 to 12.3	0.537	ACCEPT.	8/21/18	GJP
7515	Endosulfan II	10103603	GC-ECD	EPA 608	7.92	7.49	9.07	ug/L	1.03	3.72 to 12.4	0.417	ACCEPT.	8/20/18	GJP
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	7.92	7.49	9.07	ug/L	1.03	3.72 to 12.4	0.417	ACCEPT.	8/20/18	GJP
7520	Endosulfan sulfate	10103603	GC-ECD	EPA 608	9.12	8.57	9.91	ug/L	1.25	4.57 to 13.8	0.440	ACCEPT.	8/20/18	GJP
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	9.12	8.57	9.91	ug/L	1.25	4.57 to 13.8	0.440	ACCEPT.	8/20/18	GJP
7540	Endrin	10103603	GC-ECD	EPA 608	10.5	10.2	13.0	ug/L	2.01	5.73 to 18.4	0.149	ACCEPT.	8/20/18	GJP
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	10.5	10.2	13.0	ug/L	2.01	5.73 to 18.4	0.149	ACCEPT.	8/20/18	GJP
7530	Endrin aldehyde	10103603	GC-ECD	EPA 608	6.79	6.73	7.59	ug/L	1.32	2.81 to 11.2	0.0455	ACCEPT.	8/20/18	GJP
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	6.79	6.73	7.59	ug/L	1.32	2.81 to 11.2	0.0455	ACCEPT.	8/20/18	GJP
7120	gamma-BHC	10103603	GC-ECD	EPA 608	10.7	10.4	12.7	ug/L	1.55	5.59 to 17.3	0.194	ACCEPT.	8/20/18	GJP
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	10.7	10.4	12.7	ug/L	1.55	5.59 to 17.3	0.194	ACCEPT.	8/20/18	GJP
7685	Heptachlor	10103603	GC-ECD	EPA 608	7.04	6.34	8.48	ug/L	1.14	3.05 to 11.4	0.614	ACCEPT.	8/20/18	GJP
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	7.04	6.34	8.48	ug/L	1.14	3.05 to 11.4	0.614	ACCEPT.	8/20/18	GJP
7690	Heptachlor epoxide	10103603	GC-ECD	EPA 608	1.90	1.91	2.34	ug/L	0.360	1.13 to 3.17	0.0278	ACCEPT.	8/20/18	GJP
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	1.90	1.91	2.34	ug/L	0.360	1.13 to 3.17	0.0278	ACCEPT.	8/20/18	GJP
7810	Methoxychlor	10103603	GC-ECD	EPA 608	11.9	11.4	14.1	ug/L	1.92	6.26 to 20.1	0.260	ACCEPT.	8/20/18	GJP
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	11.9	11.4	14.1	ug/L	1.92	6.26 to 20.1	0.260	ACCEPT.	8/20/18	GJP
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	78.4	86.0	90.2	ng/L	6.83	70.2 to 109	1.11	ACCEPT.	8/15/18	JLH

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

WP-247

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 680 /PAR)

Client: Fibertec **Project/Document Control Number:** 85840

Sample Number(s): -005 **Date Initiated:** 09-25-18 **Date Due:** 10/09/18

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

The reported result of 2.49 mg/L for Total Phosphorus was below the assigned value of 3.31 mg/L, the study mean of 3.29 mg/L, and the acceptance range of 2.72 to 3.87 mg/L. Please investigate the cause of the error and recommend a corrective action to prevent it's recurrence.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See Attached

Investigator(s): Sierra McKenna

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Going forward, the slope of the calibration curve should be evaluated along with all of the other QC criteria. The limits for the LCS/LCD and CCV will be tightened to a range of 85% - 115%. If the slope of the curve is seems to be higher or lower than normal and the batch QC falls close to either end of the acceptance the curve and samples should be rerun. If the slope of the curve and the recoveries have not changed, the samples and standards should be re-prepped and rerun with the exception that if the samples are from a client that we have past data for, the results can be compared with the historical data and if the new results are similar then a re-prep or rerun would not be necessary. A NTF has been created to change the limits.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☑

Follow-Up Date:_____ ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:**

Quality Assurance:

Date Closed: 11/12/18

CAR 680 – Investigation Into the Unacceptable Result for Total Phosphorus on WP-247

Investigation

A number of things were looked at as part the investigation of the result for Total Phosphorus.

The prep batch was looked at and was found to be acceptable based on the recovery of the LCS/LCD. They were a bit on the low side (84% / 88%) but still within the acceptance range.

The CCV (90%) was acceptable although a little on the low side.

The coefficient of determination for the calibration curve was acceptable at 0.9996, however the slope of the curve seemed higher than usual at 1.245. Usually the slope is closer to 1. The high slope (bias) of the curve would account for the results being biased low.

A re-prep and rerun of the sample with a curve that had a slope of 0.9979 with a coefficient of determination of 0.9996 yielded a result of 3.26 mg/L which was very near the study mean of 3.29 mg/L. It appears that the higher than normal slope resulted in results with a low bias.

It is possible that concentration of the stock calibration standard was slightly high, which resulted in a low bias for the samples as indicated by the lower recoveries for the LCS/LCD. Even though there was a low bias it was not enough for the LCS/LCD to be outside of the acceptance limits and therefore did not trigger a reason to investigate.

When the result for the PT sample was normalized to 100%, the adjusted result was within the acceptance limits for the study.

Note to File Form

Use this form to modify an existing Standard Operating Procedure (SOP). Approved changes must be incorporated into the next revision of the SOP. The completed and signed copy of this form must be scanned to openKM. Training documentation of approved changes to the SOP must be on record.

SOP Title: Colorimetric Analysis of Total Phosphorus in Aqueous and Solid Samples

SOP Number: W-237

SOP Revision: 4

Section(s) Affected: 11.2.1, 13.5, 16.1.1

Add ☐ Remove ☐ Change ☑
(Check one)

Change(s) Required

11.2.1 Change the acceptance limits of the 4 LCS samples from 80-120% to 85-115%.

13.5 Change the acceptance limits for the LCS/ICV from 80-120% to 85-115%.

16.1.1 Change the acceptance limits for the LCS/LCD/ICV/CCV from 80-120% to 85-115%.

Date Implemented 11/16/18

Group Leader

QAO

Laboratory Director

DCSID: Q-503.3 (08/12/15)

1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	244	239	249	mg/L	13.1	212 to 286	0.382	ACCEPT.	8/15/18	NRV
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	244	239	249	mg/L	13.1	212 to 286	0.382	ACCEPT.	8/15/18	NRV

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	17.7	16.7	16.7	mg/L	1.48	13.4 to 19.8	0.676	ACCEPT.	8/15/18	SEM
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.21	8.30	8.28	mg/L	0.672	6.81 to 9.71	0.134	ACCEPT.	7/31/18	AMS
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	8.21	8.30	8.28	mg/L	0.672	6.81 to 9.71	0.134	ACCEPT.	7/31/18	AMS
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.21	8.34	8.28	mg/L	0.542	6.86 to 9.63	0.240	ACCEPT.	7/31/18	AMS
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	8.21	8.34	8.28	mg/L	0.542	6.86 to 9.63	0.240	ACCEPT.	7/31/18	AMS
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	0.909	0.807	0.796	mg/L	0.0900	0.677 to 0.915	1.13	ACCEPT.	7/31/18	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	0.909	0.807	0.796	mg/L	0.0900	0.677 to 0.915	1.13	ACCEPT.	7/31/18	AMS

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	2.49	3.30	3.31	mg/L	0.360	2.72 to 3.87	2.25	NOT ACCEPT.	8/1/18	AMG
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	2.49	3.30	3.31	mg/L	0.360	2.72 to 3.87	2.25	NOT ACCEPT.	8/1/18	AMG
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-247

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	<1.00	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/30/18	GJP

Total Phosphorus-Water

Original

Preparation Method: **SM 4500-P E**
Prep Batch ID: **WF18H01A-PST**
Prep. Date: **8/1/18**
Prep Analyst: **AG**

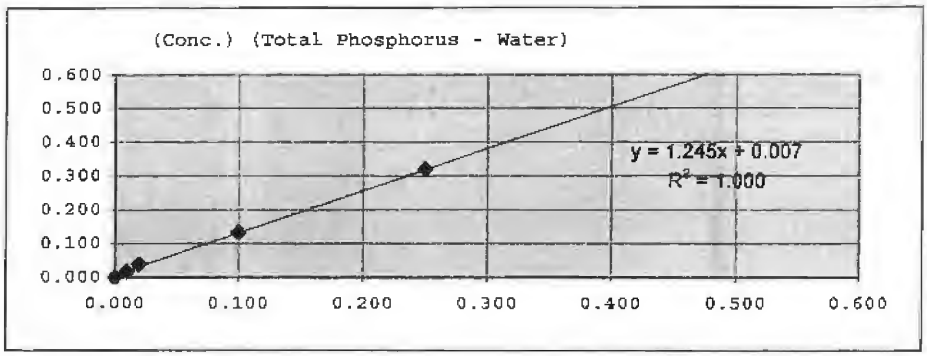
Analysis Method: **SM 4500-P E**
Batch Number: **WF18H01A-PST**
Analysis Date: **08/01/18**
Analyst: **AG**

PQL: **0.010** mg/L PQL Test: 0.009 OK

Calibration Curve Data

Cal Level	Conc. (mg P/L)	Abs. (880nm)
1	0.000	0.000
2	0.010	0.018
3	0.020	0.039
4	0.100	0.133
5	0.250	0.321
6	0.500	0.628

R^2	Slope	
0.9996	1.2450	0.0072



Quality Control Sample Data

Sample Identification	Vol.$_{Initial}$ (mL)	Vol.$_{Final}$ (mL)	ABS	Raw Conc. (mg/L)	Final Result (mg/L)	Spike (mg/L)	QC Eval.
MB	50	50	0.000	-0.006	**<0.010**	---	---
LCS	50	50	0.270	0.211	**0.211**	0.250	84%
LCD	50	50	0.280	0.219	**0.219**	0.250	88%

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 85959-002

MS	10.0	50	0.296	0.232	1.0	5.00	**1.160**	1.250	86%
MSD	10.0	50	0.291	0.228	1.0	5.00	**1.140**	1.250	84%

Enter "CCV" or "CCB" for continuing calibration verification and blanks

Sample Identification	Vol.$_{Initial}$ (mL)	Vol.$_{Final}$ (mL)	ABS	Raw Conc. (mg/L)	Bench Dilution	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	QC Eval.
85959-002	10.0	50.0	0.030	0.018	1.0	5.0	**0.091**	---	---
85840-005	10.0	50.0	0.626	0.497	1.0	5.0	**2.485**	---	---
CCV	50.0	50.0	0.286	0.224	1.0	1.0	**0.224**	0.250	90%
CCB	50.0	50.0	0.000	-0.006	1.0	1.0	**<0.010**	---	---

* Recovery Exceeds control limts

DCSID: W-466.3 (01/18/16)

Analyst Approval/Date 8/1/18

Review Approval/Date 8/1/18

Orginal

Fibertec environmental services

Quality Control Summary
Wet Chemistry Department
Phosphorus - Aqueous
Analysis Batch: WF18H01A-PST
Analysis Date: 08/01/18

Method Blank (MB)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phosphorus	U	0.010	

Laboratory Control Sample (LCS)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phosphorus	0	0.250	84	80-120	

Laboratory Control Sample Duplicate (LCD)

	Parameter	Spike (mg/L)	LCD % Rec	LCS % Rec	RPD (%)	UCL (%)	Q
1.	Phosphorus	0.250	88	84	4	20	

MB/LCS/LCD Exception Summary

Method Blank

No exceptions noted.

Laboratory Control Sample

No exceptions noted.

Laboratory Control Sample Duplicate

No target parameter recovery exceptions noted.
No target parameter RPD exceptions noted.

Parent Sample (85959-002) (DF=5.00)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phosphorus	0.091	0.050	

Matrix Spike (MS) (DF=5.00)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phosphorus	1.18	1.25	86	80-120	

Matrix Spike Duplicate (MSD) (DF=5.00)

	Parameter	Spike (mg/L)	MSD % Rec	MS % Rec	RPD (%)	UCL (%)	Q
1.	Phosphorus	1.25	84	86	2	20	

PQL = Practical Quantitation Limit RPD = Relative Percent Difference DF = Dilution Factor

U = Result below PQL * = Exceeds control limits.

E = The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J = The concentration is an estimated value.

Laboratory Approval/Date 8/2/18

Quality Assurance Review/Date 8/2/18

Original

Phosphorus - Aqueous

Method SM4500-P B / Method SM4500-P-E
Fibertec SOP W-237 H AG 8/1/18

Batch	WF180801A-PST
Digest Date	8/1/18
Analysis Date	8/1/18
Prep Analyst	AG
Analyst	AG

Circle if Dissolved

Ascorbic Acid ID	W-016499
AMAPT ID	W-016436
Conc. H_2SO_4 ID	37393
Potassium Persulfate ID	37384
10N NaOH ID	37313
Phenolphthalein ID	W-016435
Dilute H_2SO_4 ID	W-015584
Dilute NaOH ID	W-015313
pH Strip ID	36678
Balance ID	10000027
Spectrophotometer ID	10000019
Cal Std. ID	W-016433
LCS Std. ID	W-016490
LCS/MS Spike Volume	1.25 mL

Cal Curve (mg/L)	10 mg/L Std. Vol. (mL)	Abs @ 880 nm
0.000	-	0.000
0.010	0.05	0.018
0.020	0.10	0.039
0.100	0.50	0.133
0.250	1.25	0.321
0.500	2.50	0.628

Client	Sample Identification	$Volume_i$(mL)	$Volume_F$(mL)	pre-Abs @ 880 nm	Abs @ 880 nm	Bench Dilution	Abs w/ Bench Dil. @ 880 nm
---	MB	50	50	---	0.000	---	---
---	LCS	50	50	---	0.270	---	---
---	LCD	50	50	---	0.280	---	---
DC	85959-002 MS	10	50		0.296		
↓	↓ MSD	10	50		0.291		
DC	85959-002	10	50		0.030		
*PT Fibertec	85840-005	10	50		0.626		
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
	CCV	50	50				
	CCB	50	50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
	CCV	50	50		0.286		
	CCB	50	50		0.000		

Alexa Griffith 8/1/18
Analyst Signature/Date

Total Phosphorus-Water

Preparation Method: **SM 4500-P E**
Prep Batch ID: **WF18J02A-PST**
Prep. Date: **10/2/18**
Prep Analyst: **AW**

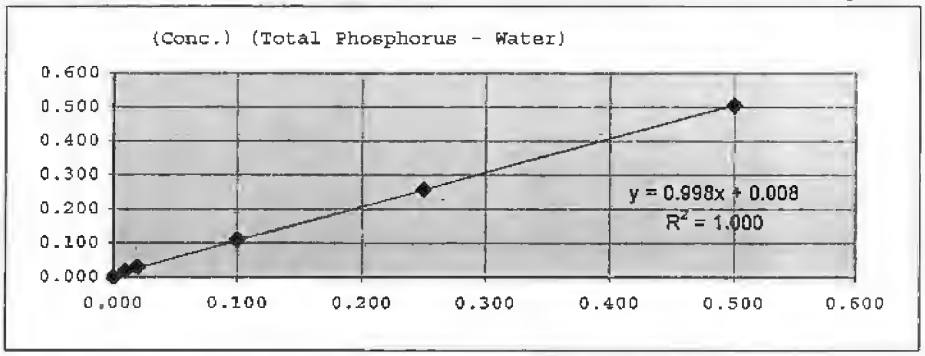
Analysis Method: **SM 4500-P E**
Batch Number: **WF18J02A-PST**
Analysis Date: **10/03/18**
Analyst: **AW**

PQL: **0.010** mg/L PQL Test: 0.012 OK

Calibration Curve Data

Cal Level	Conc. (mg P/L)	Abs. (880nm)
1	0.000	0.000
2	0.010	0.020
3	0.020	0.030
4	0.100	0.110
5	0.250	0.259
6	0.500	0.505

R^2	Slope	
0.9996	0.9979	0.0076



Quality Control Sample Data

Sample Identification	Vol.Initial (mL)	Vol.Final (mL)	ABS	Raw Conc. (mg/L)	Final Result (mg/L)	Spike (mg/L)	QC Eval.
MB	50	50	0.000	-0.008	<0.010	---	---
LCS	50	50	0.245	0.238	0.238	0.250	95%
LCD	50	50	0.250	0.243	0.243	0.250	97%

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 86964-001

MS	50.0	50	0.492	0.485	1.0	1.00	0.485	0.250	117%
MSD	50.0	50	0.489	0.482	1.0	1.00	0.482	0.250	116%

Enter "CCV" or "CCB" for continuing calibration verification and blanks

Sample Identification	Vol.Initial (mL)	Vol.Final (mL)	ABS	Raw Conc. (mg/L)	Bench Dilution	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	QC Eval.
86963-001B	2.0	50.0	0.470	0.463	1.0	25.0	11.583	---	---
86964-001	50.0	50.0	0.200	0.193	1.0	1.0	0.193	---	---
86983-001B	50.0	50.0	0.278	0.271	1.0	1.0	0.271	---	---
85840-005	5.0	50.0	0.333	0.326	1.0	10.0	3.260	---	---
86671-003B	0.25	50.0	0.032	0.024	1.0	200.0	4.882	---	---
87016-001A	10.0	50.0	0.065	0.057	1.0	5.0	0.287	---	---
CCV	50.0	50.0	0.298	0.291	1.0	1.0	0.291	0.250	116%
CCB	50.0	50.0	0.000	-0.008	1.0	1.0	<0.010	---	---

* Recovery Exceeds control limits

Analyst Approval/Date: 10/3/18

Review Approval/Date: 10/3/18

DCSID: W-466.3 (01/18/16)

Fibertec environmental services

Quality Control Summary
Wet Chemistry Department
Phosphorus - Aqueous
Analysis Batch: WF18J02A-PST
Analysis Date: 10/03/18

Rerun

Method Blank (MB)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phosphorus	U	0.010	

Laboratory Control Sample (LCS)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phosphorus	0	0.250	95	80-120	

Laboratory Control Sample Duplicate (LCD)

	Parameter	Spike (mg/L)	LCD % Rec	LCS % Rec	RPD (%)	UCL (%)	Q
1.	Phosphorus	0.250	97	95	2	20	

MB/LCS/LCD Exception Summary

Method Blank

No exceptions noted.

Laboratory Control Sample

No exceptions noted

Laboratory Control Sample Duplicate

No target parameter recovery exceptions noted.
No target parameter RPD exceptions noted

Parent Sample (86964-001) (DF=1.00)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phosphorus	0.193	0.010	

Matrix Spike (MS) (DF=1.00)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phosphorus	0.485	0.250	117	80-120	

Matrix Spike Duplicate (MSD) (DF=1.00)

	Parameter	Spike (mg/L)	MSD % Rec	MS % Rec	RPD (%)	UCL (%)	Q
1.	Phosphorus	0.250	116	117	1	20	

PQL = Practical Quantitation Limit RPD = Relative Percent Difference DF = Dilution Factor

U = Result below PQL * = Exceeds control limits.

E = The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated

J = The concentration is an estimated value.

Laboratory Approval/Date 10/3/18

Quality Assurance Review/Date 10/3/18

Rerun

Phosphorus - Aqueous

Method SM4500-P B / Method SM4500-P-E
Fibertec SOP W-237

Batch	WF18X02A-PST
Digest Date	10/02/18
Analysis Date	10/03/18
Prep Analyst	AW
Analyst	AW

Circle if Dissolved

Ascorbic Acid ID	W-016772
AMAPT ID	W-016741
Conc. H_2SO_4 ID	37393
Potassium Persulfate ID	38324
10N NaOH ID	37952
Phenolphthalein ID	W-016704
Dilute H_2SO_4 ID	W-015584
Dilute NaOH ID	W-016750
pH Strip ID	38527
Balance ID	10000027
Spectrophotometer ID	10000019
Cal Std. ID	W-016778
LCS Std. ID	W-016770
LCS/MS Spike Volume	1.25 mL

Cal Curve (mg/L)	10 mg/L Std. Vol. (mL)	Abs @ 880 nm
0.000	-	0.000
0.010	0.05	0.020
0.020	0.10	0.030
0.100	0.50	0.110
0.250	1.25	0.259
0.500	2.50	0.505

Client	Sample Identification	$Volume_I$(mL)	$Volume_F$(mL)	pre-Abs @ 880 nm	Abs @ 880 nm	Bench Dilution	Abs w/ Bench Dil. @ 880 nm
----	MB	50	50	----	0.000	----	----
----	LCS	50	50	----	0.245	----	----
----	LCD	50	50	----	0.250	----	----
AAR	869164-001 MS	50	50		0.492		
↓	↓ MSD	50	50		0.489		
Lear	869163-001B	2.0	50		0.470		
AAR	869164-001	50	50		0.200		
Vibracoustic	869183-001B	50	50		0.278		
PT Fibertec	85840-005	10(5)2	50		0.409/0.333/0.140		
CT1	869671-003B	0.25	50		~~0.272~~	0.032	AW 10/3/18
DC	370116-001A	10	50		0.065		
			50				
			50				
			50				
			50				
	CCV	50	50				
	CCB	50	50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
	CCV	50	50		0.298		
	CCB	50	50		0.000		

Alexa Warren 10/3/18
Analyst Signature/Date

WP-247-Remedial PT Study

WP-PTX3271

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 12/17/2018 - Closed: 01/07/2019 - Reports Printed On: 01/07/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-139B Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3271

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description		Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978		1.74	1.92	mg/L	1.55 to 2.28	ACCEPT.	1/3/19	AMW
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011	2011	1.74	1.92	mg/L	1.55 to 2.28	ACCEPT.	1/3/19	AMW

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

AE 1018

Fall, 2018

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Certified Reference Materials

Study: AE1018 Air & Emissions Proficiency Testing Results
Opening Date: 10/22/2018 **Closing Date:** 12/6/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1059-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
Additional State Specific Analytes											
4315	Acetone	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4320	Acetonitrile					<5		ppbv			NR
4323	Acetylene					<5		ppbv			NR
4325	Acrolein (Propenal)					<5		ppbv			NR
4340	Acrylonitrile					<5		ppbv			NR
4375	Benzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	19.0	20.2	ppbv	7.60	30.4	Acceptable
4390	Bromochloromethane					<5		ppbv			NR
4395	Bromodichloromethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4400	Bromoform	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4950	Bromomethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
9318	1,3-Butadiene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4410	2-Butanone (Methyl ethyl ketone, MEK)	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4450	Carbon disulfide	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4455	Carbon tetrachloride	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	30.0	25.6	ppbv	12.0	48.0	Acceptable
4475	Chlorobenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4485	Chloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4505	Chloroform	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	22.0	26.4	ppbv	8.80	35.2	Acceptable
4960	Chloromethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5635	Chloromethylbenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable

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Study: AE1018 Air & Emissions Proficiency Testing Results
Opening Date: 10/22/2018 **Closing Date:** 12/6/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1059-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4525	Chloroprene					<5		ppbv			NR
4555	Cyclohexane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4575	Dibromochloromethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4625	Dichlorodifluoromethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4610	1,2 Dichlorobenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	26.0	29.5	ppbv	10.4	41.6	Acceptable
4615	1,3 Dichlorobenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4620	1,4 Dichlorobenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	35.0	40.6	ppbv	14.0	56.0	Acceptable
4630	1,1-Dichloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	16.0	18.1	ppbv	6.40	25.6	Acceptable
4635	1,2 Dichloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	45.0	52.4	ppbv	18.0	72.0	Acceptable
4640	1,1-Dichloroethene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4645	cis-1,2-Dichloroethene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	43.0	48.2	ppbv	17.2	68.8	Acceptable
4700	trans-1,2-Dichloroethene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4655	1,2-Dichloropropane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	16.0	19.3	ppbv	6.40	25.6	Acceptable
4680	cis-1,3-Dichloropropene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4685	trans-1,3-Dichloropropene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4695	1,2-Dichloro-1,1,2,2-tetrafluoroethane					<5		ppbv			NR
4755	Ethyl acetate	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4760	Ethyl acrylate					<5		ppbv			NR

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Study: AE1018 Air & Emissions Proficiency Testing Results
Opening Date: 10/22/2018 **Closing Date:** 12/6/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) — Lot #: 1059-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4765	Ethylbenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	27.0	28.9	ppbv	10.8	43.2	Acceptable
4770	Ethyl-t-butylether (ETBE)					<5		ppbv			NR
4542	4-Ethyltoluene					<5		ppbv			NR
4825	n-Heptane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	20.0	21.2	ppbv	8.00	32.0	Acceptable
4835	Hexachlorobutadiene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4855	Hexane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4895	Isopropanol	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5000	Methyl tert-butyl ether (MTBE)	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4975	Methylene chloride	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4995	Methyl isobutyl ketone (Hexone)	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4990	Methyl methacrylate					<5		ppbv			NR
5027	n-Octane					<5		ppbv			NR
4836	Propylene					<5		ppbv			NR
5100	Styrene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4370	T-amylmethylether (TAME)					<5		ppbv			NR
5115	Tetrachloroethene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	37.0	36.9	ppbv	14.8	59.2	Acceptable
5155	1,2,4-Trichlorobenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5160	1,1,1-Trichloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	16.0	18.1	ppbv	6.40	25.6	Acceptable
5165	1,1,2-Trichloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5110	1,1,2,2-Tetrachloroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	21.0	22.6	ppbv	8.40	33.6	Acceptable

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Study: AE1018 Air & Emissions Proficiency Testing Results
Opening Date: 10/22/2018 **Closing Date:** 12/6/2018 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) — Lot #: 1059-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
5170	Trichloroethene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5175	Trichlorofluoromethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5210	1,2,4-Trimethylbenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	42.0	37.1	ppbv	16.8	67.2	Acceptable
5215	1,3,5-Trimethylbenzene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	20.0	16.3	ppbv	8.00	32.0	Acceptable
5140	Toluene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	48.0	48.7	ppbv	19.2	76.8	Acceptable
5230	Vinyl bromide					<5		ppbv			NR
5235	Vinyl chloride	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5240	m+p-Xylene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	21.0	21.4	ppbv	8.40	33.6	Acceptable
5250	o-Xylene	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	26.0	27.9	ppbv	10.4	41.6	Acceptable
5260	Xylenes, total	11/2/2018	ANB	10248803	EPA TO-15 Rev. 2 1999	47.0	49.3	ppbv	18.8	75.2	Acceptable

SM-119

Fall, 2018

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-119 - Shipped: 10/23/2018 - Closed: 12/06/2018 - Reports Printed On: 12/26/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	10400	10841	10680	mg/kg	1903	7100 to 14400	0.232	ACCEPT.	11/19/18	JLH
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	241	204	280	mg/kg	71.3	27.4 to 348	0.519	ACCEPT.	11/20/18	JLH
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	171	164	180	mg/kg	23.2	90.0 to 237	0.302	ACCEPT.	11/19/18	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	637	802	960	mg/kg	125	495 to 1090	1.32	ACCEPT.	11/19/18	JLH
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	<4.00	0.00	<40	mg/kg	0.00	0.00 to 40.0	n/a	ACCEPT.	11/19/18	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	151	144	185	mg/kg	18.1	90.7 to 204	0.387	ACCEPT.	11/19/18	JLH
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	6020	9536	9050	mg/kg	2973	905 to 17300	1.18	ACCEPT.	11/19/18	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	188	191	231	mg/kg	20.9	133 to 246	0.144	ACCEPT.	11/19/18	JLH
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	133	160	185	mg/kg	24.4	88.7 to 222	1.11	ACCEPT.	11/19/18	JLH
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	310	301	355	mg/kg	37.7	238 to 391	0.239	ACCEPT.	11/19/18	JLH
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	5900	7126	6320	mg/kg	3496	3710 to 9310	0.351	ACCEPT.	11/19/18	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	287	293	350	mg/kg	41.6	153 to 426	0.144	ACCEPT.	11/19/18	JLH
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	3760	4780	5120	mg/kg	879	2470 to 6690	1.16	ACCEPT.	11/19/18	JLH
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	561	631	833	mg/kg	91.5	401 to 917	0.765	ACCEPT.	11/19/18	JLH
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	24.7	21.9	24.4	mg/kg	3.71	8.56 to 35.4	0.755	ACCEPT.	11/1/18	NRV
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	81.8	97.1	112	mg/kg	11.3	58.4 to 136	1.35	ACCEPT.	11/20/18	JLH
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	343	401	480	mg/kg	73.1	223 to 558	0.793	ACCEPT.	11/19/18	JLH
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	15700	15571	15780	mg/kg	1999	13000 to 18000	0.0645	ACCEPT.	11/19/18	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	119	230	313	mg/kg	218	17.8 to 391	0.509	ACCEPT.	11/19/18	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	111	56.2	87.3	mg/kg	19.4	8.73 to 116	2.82	ACCEPT.	11/19/18	JLH
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	9290	12251	11400	mg/kg	3028	1230 to 24200	0.978	ACCEPT.	11/19/18	JLH

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	314	278	334	mg/kg	94.2	33.4 to 621	0.382	ACCEPT.	11/19/18	JLH
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	157	154	207	mg/kg	29.1	84.7 to 235	0.103	ACCEPT.	11/19/18	JLH
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	241	278	301	mg/kg	53.5	164 to 387	0.692	ACCEPT.	11/19/18	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	163	200	226	mg/kg	28.6	103 to 291	1.29	ACCEPT.	11/19/18	JLH
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	159	190	208	mg/kg	35.1	76.2 to 304	0.883	ACCEPT.	11/15/18	SEM

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	11/16/18	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	0.550	0.00	<10	mg/L	0.00	0.00 to 10.0	n/a	ACCEPT.	11/16/18	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	11.6	12.6	14.8	mg/L	0.596	10.8 to 16.3	1.68	ACCEPT.	11/14/18	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0400	0.00	<5	mg/L	0.00	0.00 to 5.00	n/a	ACCEPT.	11/16/18	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	<0.0750	0.00	<5	mg/L	0.00	0.00 to 5.00	n/a	ACCEPT.	11/16/18	JLH
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	11/13/18	NRV
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	3.35	3.23	5.60	mg/L	0.298	2.34 to 6.16	0.403	ACCEPT.	11/16/18	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	21.3	19.0	32.0	mg/L	6.40	3.20 to 50.0	0.359	ACCEPT.	11/14/18	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	1.69	0.00	<2	mg/L	0.00	0.00 to 2.00	n/a	ACCEPT.	11/16/18	JLH
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	7.04	6.82	6.89	pH units	0.366	6.28 to 7.48	0.601	ACCEPT.	11/7/18	AMW

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	193	186	178	oF	8.96	161 to 195	0.781	ACCEPT.	11/13/18	AMS

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	54.2	49.7	61.7	mg/kg	6.93	35.9 to 67.9	0.649	ACCEPT.	11/14/18	AMS
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	980	999	967	mg/kg	61.8	714 to 1280	0.307	ACCEPT.	11/14/18	AMS
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	467	341	367	mg/kg	52.2	153 to 529	2.41	ACCEPT.	11/14/18	AMS
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	64.5	64.3	54.7	mg/kg	8.44	43.9 to 84.7	0.0237	ACCEPT.	11/14/18	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	149	261	392	mg/kg	81.1	39.2 to 504	1.38	ACCEPT.	11/14/18	AMS
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	824	913	917	mg/kg	104	527 to 1300	0.856	ACCEPT.	11/14/18	AMS
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	350	406	627	ug/kg	90.0	136 to 690	0.622	ACCEPT.	10/31/18	RKP
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	194	237	306	ug/kg	47.9	69.3 to 405	0.898	ACCEPT.	10/31/18	RKP
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	181	256	348	ug/kg	61.7	34.8 to 513	1.22	ACCEPT.	10/31/18	RKP
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	145	179	227	ug/kg	17.7	70.7 to 287	1.92	ACCEPT.	10/31/18	RKP
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	308	393	480	ug/kg	70.4	200 to 586	1.21	ACCEPT.	10/31/18	RKP
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	197	271	321	ug/kg	55.9	116 to 426	1.32	ACCEPT.	10/31/18	RKP
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	187	233	267	ug/kg	48.3	128 to 338	0.952	ACCEPT.	10/31/18	RKP
5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	301	344	453	ug/kg	31.8	152 to 536	1.35	ACCEPT.	10/31/18	RKP
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	225	266	307	ug/kg	34.7	146 to 386	1.18	ACCEPT.	10/31/18	RKP

5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	328	399	478	ug/kg	53.1	173 to 625	1.34	ACCEPT.	10/31/18	RKP
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	233	282	317	ug/kg	40.2	139 to 425	1.22	ACCEPT.	10/31/18	RKP
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	153	203	254	ug/kg	32.9	98.0 to 308	1.52	ACCEPT.	10/31/18	RKP
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	85.6	122	163	ug/kg	25.3	35.9 to 208	1.44	ACCEPT.	10/31/18	RKP
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	38.0	42.6	53.0	ug/kg	5.81	6.92 to 78.3	0.792	ACCEPT.	10/31/18	RKP
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	170	177	267	ug/kg	31.7	26.7 to 345	0.221	ACCEPT.	10/31/18	RKP
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	120	152	184	ug/kg	34.1	63.8 to 240	0.938	ACCEPT.	10/31/18	RKP
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	168	208	246	ug/kg	28.7	88.3 to 328	1.39	ACCEPT.	10/31/18	RKP
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	136	147	156	mg/kg	15.4	65.7 to 228	0.714	ACCEPT.	11/14/18	SEM

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B --2007	155	280	325	ug/kg	28.2	113 to 447	4.43	ACCEPT.	11/14/18	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B --2007	69.3	171	196	ug/kg	18.0	64.4 to 278	5.65	ACCEPT.	11/14/18	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B --2007	72.4	153	174	ug/kg	13.9	42.1 to 264	5.80	ACCEPT.	11/14/18	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B --2007	138	330	417	ug/kg	33.9	124 to 536	5.66	ACCEPT.	11/14/18	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B --2007	84.1	243	322	ug/kg	36.2	87.4 to 399	4.39	NOT ACCEPT.	11/14/18	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B --2007	59.6	122	143	ug/kg	15.9	28.3 to 216	3.92	ACCEPT.	11/14/18	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B --2007	157	267	330	ug/kg	24.6	86.8 to 447	4.47	ACCEPT.	11/14/18	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B --2007	41.2	90.8	103	ug/kg	9.40	33.1 to 148	5.28	ACCEPT.	11/14/18	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B --2007	82.9	250	305	ug/kg	22.6	98.0 to 402	7.39	NOT ACCEPT.	11/14/18	RDK

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	137	262	302	ug/kg	22.5	93.1 to 431	5.56	ACCEPT.	11/14/18	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	173	282	330	ug/kg	21.3	74.7 to 489	5.12	ACCEPT.	11/14/18	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	168	344	435	ug/kg	78.1	174 to 514	2.25	NOT ACCEPT.	11/14/18	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	81.3	212	253	ug/kg	35.8	34.9 to 389	3.65	ACCEPT.	11/14/18	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	96.7	356	422	ug/kg	31.8	129 to 583	8.15	NOT ACCEPT.	11/14/18	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	67.4	229	283	ug/kg	24.1	90.0 to 368	6.71	NOT ACCEPT.	11/14/18	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	27.3	62.7	78.1	ug/kg	4.39	21.8 to 104	8.06	ACCEPT.	11/14/18	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	224	397	471	ug/kg	35.6	57.6 to 736	4.86	ACCEPT.	11/14/18	RDK
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	377	461	552	ug/kg	57.5	288 to 634	1.46	ACCEPT.	11/20/18	BDA

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	21.8	36.3	44.6	mg/kg	7.85	11.6 to 61.0	1.85	ACCEPT.	11/2/18	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<2.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<2.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	285	249	321	ug/kg	37.6	136 to 362	0.957	ACCEPT.	11/30/18	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	314	322	571	ug/kg	87.8	149 to 628	0.0911	ACCEPT.	11/30/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	118	140	130	ug/kg	29.2	52.4 to 228	0.753	ACCEPT.	11/30/18	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/9/18	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	395	370	446	ug/kg	47.5	227 to 513	0.526	ACCEPT.	11/9/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/9/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	403	263	511	ug/kg	111	51.1 to 595	1.26	ACCEPT.	11/30/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	242	225	259	ug/kg	35.0	120 to 330	0.486	ACCEPT.	11/30/18	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	7240	7088	11040	ug/kg	2835	1100 to 13300	0.0536	ACCEPT.	11/1/18	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	3790	3682	5720	ug/kg	1440	572 to 7520	0.0750	ACCEPT.	11/1/18	GJP
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	1950	1803	3040	ug/kg	632	304 to 3640	0.233	ACCEPT.	11/1/18	GJP
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW 8270C -- 1996	4820	4794	7080	ug/kg	1809	1100 to 8500	0.0144	ACCEPT.	11/1/18	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	4410	4107	5680	ug/kg	888	1210 to 6990	0.341	ACCEPT.	11/1/18	GJP

6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5780	4899	6850	ug/kg	1157	1700 to 8100	0.761	ACCEPT.	11/1/18	GJP
6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	7250	6761	9820	ug/kg	2428	2310 to 11200	0.201	ACCEPT.	11/1/18	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	2860	2457	3150	ug/kg	858	315 to 5030	0.470	ACCEPT.	11/1/18	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	4790	5192	12830	ug/kg	3031	1280 to 13300	0.133	ACCEPT.	11/2/18	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	6220	5755	7560	ug/kg	922	2300 to 9220	0.504	ACCEPT.	11/1/18	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	6380	5224	8770	ug/kg	3308	877 to 13800	0.349	ACCEPT.	11/1/18	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	7340	6951	9340	ug/kg	1230	3140 to 10800	0.316	ACCEPT.	11/1/18	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	2430	2252	3310	ug/kg	571	757 to 3740	0.312	ACCEPT.	11/1/18	GJP
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	2090	1937	3040	ug/kg	602	486 to 3390	0.254	ACCEPT.	11/1/18	GJP
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	3830	3715	5380	ug/kg	973	538 to 6640	0.118	ACCEPT.	11/1/18	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	2020	1829	2710	ug/kg	477	631 to 3030	0.400	ACCEPT.	11/1/18	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	7710	6821	9770	ug/kg	2212	1530 to 12100	0.402	ACCEPT.	11/1/18	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	5850	5180	7970	ug/kg	1655	1220 to 9140	0.405	ACCEPT.	11/2/18	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	4690	4800	6310	ug/kg	859	1920 to 7680	0.128	ACCEPT.	11/1/18	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	2590	2422	3310	ug/kg	482	820 to 4030	0.349	ACCEPT.	11/1/18	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	7370	5572	9940	ug/kg	1936	994 to 15100	0.929	ACCEPT.	11/1/18	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	7600	7178	10790	ug/kg	2065	1080 to 15500	0.204	ACCEPT.	11/1/18	GJP
5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	7670	7742	10840	ug/kg	1660	3170 to 12300	0.0434	ACCEPT.	11/1/18	GJP

5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	1480	1510	1950	ug/kg	282	552 to 2470	0.106	ACCEPT.	11/1/18	GJP
5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	8990	9048	11130	ug/kg	1380	3960 to 14100	0.0420	ACCEPT.	11/1/18	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	6360	6653	8200	ug/kg	1409	2660 to 10600	0.208	ACCEPT.	11/1/18	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	9600	9198	11150	ug/kg	921	3760 to 14600	0.436	ACCEPT.	11/1/18	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	5950	5559	8350	ug/kg	1957	1440 to 9680	0.200	ACCEPT.	11/1/18	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	5320	5913	7190	ug/kg	1094	2140 to 9660	0.542	ACCEPT.	11/1/18	GJP
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	5050	5289	6440	ug/kg	956	2620 to 7960	0.250	ACCEPT.	11/1/18	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	3830	4056	4420	ug/kg	747	1270 to 6850	0.303	ACCEPT.	11/1/18	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	1790	1993	2350	ug/kg	309	457 to 3520	0.657	ACCEPT.	11/1/18	GJP
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	7200	7188	9670	ug/kg	1444	3260 to 11100	0.0083	ACCEPT.	11/1/18	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	6780	6771	8450	ug/kg	1317	2760 to 10800	0.0068	ACCEPT.	11/1/18	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	2070	2063	2550	ug/kg	309	797 to 3320	0.0227	ACCEPT.	11/1/18	GJP
6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	2610	2691	3490	ug/kg	449	1140 to 4240	0.180	ACCEPT.	11/1/18	GJP

6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	1880	1729	3000	ug/kg	597	300 to 3480	0.253	ACCEPT.	11/1/18	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	7340	6211	8710	ug/kg	1460	1390 to 11000	0.773	ACCEPT.	11/1/18	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	6490	5609	7460	ug/kg	1310	1910 to 9310	0.673	ACCEPT.	11/1/18	GJP
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	7430	6967	11090	ug/kg	2125	1830 to 12100	0.218	ACCEPT.	11/1/18	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	7130	6975	9620	ug/kg	2387	2270 to 11700	0.0649	ACCEPT.	11/1/18	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6330	5970	8600	ug/kg	1158	860 to 11700	0.311	ACCEPT.	11/2/18	GJP
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	1800	1824	2240	ug/kg	231	821 to 2820	0.104	ACCEPT.	11/1/18	GJP
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	7760	7814	11810	ug/kg	2593	2150 to 13500	0.0208	ACCEPT.	11/1/18	GJP
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												
5610	Benzoic acid	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --

6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	9950	8928	8690	ug/kg	1219	6490 to 10900	0.838	ACCEPT.	10/31/18	MAK
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	2990	2636	2570	ug/kg	206	1540 to 3600	1.72	ACCEPT.	10/31/18	MAK
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	1790	1718	1570	ug/kg	104	501 to 2500	0.692	ACCEPT.	10/31/18	MAK
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	<732	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<676	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	5790	5294	5580	ug/kg	1877	2790 to 8370	0.264	ACCEPT.	10/31/18	MAK
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	4760	4083	4340	ug/kg	741	2380 to 6290	0.914	ACCEPT.	10/31/18	MAK
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK

5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	9430	8154	8120	ug/kg	967	4860 to 11400	1.32	ACCEPT.	10/31/18	MAK
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8010	7934	7330	ug/kg	916	5500 to 9170	0.0830	ACCEPT.	10/31/18	MAK
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	7290	7104	6660	ug/kg	732	5000 to 8340	0.254	ACCEPT.	10/31/18	MAK
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	6610	6516	6690	ug/kg	414	4680 to 8690	0.227	ACCEPT.	10/31/18	MAK
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	1780	1666	1600	ug/kg	132	1100 to 2110	0.864	ACCEPT.	10/31/18	MAK
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6180	5786	5730	ug/kg	412	4410 to 6990	0.956	ACCEPT.	10/31/18	MAK
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	11500	13683	13610	ug/kg	1760	3750 to 20800	1.24	ACCEPT.	10/31/18	MAK
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	16600	16205	16740	ug/kg	3480	8370 to 25100	0.114	ACCEPT.	10/31/18	MAK
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	12800	10983	11180	ug/kg	1908	5590 to 16800	0.952	ACCEPT.	10/31/18	MAK
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	38700	0.00	<929	ug/kg	0.00	0.00 to 929	n/a	NOT ACCEPT.	10/31/18	MAK
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	<656	0.00	<750	ug/kg	0.00	0.00 to 750	n/a	ACCEPT.	10/31/18	MAK
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	<479	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	9880	8306	8520	ug/kg	1200	5110 to 11900	1.31	ACCEPT.	10/31/18	MAK
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	5440	4819	4630	ug/kg	640	2880 to 6320	0.970	ACCEPT.	10/31/18	MAK
4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8990	8806	8260	ug/kg	1276	6200 to 10300	0.144	ACCEPT.	10/31/18	MAK

4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	1770	1663	1460	ug/kg	136	1020 to 1900	0.787	ACCEPT.	10/31/18	MAK
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	3710	3573	3310	ug/kg	357	1990 to 4640	0.384	ACCEPT.	10/31/18	MAK
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	6260	5663	5560	ug/kg	808	3330 to 7780	0.739	ACCEPT.	10/31/18	MAK
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<642	0.00	<700	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	6660	6828	6180	ug/kg	757	3700 to 8650	0.222	ACCEPT.	10/31/18	MAK
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<697	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT.	10/31/18	MAK
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	2890	3119	2760	ug/kg	700	1930 to 3580	0.327	ACCEPT.	10/31/18	MAK
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	1530	1664	1320	ug/kg	225	794 to 1850	0.596	ACCEPT.	10/31/18	MAK
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	<721	0.00	<721	ug/kg	0.00	0.00 to 721	n/a	ACCEPT.	10/31/18	MAK
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK

4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	1810	1787	1650	ug/kg	284	1180 to 2330	0.0810	ACCEPT.	10/31/18	MAK
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	7020	7024	6480	ug/kg	1461	4860 to 8100	0.0027	ACCEPT.	10/31/18	MAK
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	2680	2450	2520	ug/kg	194	1760 to 3280	1.19	ACCEPT.	10/31/18	MAK
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	9440	9066	8790	ug/kg	1408	5270 to 12300	0.266	ACCEPT.	10/31/18	MAK
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	5160	4939	4640	ug/kg	707	2780 to 6500	0.313	ACCEPT.	10/31/18	MAK
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	8440	8567	7170	ug/kg	3087	5240 to 9190	0.0411	ACCEPT.	10/31/18	MAK
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	6960	5918	6280	ug/kg	1032	2010 to 9920	1.01	ACCEPT.	10/31/18	MAK
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												
4835	Hexachlorobutadiene	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												

5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	157	211	226	ug/kg	34.0	58.3 to 364	1.59	ACCEPT.	11/20/18	BDA

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	3.76	5.01	8.94	mg/L	1.77	0.894 to 10.3	0.706	ACCEPT.	11/12/17	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	0.643	0.574	1.48	mg/L	0.0983	0.269 to 1.63	0.702	ACCEPT.	11/12/17	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	1.94	2.14	2.84	mg/L	0.283	1.29 to 3.12	0.707	ACCEPT.	11/12/17	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	2.26	2.64	4.90	mg/L	0.537	1.03 to 5.39	0.708	ACCEPT.	11/12/17	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	0.181	0.171	0.220	mg/L	0.0148	0.0270 to 0.242	0.676	ACCEPT.	11/9/17	RKP
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.197	0.324	0.410	mg/L	0.119	0.0410 to 0.681	1.07	ACCEPT.	11/30/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.368	0.536	0.760	mg/L	0.145	0.101 to 0.971	1.16	ACCEPT.	11/30/18	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	0.148	0.131	0.250	mg/L	0.0247	0.0570 to 0.275	0.688	ACCEPT.	11/15/18	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	0.0620	0.0580	0.140	mg/L	0.0057	0.0409 to 0.154	0.702	ACCEPT.	11/15/18	RDK
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	1520	1180	1230	mg/kg	203	309 to 2050	1.67	ACCEPT.	11/16/18	SEM
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	31.5	31.1	42.9	mg/kg	8.91	7.29 to 61.1	0.0449	ACCEPT.	11/7/18	BDA
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

SM-119

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 697 /PAR)

Client: PT Study SM-119 **Project/Document Control Number:** 87529

Sample Number(s): 009 **Date Initiated:** 01/07/2019 **Date Due:** 01/21/2019

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Wet Chemistry ☐ Metals ☐ Digestions ☑ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Acetone was reported at 38,700 ug/Kg for this sample. The assigned value was <929 ug/Kg. The acceptance limits were 0.00 to 929 ug/Kg. Please investigate the cause of this error and provide an explanation and proposed corrective action to prevent the recurrence of this issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See attached

Investigator(s): Liana Solis

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

See attached

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date:_____ ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : LS 2/25/19 **Supervisory:** LS 2/25/19

Quality Assurance: John Mueller

Date Closed: 2/26/19

III. Investigation

The PT sample 87529-009 was run in VI18J31B. Acetone had a slightly high recovery in the CCV at a difference of 11%. Acetone recovery was 99% in the LCS and 87% in the LCD. There was an LCDRPD of 13%. Acetone was in the blank at 0.92 µg/L.

The PT sample was run at a 50x and a 500x dilution. The injection immediately before the PT sample was a rinse. The rinse had a hit of acetone at 0.87 µg/L. The 500x dilution ran first. Acetone hit at a raw value of 77.35 µg/L. The next injection was the 50x dilution where acetone had a raw value of 800.81 µg/L. There is a 3.5% difference between the final value of 38,675 µg/L for the 500x dilution and 40,040.5 µg/L for the 50x dilution. Despite the fact that the hit of 800.81 µg/L is over the instrument's calibration range, these two dilutions agree with each other.

The large amount of acetone in the PT sample is not from carryover or the instrument being biased high. The most likely explanation for the large hit of acetone is due to contamination. To test for contamination, a methanol blank and a sand blank were made and put in the freezer with the PT sample on January 7, 2019. The methanol blank, sand blank, and PT sample were all prepped at a 50x and ran nine days later after the batch VP19A15A on January 16, 2019. These samples were only run to check for the presence of acetone, so the three samples were not run under QC. Neither blank had any acetone present, but the PT sample still had acetone so high that it hit above the calibration range, with a raw result of around 3,920.75 µg/L (a 389.6% increase from the original 50x run). This large increase in acetone from 800.81 µg/L to 3,920.75 µg/L suggests that whatever is causing the contamination is still present and is causing acetone to grow.

Several old PT samples were rerun to check if hits for acetone were consistent or if they were growing like the acetone in the failing PT sample 87529-009. Old PT samples 884232-009, 75770-009, and 78324-009 were each reran at a 50x dilution in VI19A17B. Sample 84232-009 stayed fairly consistent, with a final rerun value of 11,163 µg/L and an original value of 12,251.09 µg/L (8.8% difference from original reported value). The oldest sample from October 2016, sample 75770-009, had the largest difference in the old PT reruns, but still stayed within a reasonable range. The final rerun value was 10,175.5 µg/L and an original value of 8,804.769 µg/L (15.6% difference from original reported value). Sample 78324-009 also stayed within range. It had a final rerun value of 3,613.5 µg/L and an original value of 4,054.284 µg/L (a 10.9% difference from the original value).

In response to not finding any other excessive or growing acetone values, a QC sample was ordered. The QC sample 88809-001 was run on February 12, 2019 in VI19B12A. Acetone passed the QC criteria, which had acceptance limits of 0 to 929 µg/Kg. It was reported as non-detect with a reporting limit of 929 µg/Kg. In the 50x dilution run of the QC sample, acetone was hitting at an amount below the low calibration point for an estimated raw value of 3.89 µg/L (final value of 194.418 µg/L). This QC sample was treated in the same manner as the PT sample and did not have acetone contamination.

IV. Action Taken

Due to the QC sample and past PT samples all having acetone within the expected range, it is believed that the failing PT sample 87529-009 was a one time contamination incident that did not occur in the volatiles lab. It is possible that contamination occurred between the time the sample left the NSI Lab and the time the sample arrived in volatiles lab. Because the QC sample passed all criteria and there is no evidence that the acetone contamination in 87529-009 was caused by improper storage or preparation, there is not corrective or preventative action plan needed.

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-119 - Shipped: 10/23/2018 - Closed: 12/06/2018
Reports Printed On: 12/26/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd , Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	10400	10841	10680	mg/kg	1903	7100 to 14400	0.232	ACCEPT.	11/19/18	JLH
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	241	204	280	mg/kg	71.3	27.4 to 348	0.519	ACCEPT.	11/20/18	JLH
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	171	164	180	mg/kg	23.2	90.0 to 237	0.302	ACCEPT.	11/19/18	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	637	802	960	mg/kg	125	495 to 1090	1.32	ACCEPT.	11/19/18	JLH
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	<4.00	0.00	<40	mg/kg	0.00	0.00 to 40.0	n/a	ACCEPT.	11/19/18	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	151	144	185	mg/kg	18.1	90.7 to 204	0.387	ACCEPT.	11/19/18	JLH
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	6020	9536	9050	mg/kg	2973	905 to 17300	1.18	ACCEPT.	11/19/18	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	188	191	231	mg/kg	20.9	133 to 246	0.144	ACCEPT.	11/19/18	JLH
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	133	160	185	mg/kg	24.4	88.7 to 222	1.11	ACCEPT.	11/19/18	JLH
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	310	301	355	mg/kg	37.7	238 to 391	0.239	ACCEPT.	11/19/18	JLH
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	5900	7126	6320	mg/kg	3496	3710 to 9310	0.351	ACCEPT.	11/19/18	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	287	293	350	mg/kg	41.6	153 to 426	0.144	ACCEPT.	11/19/18	JLH
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	3760	4780	5120	mg/kg	879	2470 to 6690	1.16	ACCEPT.	11/19/18	JLH
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	561	631	833	mg/kg	91.5	401 to 917	0.765	ACCEPT.	11/19/18	JLH
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	24.7	21.9	24.4	mg/kg	3.71	8.56 to 35.4	0.755	ACCEPT.	11/1/18	NRV
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	81.8	97.1	112	mg/kg	11.3	58.4 to 136	1.35	ACCEPT.	11/20/18	JLH
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	343	401	480	mg/kg	73.1	223 to 558	0.793	ACCEPT.	11/19/18	JLH
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	15700	15571	15780	mg/kg	1999	13000 to 18000	0.0645	ACCEPT.	11/19/18	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	119	230	313	mg/kg	218	17.8 to 391	0.509	ACCEPT.	11/19/18	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	111	56.2	87.3	mg/kg	19.4	8.73 to 116	2.82	ACCEPT.	11/19/18	JLH
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	9290	12251	11400	mg/kg	3028	1230 to 24200	0.978	ACCEPT.	11/19/18	JLH

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	314	278	334	mg/kg	94.2	33 4 to 621	0.382	ACCEPT	11/19/18	JLH
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	157	154	207	mg/kg	29.1	84.7 to 235	0.103	ACCEPT.	11/19/18	JLH
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	241	278	301	mg/kg	53 5	164 to 387	0.692	ACCEPT	11/19/18	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	163	200	226	mg/kg	28.6	103 to 291	1.29	ACCEPT.	11/19/18	JLH
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	159	190	208	mg/kg	35 1	76.2 to 304	0.883	ACCEPT	11/15/18	SEM

SPEI-005 TCLP Metals - Fibertec, Inc - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	<1	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	11/16/18	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	0.550	0 00	<10	mg/L	0.00	0.00 to 10.0	n/a	ACCEPT	11/16/18	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	11.6	12.6	14.8	mg/L	0.596	10.8 to 16.3	1.68	ACCEPT.	11/14/18	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0400	0 00	<5	mg/L	0.00	0.00 to 5.00	n/a	ACCEPT.	11/16/18	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	<0.0750	0.00	<5	mg/L	0.00	0.00 to 5.00	n/a	ACCEPT.	11/16/18	JLH
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	<1	mg/L	0 00	0.00 to 1.00	n/a	ACCEPT	11/13/18	NRV
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	3.35	3.23	5.60	mg/L	0.298	2 34 to 6.16	0.403	ACCEPT	11/16/18	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	21.3	19.0	32.0	mg/L	6.40	3.20 to 50.0	0 359	ACCEPT.	11/14/18	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	1.69	0.00	<2	mg/L	0.00	0.00 to 2.00	n/a	ACCEPT	11/16/18	JLH
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	7.04	6 82	6.89	pH units	0.366	6.28 to 7.48	0.601	ACCEPT.	11/7/18	AMW

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	193	186	178	oF	8.96	161 to 195	0.781	ACCEPT.	11/13/18	AMS

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	54.2	49.7	61.7	mg/kg	6.93	35.9 to 67.9	0.649	ACCEPT.	11/14/18	AMS
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	980	999	967	mg/kg	61.8	714 to 1280	0.307	ACCEPT.	11/14/18	AMS
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	467	341	367	mg/kg	52.2	153 to 529	2.41	ACCEPT.	11/14/18	AMS
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	64.5	64.3	54.7	mg/kg	8.44	43.9 to 84.7	0.0237	ACCEPT.	11/14/18	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	149	261	392	mg/kg	81.1	39.2 to 504	1.38	ACCEPT.	11/14/18	AMS
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	824	913	917	mg/kg	104	527 to 1300	0.856	ACCEPT.	11/14/18	AMS
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	350	406	627	ug/kg	90.0	136 to 690	0.622	ACCEPT.	10/31/18	RKP
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	194	237	306	ug/kg	47.9	69.3 to 405	0.898	ACCEPT.	10/31/18	RKP
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	181	256	348	ug/kg	61.7	34.8 to 513	1.22	ACCEPT.	10/31/18	RKP
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	145	179	227	ug/kg	17.7	70.7 to 287	1.92	ACCEPT.	10/31/18	RKP
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	308	393	480	ug/kg	70.4	200 to 586	1.21	ACCEPT.	10/31/18	RKP
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	197	271	321	ug/kg	55.9	116 to 426	1.32	ACCEPT.	10/31/18	RKP
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	187	233	267	ug/kg	48.3	128 to 338	0.952	ACCEPT.	10/31/18	RKP
5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	301	344	453	ug/kg	31.8	152 to 536	1.35	ACCEPT.	10/31/18	RKP
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	225	266	307	ug/kg	34.7	146 to 386	1.18	ACCEPT.	10/31/18	RKP

5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	328	399	478	ug/kg	53.1	173 to 625	1.34	ACCEPT.	10/31/18	RKP
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	233	282	317	ug/kg	40.2	139 to 425	1.22	ACCEPT.	10/31/18	RKP
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	153	203	254	ug/kg	32.9	98.0 to 308	1.52	ACCEPT.	10/31/18	RKP
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	85.6	122	163	ug/kg	25.3	35.9 to 208	1.44	ACCEPT.	10/31/18	RKP
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	38.0	42.6	53.0	ug/kg	5.81	6.92 to 78.3	0.792	ACCEPT.	10/31/18	RKP
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	170	177	267	ug/kg	31.7	26.7 to 345	0.221	ACCEPT.	10/31/18	RKP
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	120	152	184	ug/kg	34.1	63.8 to 240	0.938	ACCEPT.	10/31/18	RKP
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	168	208	246	ug/kg	28.7	88.3 to 328	1.39	ACCEPT.	10/31/18	RKP
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fiberlec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	136	147	156	mg/kg	15.4	65.7 to 228	0.714	ACCEPT.	11/14/18	SEM

SPEO-003 Pesticides in Soil - Fiberlec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B -- 2007	155	280	325	ug/kg	28.2	113 to 447	4.43	ACCEPT.	11/14/18	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B -- 2007	69.3	171	196	ug/kg	18.0	64.4 to 278	5.65	ACCEPT.	11/14/18	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B -- 2007	72.4	153	174	ug/kg	13.9	42.1 to 264	5.80	ACCEPT.	11/14/18	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B -- 2007	138	330	417	ug/kg	33.9	124 to 536	5.66	ACCEPT.	11/14/18	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B -- 2007	84.1	243	322	ug/kg	36.2	87.4 to 399	4.39	NOT ACCEPT.	11/14/18	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	59.6	122	143	ug/kg	15.9	28.3 to 216	3.92	ACCEPT.	11/14/18	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	157	267	330	ug/kg	24.6	86.8 to 447	4.47	ACCEPT.	11/14/18	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B -- 2007	41.2	90.8	103	ug/kg	9.40	33.1 to 148	5.28	ACCEPT.	11/14/18	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B -- 2007	82.9	250	305	ug/kg	22.6	98.0 to 402	7.39	NOT ACCEPT.	11/14/18	RDK

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	137	262	302	ug/kg	22.5	93.1 to 431	5.56	ACCEPT	11/14/18	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	173	282	330	ug/kg	21.3	74.7 to 489	5.12	ACCEPT	11/14/18	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	168	344	435	ug/kg	78.1	174 to 514	2.25	NOT ACCEPT	11/14/18	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	81.3	212	253	ug/kg	35.8	34.9 to 389	3.65	ACCEPT.	11/14/18	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	96.7	356	422	ug/kg	31.8	129 to 583	8.15	NOT ACCEPT.	11/14/18	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	67.4	229	283	ug/kg	24.1	90.0 to 368	6.71	NOT ACCEPT	11/14/18	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	27.3	62.7	78.1	ug/kg	4.39	21.8 to 104	8.06	ACCEPT	11/14/18	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	224	397	471	ug/kg	35.6	57.6 to 736	4.86	ACCEPT	11/14/18	RDK
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	377	461	552	ug/kg	57.5	288 to 634	1.46	ACCEPT.	11/20/18	BDA

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT	11/2/18	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT	11/2/18	RDK
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	21.8	36.3	44.6	mg/kg	7.85	11.6 to 61.0	1.85	ACCEPT.	11/2/18	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT	11/2/18	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<2.00	0.00	<0.1	mg/kg	0.00	0.00	n/a	ACCEPT	11/2/18	RDK
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<2.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/2/18	RDK
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<2.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT	11/2/18	RDK

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	285	249	321	ug/kg	37.6	136 to 362	0.957	ACCEPT.	11/30/18	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	314	322	571	ug/kg	87.8	149 to 628	0.0911	ACCEPT.	11/30/18	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	118	140	130	ug/kg	29.2	52.4 to 228	0.753	ACCEPT.	11/30/18	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/9/18	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	395	370	446	ug/kg	47.5	227 to 513	0.526	ACCEPT.	11/9/18	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/9/18	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	403	263	511	ug/kg	111	51.1 to 595	1.26	ACCEPT.	11/30/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	242	225	259	ug/kg	35.0	120 to 330	0.486	ACCEPT.	11/30/18	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	7240	7088	11040	ug/kg	2835	1100 to 13300	0.0536	ACCEPT.	11/1/18	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	3790	3682	5720	ug/kg	1440	572 to 7520	0.0750	ACCEPT.	11/1/18	GJP
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	1950	1803	3040	ug/kg	632	304 to 3640	0.233	ACCEPT.	11/1/18	GJP
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW 8270C -- 1996	4820	4794	7080	ug/kg	1809	1100 to 8500	0.0144	ACCEPT.	11/1/18	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	4410	4107	5680	ug/kg	888	1210 to 6990	0.341	ACCEPT.	11/1/18	GJP

6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5780	4899	6850	ug/kg	1157	1700 to 8100	0.761	ACCEPT	11/1/18	GJP
6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	7250	6761	9820	ug/kg	2428	2310 to 11200	0.201	ACCEPT	11/1/18	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	2860	2457	3150	ug/kg	858	315 to 5030	0.470	ACCEPT	11/1/18	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	4790	5192	12830	ug/kg	3031	1280 to 13300	0.133	ACCEPT	11/2/18	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	6220	5755	7560	ug/kg	922	2300 to 9220	0.504	ACCEPT	11/1/18	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	6380	5224	8770	ug/kg	3308	877 to 13800	0.349	ACCEPT	11/1/18	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	7340	6951	9340	ug/kg	1230	3140 to 10800	0.316	ACCEPT	11/1/18	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	2430	2252	3310	ug/kg	571	757 to 3740	0.312	ACCEPT	11/1/18	GJP
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	2090	1937	3040	ug/kg	602	486 to 3390	0.254	ACCEPT	11/1/18	GJP
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	3830	3715	5380	ug/kg	973	538 to 6640	0.118	ACCEPT	11/1/18	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	2020	1829	2710	ug/kg	477	631 to 3030	0.400	ACCEPT.	11/1/18	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	7710	6821	9770	ug/kg	2212	1530 to 12100	0.402	ACCEPT.	11/1/18	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	5850	5180	7970	ug/kg	1655	1220 to 9140	0.405	ACCEPT.	11/2/18	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	4690	4800	6310	ug/kg	859	1920 to 7680	0.128	ACCEPT	11/1/18	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	2590	2422	3310	ug/kg	482	820 to 4030	0.349	ACCEPT.	11/1/18	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	7370	5572	9940	ug/kg	1936	994 to 15100	0.929	ACCEPT	11/1/18	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	7600	7178	10790	ug/kg	2065	1080 to 15500	0.204	ACCEPT.	11/1/18	GJP
5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	7670	7742	10840	ug/kg	1660	3170 to 12300	0.0434	ACCEPT	11/1/18	GJP

5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	1480	1510	1950	ug/kg	282	552 to 2470	0.106	ACCEPT.	11/1/18	GJP
5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	8990	9048	11130	ug/kg	1380	3960 to 14100	0.0420	ACCEPT.	11/1/18	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	6360	6653	8200	ug/kg	1409	2660 to 10600	0.208	ACCEPT.	11/1/18	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	9600	9198	11150	ug/kg	921	3760 to 14600	0.436	ACCEPT.	11/1/18	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	5950	5559	8350	ug/kg	1957	1440 to 9680	0.200	ACCEPT.	11/1/18	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<167	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	11/1/18	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	5320	5913	7190	ug/kg	1094	2140 to 9660	0.542	ACCEPT.	11/1/18	GJP
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/18	GJP
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	5050	5289	6440	ug/kg	956	2620 to 7960	0.250	ACCEPT.	11/1/18	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	3830	4056	4420	ug/kg	747	1270 to 6850	0.303	ACCEPT.	11/1/18	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	1790	1993	2350	ug/kg	309	457 to 3520	0.657	ACCEPT.	11/1/18	GJP
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	7200	7188	9670	ug/kg	1444	3260 to 11100	0.0083	ACCEPT.	11/1/18	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	6780	6771	8450	ug/kg	1317	2760 to 10800	0.0068	ACCEPT.	11/1/18	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	11/1/18	GJP
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	2070	2063	2550	ug/kg	309	797 to 3320	0.0227	ACCEPT.	11/1/18	GJP
6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	2610	2691	3490	ug/kg	449	1140 to 4240	0.180	ACCEPT.	11/1/18	GJP

6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0 00	0 00 to 150	n/a	ACCEPT	11/1/18	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<150	0 00	<150	ug/kg	0.00	0 00 to 150	n/a	ACCEPT	11/1/18	GJP
6285	Hexachlorocyclopentadien e	10185805	GC-MS	SW 8270C -- 1996	<750	0 00	0	ug/kg	0 00	0.00	n/a	ACCEPT	11/1/18	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	1880	1729	3000	ug/kg	597	300 to 3480	0 253	ACCEPT	11/1/18	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	7340	6211	8710	ug/kg	1460	1390 to 11000	0 773	ACCEPT	11/1/18	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	6490	5609	7460	ug/kg	1310	1910 to 9310	0.673	ACCEPT	11/1/18	GJP
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0 00	0 00 to 150	n/a	ACCEPT	11/1/18	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0 00	0	ug/kg	0 00	0 00	n/a	ACCEPT	11/1/18	GJP
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	11/1/18	GJP
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	7430	6967	11090	ug/kg	2125	1830 to 12100	0.218	ACCEPT	11/1/18	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	7130	6975	9620	ug/kg	2387	2270 to 11700	0 0649	ACCEPT	11/1/18	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6330	5970	8600	ug/kg	1158	860 to 11700	0.311	ACCEPT	11/2/18	GJP
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	1800	1824	2240	ug/kg	231	821 to 2820	0.104	ACCEPT	11/1/18	GJP
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	7760	7814	11810	ug/kg	2593	2150 to 13500	0.0208	ACCEPT	11/1/18	GJP
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	<100	0 00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT	11/1/18	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0 00	n/a	ACCEPT	11/1/18	GJP

5510	Acetophenone	-- Not Reported --
4871	2-Methylcholanthrene	-- Not Reported --
5145	2-Amino-1-methylbenzene	-- Not Reported --
5025	N-Nitroso-di-n-butylamine	-- Not Reported --
5050	2-Picoline	-- Not Reported --
5145	o-Toluidine	-- Not Reported --
5150	1,2,3-Trichlorobenzene	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
5515	2-Acetylaminofluorene	-- Not Reported --
5540	4-Aminobiphenyl	-- Not Reported --
5595	Benzidine	-- Not Reported --
5610	Benzoic acid	-- Not Reported --
5790	1-Chloronaphthalene	-- Not Reported --
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --

6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phosphorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Dete	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	9950	8928	8690	ug/kg	1219	6490 to 10900	0.838	ACCEPT.	10/31/18	MAK
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	2990	2636	2570	ug/kg	206	1540 to 3600	1.72	ACCEPT.	10/31/18	MAK
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	1790	1718	1570	ug/kg	104	501 to 2500	0.692	ACCEPT.	10/31/18	MAK
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	<732	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<676	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	5790	5294	5580	ug/kg	1877	2790 to 8370	0.264	ACCEPT.	10/31/18	MAK
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0 00	n/a	ACCEPT.	10/31/18	MAK
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	4760	4083	4340	ug/kg	741	2380 to 6290	0.914	ACCEPT.	10/31/18	MAK
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK

5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	9430	8154	8120	ug/kg	967	4860 to 11400	1.32	ACCEPT.	10/31/18	MAK
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8010	7934	7330	ug/kg	916	5500 to 9170	0.0830	ACCEPT.	10/31/18	MAK
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	7290	7104	6660	ug/kg	732	5000 to 8340	0.254	ACCEPT.	10/31/18	MAK
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	6610	6516	6690	ug/kg	414	4680 to 8690	0.227	ACCEPT.	10/31/18	MAK
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	1780	1666	1600	ug/kg	132	1100 to 2110	0.864	ACCEPT.	10/31/18	MAK
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6180	5786	5730	ug/kg	412	4410 to 6990	0.956	ACCEPT.	10/31/18	MAK
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	11500	13683	13610	ug/kg	1760	3750 to 20800	1.24	ACCEPT.	10/31/18	MAK
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	16600	16205	16740	ug/kg	3480	8370 to 25100	0.114	ACCEPT.	10/31/18	MAK
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	12800	10983	11180	ug/kg	1908	5590 to 16800	0.952	ACCEPT.	10/31/18	MAK
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	38700	0.00	<929	ug/kg	0.00	0.00 to 929	n/a	NOT ACCEPT.	10/31/18	MAK
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	<656	0.00	<750	ug/kg	0.00	0.00 to 750	n/a	ACCEPT.	10/31/18	MAK
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	<479	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/31/18	MAK
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	9880	8306	8520	ug/kg	1200	5110 to 11900	1.31	ACCEPT.	10/31/18	MAK
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	5440	4819	4630	ug/kg	640	2880 to 6320	0.970	ACCEPT.	10/31/18	MAK
4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8990	8806	8260	ug/kg	1276	6200 to 10300	0.144	ACCEPT.	10/31/18	MAK

4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0 00	n/a	ACCEPT.	10/31/18	MAK
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	1770	1663	1460	ug/kg	136	1020 to 1900	0.787	ACCEPT	10/31/18	MAK
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	3710	3573	3310	ug/kg	357	1990 to 4640	0.384	ACCEPT	10/31/18	MAK
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	6260	5663	5560	ug/kg	808	3330 to 7780	0.739	ACCEPT.	10/31/18	MAK
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<642	0.00	<700	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	6660	6828	6180	ug/kg	757	3700 to 8650	0.222	ACCEPT	10/31/18	MAK
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<697	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT	10/31/18	MAK
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	2890	3119	2760	ug/kg	700	1930 to 3580	0.327	ACCEPT.	10/31/18	MAK
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	1530	1664	1320	ug/kg	225	794 to 1850	0.596	ACCEPT	10/31/18	MAK
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	<721	0.00	<721	ug/kg	0.00	0 00 to 721	n/a	ACCEPT.	10/31/18	MAK
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT	10/31/18	MAK
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/31/18	MAK
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0 00	n/a	ACCEPT	10/31/18	MAK
4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<1000	0 00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK

4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	1810	1787	1650	ug/kg	284	1180 to 2330	0.0810	ACCEPT.	10/31/18	MAK
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	7020	7024	6480	ug/kg	1461	4860 to 8100	0.0027	ACCEPT.	10/31/18	MAK
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	2680	2450	2520	ug/kg	194	1760 to 3280	1.19	ACCEPT.	10/31/18	MAK
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	9440	9066	8790	ug/kg	1408	5270 to 12300	0.266	ACCEPT.	10/31/18	MAK
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	5160	4939	4640	ug/kg	707	2780 to 6500	0.313	ACCEPT.	10/31/18	MAK
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	8440	8567	7170	ug/kg	3087	5240 to 9190	0.0411	ACCEPT.	10/31/18	MAK
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	6960	5918	6280	ug/kg	1032	2010 to 9920	1.01	ACCEPT.	10/31/18	MAK
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/31/18	MAK

4670	1,1-Dichloropropene	-- Not Reported --
4660	1,3-Dichloropropane	-- Not Reported --
4665	2,2-Dichloropropane	-- Not Reported --
4540	4-Chlorotoluene	-- Not Reported --
4340	Acrylonitrile	-- Not Reported --
4368	t-Amyl alcohol	-- Not Reported --
4750	Ethanol	-- Not Reported --
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --
4355	Allyl chloride	-- Not Reported --
4870	Iodomethane	-- Not Reported --
4525	Chloroprene	-- Not Reported --
4810	Ethyl methacrylate	-- Not Reported --
4875	Isobutyl alcohol	-- Not Reported --
4925	Methacrylonitrile	-- Not Reported --
4990	Methyl methacrylate	-- Not Reported --
5035	Pentachloroethane	-- Not Reported --
5080	Propionitrile	-- Not Reported --
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --
4320	Acetonitrile	-- Not Reported --
4325	Acrolein	-- Not Reported --
4500	2-Chloroethyl vinyl ether	-- Not Reported --
4510	1-Chlorohexane	-- Not Reported --
4555	Cyclohexane	-- Not Reported --
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --
4835	Hexachlorobutadiene	-- Not Reported --
4855	n-Hexane	-- Not Reported --

5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	157	211	226	ug/kg	34.0	58.3 to 364	1.59	ACCEPT	11/20/18	BDA

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	3.76	5.01	8.94	mg/L	1.77	0.894 to 10.3	0.706	ACCEPT	11/12/17	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	0.643	0.574	1.48	mg/L	0.0983	0.269 to 1.63	0.702	ACCEPT.	11/12/17	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	1.94	2.14	2.84	mg/L	0.283	1.29 to 3.12	0.707	ACCEPT.	11/12/17	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	2.26	2.64	4.90	mg/L	0.537	1.03 to 5.39	0.708	ACCEPT.	11/12/17	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/9/17	RKP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	0.181	0.171	0.220	mg/L	0.0148	0.0270 to 0.242	0.676	ACCEPT.	11/9/17	RKP
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.197	0.324	0.410	mg/L	0.119	0.0410 to 0.681	1.07	ACCEPT.	11/30/18	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.368	0.536	0.760	mg/L	0.145	0.101 to 0.971	1.16	ACCEPT.	11/30/18	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	0.148	0.131	0.250	mg/L	0.0247	0.0570 to 0.275	0.688	ACCEPT.	11/15/18	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	0.0620	0.0580	0.140	mg/L	0.0057	0.0409 to 0.154	0.702	ACCEPT.	11/15/18	RDK
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/15/18	RDK

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	1520	1180	1230	mg/kg	203	309 to 2050	1.67	ACCEPT.	11/16/18	SEM
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-119

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<10.0	0.00	<0.86	mg/kg	0.00	0.00	n/a	ACCEPT.	11/7/18	BDA
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	31.5	31.1	42.9	mg/kg	8.91	7.29 to 61.1	0.0449	ACCEPT.	11/7/18	BDA
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

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Certificate of Analysis

VOCs in Soil - Mid Level QC Sample

Catalog Number: SQCO-008H
Lot Number: S1018
Manufacture Date: 07/20/2018
Certified Date: 08/07/2018

Expiration: 10/31/2021
Storage: -10°C to -20°C
Solvent: P&T Methanol/H2O (90:10)
Hazards: Flammable, Irritant

Analyte	Study Mean (ug/kg)	Gravimetric Concentration (ug/kg)	Acceptance Limits (ug/kg)
1,1,1,2-Tetrachloroethane	8928	8690 ± 61.3	6490-10900
1,1,1-Trichloroethane	2636	2570 ± 18.1	1540-3600
1,1,2,2-Tetrachloroethane	1718	1570 ± 11.1	501-2500
1,1,2-Trichloro-1,2,2-trifluoroethane	0.00	0.00 ± 0.00	0.00-0.00
1,1,2-Trichloroethane	0.00	0.00 ± 0.00	0.00-650
1,1-Dichloroethane	0.00	0.00 ± 0.00	0.00-650
1,1-Dichloroethylene	5294	5580 ± 39.3	2790-8370
1,1-Dichloropropylene	0.00	0.00 ± 0.00	0.00-0.00
1,2,3-Trichlorobenzene	0.00	0.00 ± 0.00	0.00-0.00
1,2,3-Trichloropropane	4083	4340 ± 30.6	2380-6290
1,2,4-Trichlorobenzene	0.00	0.00 ± 0.00	0.00-1200
1,2,4-Trimethylbenzene	0.00	0.00 ± 0.00	0.00-0.00
1,2-Dibromo-3-chloropropane	8154	8120 ± 57.2	4860-11400
1,2-Dibromoethane	0.00	0.00 ± 0.00	0.00-1200
1,2-Dichlorobenzene	7934	7330 ± 51.7	5500-9170
1,2-Dichloroethane	7104	6660 ± 47.0	5000-8340
1,2-Dichloropropane	6516	6690 ± 47.2	4680-8690
1,3,5-Trichlorobenzene	0.00	0.00 ± 0.00	0.00-0.00
1,3,5-Trimethylbenzene	0.00	0.00 ± 0.00	0.00-0.00
1,3-Dichlorobenzene	1666	1600 ± 11.3	1100-2110
1,3-Dichloropropane	0.00	0.00 ± 0.00	0.00-0.00
1,4-Dichlorobenzene	5786	5730 ± 40.4	4410-6990
1,4-Dioxane	0.00	0.00 ± 0.00	0.00-0.00
1-Chlorohexane	0.00	0.00 ± 0.00	0.00-0.00
2,2-Dichloropropane	0.00	0.00 ± 0.00	0.00-0.00
2-Butanone	13683	13610 ± 96.0	3750-20800
2-Chloroethyl vinyl ether	0.00	0.00 ± 0.00	0.00-0.00
2-Chlorotoluene	0.00	0.00 ± 0.00	0.00-0.00
2-Hexanone	16205	16740 ± 118	8370-25100
3,3-Dimethyl-1-butanol	0.00	0.00 ± 0.00	0.00-0.00
4-Chlorotoluene	0.00	0.00 ± 0.00	0.00-0.00
4-Methyl-2-pentanone	10983	11180 ± 78.8	5590-16800
Acetone	0.00	0.00 ± 0.00	0.00-929
Acetonitrile	0.00	0.00 ± 0.00	0.00-0.00
Acrolein	0.00	0.00 ± 0.00	0.00-0.00

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Catalog Number: SQCO-008H
Lot Number: S1018

Analyte	Study Mean (ug/kg)	Gravimetric Concentration (ug/kg)	Acceptance Limits (ug/kg)
Acrylonitrile	0.00	0.00 ± 0.00	0.00-0.00
Allyl chloride	0.00	0.00 ± 0.00	0.00-0.00
Benzene	0.00	0.00 ± 0.00	0.00-750
Bromobenzene	0.00	0.00 ± 0.00	0.00-0.00
Bromochloromethane	0.00	0.00 ± 0.00	0.00-0.00
Bromodichloromethane	0.00	0.00 ± 0.00	0.00-650
Bromoform	8306	8520 ± 60.1	5110-11900
Bromomethane	0.00	0.00 ± 0.00	0.00-0.00
Carbon disulfide	0.00	0.00 ± 0.00	0.00-0.00
Carbon tetrachloride	4819	4630 ± 32.6	2880-6320
Chlorobenzene	8806	8260 ± 58.2	6200-10300
Chloroethane	0.00	0.00 ± 0.00	0.00-0.00
Chloroform	1663	1460 ± 10.3	1020-1900
Chloromethane	0.00	0.00 ± 0.00	0.00-0.00
Chloroprene	0.00	0.00 ± 0.00	0.00-0.00
cis-1,2-Dichloroethylene	3573	3310 ± 23.3	1990-4640
cis-1,3-Dichloropropene	5663	5560 ± 39.2	3330-7780
cis-1,4-Dichloro-2-butene	0.00	0.00 ± 0.00	0.00-0.00
Cyclohexane	0.00	0.00 ± 0.00	0.00-0.00
Di-isopropyl ether	0.00	0.00 ± 0.00	0.00-0.00
Dibromochloromethane	0.00	0.00 ± 0.00	0.00-0.00
Dibromomethane	6828	6180 ± 43.6	3700-8650
Dichlorodifluoromethane	0.00	0.00 ± 0.00	0.00-0.00
Diethyl ether	0.00	0.00 ± 0.00	0.00-0.00
Ethanol	0.00	0.00 ± 0.00	0.00-0.00
Ethyl methacrylate	0.00	0.00 ± 0.00	0.00-0.00
Ethyl-tert-butyl ether (ETBE)	0.00	0.00 ± 0.00	0.00-0.00
Ethylbenzene	0.00	0.00 ± 0.00	0.00-700
Hexachlorobutadiene	0.00	0.00 ± 0.00	0.00-0.00
Hexachloroethane	0.00	0.00 ± 0.00	0.00-0.00
Iodomethane	0.00	0.00 ± 0.00	0.00-0.00
Isobutyl alcohol	0.00	0.00 ± 0.00	0.00-0.00
Isopropylbenzene	0.00	0.00 ± 0.00	0.00-0.00
Methacrylonitrile	0.00	0.00 ± 0.00	0.00-0.00
Methyl acetate	0.00	0.00 ± 0.00	0.00-0.00
Methyl cyclohexane	0.00	0.00 ± 0.00	0.00-0.00
Methyl methacrylate	0.00	0.00 ± 0.00	0.00-0.00
Methyl-tert-butyl ether (MTBE)	3119	2760 ± 19.5	1930-3580
Methylene chloride	1664	1320 ± 9.31	794-1850
n-Butylbenzene	0.00	0.00 ± 0.00	0.00-0.00
n-Hexane	0.00	0.00 ± 0.00	0.00-0.00
n-Propylbenzene	0.00	0.00 ± 0.00	0.00-0.00

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Catalog Number: SQCO-008H
Lot Number: S1018

Analyte	Study Mean (ug/kg)	Gravimetric Concentration (ug/kg)	Acceptance Limits (ug/kg)
Naphthalene	0.00	0.00 ± 0.00	0.00-721
p-Isopropyltoluene	0.00	0.00 ± 0.00	0.00-0.00
Pentachloroethane	0.00	0.00 ± 0.00	0.00-0.00
Propionitrile	0.00	0.00 ± 0.00	0.00-0.00
sec-Butylbenzene	0.00	0.00 ± 0.00	0.00-0.00
Styrene	0.00	0.00 ± 0.00	0.00-1200
t-Amyl alcohol	0.00	0.00 ± 0.00	0.00-0.00
t-Amylmethyl ether (TAME)	0.00	0.00 ± 0.00	0.00-0.00
t-Butyl alcohol	0.00	0.00 ± 0.00	0.00-0.00
tert-Butylbenzene	0.00	0.00 ± 0.00	0.00-0.00
Tetrachloroethylene	1787	1650 ± 11.6	1180-2330
Tetrahydrofuran	0.00	0.00 ± 0.00	0.00-0.00
Toluene	7024	6480 ± 45.7	4860-8100
Total Xylenes	2450	2520 ± 17.8	1760-3280
trans-1,2-Dichloroethylene	9066	8790 ± 62.0	5270-12300
trans-1,3-Dichloropropene	4939	4640 ± 32.7	2780-6500
trans-1,4-Dichloro-2-butene	0.00	0.00 ± 0.00	0.00-0.00
Trichloroethylene	8567	7170 ± 50.5	5240-9190
Trichlorofluoromethane	5918	6280 ± 44.3	2010-9920
Vinyl acetate	0.00	0.00 ± 0.00	0.00-0.00
Vinyl chloride	0.00	0.00 ± 0.00	0.00-0.00

This quality control sample was manufactured by NSI Lab Solutions following quality procedures meeting the requirements of ISO 9001, ISO 17025, and ISO 34. Acceptance limits are set at current NELAC standards. The study mean is set at the mean of an interlaboratory proficiency testing study with outlier rejection. This sample is intended to be used to validate analytical methods, for detection limit studies, and analyst proficiency testing.

Storage & Instructions For Use

Store the sample at -10°C to -20°C.

This sample is supplied as a 10 gram sample stabilized with 10 mL of P&T Methanol.
The sample is to be analyzed by US EPA SW846 Methods 8240 and 8260 purge and trap extraction (US EPA Method 5030) with Methanol as the extraction solvent.
This sample should be prepared and analyzed cold. Shake the sample for 30 seconds prior to opening.
Using a gas tight syringe, aliquot 100 uL of the Methqanol extract and inject into your purge and trap vessel below the surface of 5 or 25 mL of organic free reagent water. Using more than 100 uL may exceed the trapping capacity of the purge and trap system.
After sampling, tightly reseal the vial ensuring there is no sample remaining between the vial rim, threads, and cap.
Immeidately complete other sample preparation according to your analytical procedures.
Report results in units of ug/kg based on a 10 g sample weight and 10 mL as the extraction volume.

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Catalog Number: SQCO-008H
Lot Number: S1018

Traceability Information

Analyte Source Materials: The highest purity analyte source materials are used in the manufacture of this sample. Analyte source material purity and associated uncertainty has been analytically verified against appropriate NIST SRMs, where available.

Balance: All analytical balances are calibrated on a semiannual basis by an ISO 17025 accredited calibration laboratory and are traceable to NIST. Traceable Calibration Certificate available upon request.

All balances are checked daily by an in-house standard operating procedure. The weights used for this daily verification are calibrated annually by an ISO 17025 accredited calibration laboratory and are certified traceable to NIST. Certificate of Calibration and Traceability available upon request.

Thermometer: All thermometers are NIST traceable through thermometers that are calibrated annually by an ISO 17025 accredited calibration laboratory.

Glassware: All glassware used in the manufacture of our samples is Class A. An in-house standard operating procedure is used to verify all glassware prior to it being placed into service. Volumetric pipetors are calibrated every four months by an ISO 17025 accredited calibration laboratory.

Homogeneity/Stability/Expiration

This qualify control sample was thoroughly mixed in production. Batch homogeneity was established through analyses of samples chosen at random. The stability of this quality control sample is based on short-term and long-term monitoring of the certified concentration. The expiration date is guaranteed to be valid from the manufacture date and is based on results of long-term monitoring.

Kenneth Grzybowski

Kenneth Grzybowski, Technical Organic Manager

Fibertec
environmental
services

Thursday, February 14, 2019

Fibertec Project Number:	88809
Project Identification:	SQCO-008H /S1018
Submittal Date:	02/05/2018

Mr. Ken Mueller
Fibertec, Inc.
1914 Holloway Drive
Holt, Michigan 48842

Dear Mr. Mueller,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Sharon Rakow at 12:42 PM, Feb 14, 2019

For Daryl P. Strandbergh
Laboratory Director

Enclosures

Client Identification:	**Fibertec, Inc.**	Sample Description:	**SQCO-008H**	Chain of Custody:	**NA**
Client Project Name:	**,SQCO-008H**	Sample No:	**S1018**	Collect Date:	**02/05/19**
Client Project No:	**S1018**	Sample Matrix:	**PT: Solids**	Collect Time:	**08:00**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

VOCs in Soil - Mid Level **Aliquot ID: 88809-001** **Matrix: PT: Solids**
Method: EPA 5035A/EPA 8260B **Description: SQCO-008H**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init.
1. Acetone	U		µg/kg	929	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
2. Benzene	U		µg/kg	656	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
3. Bromobenzene	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
4. Bromochloromethane	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
5. Bromodichloromethane	U		µg/kg	479	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
6. Bromoform	8610		µg/kg	1000	10	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
7. Bromomethane	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
8. t-Butanol	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
9. 2-Butanone	13100		µg/kg	1000	10	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
10. n-Butylbenzene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
11. sec-Butylbenzene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
12. tert-Butylbenzene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
13. Carbon Disulfide	U		µg/kg	500	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
14. Carbon Tetrachloride	5430		µg/kg	480	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
15. Chlorobenzene	8580		µg/kg	648	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
16. Chloroethane	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
17. Chloroform	1610		µg/kg	550	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
18. Chloromethane	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
19. 2-Chlorotoluene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	9080		µg/kg	2600	10	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
21. Dibromochloromethane	U		µg/kg	642	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
22. Dibromomethane	6390		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
23. trans-1,4-Dichloro-2-butene (SIM)	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
24. 1,2-Dichlorobenzene	7280		µg/kg	618	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
25. 1,3-Dichlorobenzene	1560		µg/kg	1400	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
26. 1,4-Dichlorobenzene	6450		µg/kg	596	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
27. Dichlorodifluoromethane	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
28. 1,1-Dichloroethane	U		µg/kg	676	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
29. 1,2-Dichloroethane	7240		µg/kg	663	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
30. 1,1-Dichloroethene	5540		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
31. cis-1,2-Dichloroethene	3410		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
32. trans-1,2-Dichloroethene	8540		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
33. 1,2-Dichloropropane	6420		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
34. cis-1,3-Dichloropropene	5750		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
35. trans-1,3-Dichloropropene	5090		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
36. Diethyl Ether	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
‡ 37. Diisopropyl Ether	U		µg/kg	500	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS

Client Identification:	**Fibertec, Inc.**	Sample Description:	**SQCO-008H**	Chain of Custody:	**NA**
Client Project Name:	**SQCO-008H**	Sample No:	**S1018**	Collect Date:	**02/05/19**
Client Project No:	**S1018**	Sample Matrix:	**PT: Solids**	Collect Time:	**08:00**

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

VOCs in Soil - Mid Level **Aliquot ID: 88809-001** **Matrix: PT: Solids**
Method: EPA 5035A/EPA 8260B **Description: SQCO-008H**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation P. Date	Preparation P. Batch	Analysis A. Date	Analysis A. Batch	Init
38. Ethylbenzene	U		µg/kg	697	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
39. Ethylene Dibromide	U		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
‡ 40. Hexachloroethane	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
41. 2-Hexanone	**18000**		µg/kg	2500	10	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
42. Isopropylbenzene	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
43. 4-Isopropyltoluene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
44. 4-Methyl-2-pentanone	**13300**		µg/kg	2500	10	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
45. Methylene Chloride	**1420**		µg/kg	435	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
46. MTBE	**2820**		µg/kg	1400	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
47. Naphthalene	U		µg/kg	721	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
48. n-Propylbenzene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
49. Styrene	U		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
‡ 50. TAME	U		µg/kg	500	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
51. 1,1,1,2-Tetrachloroethane	**9720**		µg/kg	520	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
52. 1,1,2,2-Tetrachloroethane	**1820**		µg/kg	455	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
53. Tetrachloroethene	**1850**		µg/kg	543	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
54. Toluene	**6690**		µg/kg	665	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
55. 1,2,3-Trichlorobenzene	U		µg/kg	750	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
56. 1,2,4-Trichlorobenzene	U		µg/kg	1200	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
57. 1,1,1-Trichloroethane	**2810**		µg/kg	530	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
58. 1,1,2-Trichloroethane	U		µg/kg	732	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
59. Trichloroethene	**8040**		µg/kg	638	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
60. Trichlorofluoromethane	**6040**		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
61. 1,2,3-Trichloropropane	**5010**		µg/kg	407	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
62. 1,2,4-Trimethylbenzene	U		µg/kg	500	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
63. 1,3,5-Trimethylbenzene	U		µg/kg	500	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
64. Vinyl Chloride	U		µg/kg	1000	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
65. m&p-Xylene	**1730**		µg/kg	931	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
66. o-Xylene	U		µg/kg	931	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS
‡ 67. Xylenes	**2600**		µg/kg	931	1.0	02/12/19	VI19B12A	02/12/19	VI19B12A	KSS

Definitions/ Qualifiers:

A: Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value
M: Modified Method
U: The analyte was not detected at or above the reporting limit
X: Matrix interference has resulted in a raised reporting limit or distorted result
W: Results reported on a wet-weight basis
***:** Value reported is outside QC limits

Exception Summary:

Analysis Locations:

All analyses performed in Holt.

NELAP ACCREDITED TNI LABORATORY

Accreditation Number(s):

T104704518-19-8 (TX)

Remedial Soil Mid-Level Volatiles QC Sample
Project#: 88809

Reported: 2/14/2019

Parameter	Result, ug/Kg	Study Mean, ug/Kg	Gravimetric Concentration, ug/Kg	Acceptance Limits, ug/Kg	Acceptable, Y/N
1. Acetone	U	0	0 ± 0	0.00-929	Y
2. Benzene	U	0	0 ± 0	0.00-750	Y
3. Bromobenzene	U	0	0 ± 0	0.00-0.00	Y
4. Bromochloromethane	U	0	0 ± 0	0.00-0.00	Y
5. Bromodichloromethane	U	0	0 ± 0	0.00-650	Y
6. Bromoform	8610	8306	8520 ± 60.1	5110-11900	Y
7. Bromomethane	U	0	0 ± 0	0.00-0.00	Y
8. t-Butanol	U	0	0 ± 0	0.00-0.00	Y
9. 2-Butanone	13100	13683	13610 ± 96	3750-20800	Y
10. n-Butylbenzene	U	0	0 ± 0	0.00-0.00	Y
11. sec-Butylbenzene	U	0	0 ± 0	0.00-0.00	Y
12. tert-Butylbenzene	U	0	0 ± 0	0.00-0.00	Y
13. Carbon Disulfide	U	0	0 ± 0	0.00-0.00	Y
14. Carbon Tetrachloride	5430	4819	4630 ± 32.6	2880-6320	Y
15. Chlorobenzene	8580	8806	8260 ± 58.2	6200-10300	Y
16. Chloroethane	U	0	0 ± 0	0.00-0.00	Y
17. Chloroform	1610	1663	1460 ± 10.3	1020-1900	Y
18. Chloromethane	U	0	0 ± 0	0.00-0.00	Y
19. 2-Chlorotoluene	U	0	0 ± 0	0.00-0.00	Y
20. 1,2-Dibromo-3-chloropropane (SIM)	9080	8154	8120 ± 57.2	4860-11400	Y
21. Dibromochloromethane	U	0	0 ± 0	0.00-0.00	Y
22. Dibromomethane	6390	6828	6180 ± 43.6	3700-8650	Y
23. trans-1,4-Dichloro-2-butene (SIM)	U	0	0 ± 0	0.00-0.00	Y
24. 1,2-Dichlorobenzene	7280	7934	7330 ± 51.7	5500-9170	Y
25. 1,3-Dichlorobenzene	1560	1666	1600 ± 11.3	1100-2110	Y
26. 1,4-Dichlorobenzene	5450	5786	5730 ± 40.4	4410-6990	Y
27. Dichlorodifluoromethane	U	0	0 ± 0	0.00-0.00	Y
28. 1,1-Dichloroethane	U	0	0 ± 0	0.00-650	Y
29. 1,2-Dichloroethane	7240	7104	6660 ± 47	5000-8340	Y
30. 1,1-Dichloroethene	5540	5294	5580 ± 39.3	2790-8370	Y
31. cis-1,2-Dichloroethene	3410	3573	3310 ± 23.3	1990-4640	Y
32. trans-1,2-Dichloroethene	8540	9066	8790 ± 62	5270-12300	Y
33. 1,2-Dichloropropane	6420	6516	6690 ± 47.2	4680-8690	Y
34. cis-1,3-Dichloropropene	5750	5663	5560 ± 39.2	3330-7780	Y
35. trans-1,3-Dichloropropene	5090	4939	4640 ± 32.7	2780-6500	Y
36. Diethyl Ether	U	0	0 ± 0	0.00-0.00	Y
37. Diisopropyl Ether	U	0	0 ± 0	0.00-0.00	Y
38. Ethylbenzene	U	0	0 ± 0	0.00-700	Y
39. Ethylene Dibromide	U	0	0 ± 0	0.00-1200	Y
40. Hexachloroethane	U	0	0 ± 0	0.00-0.00	Y
41. 2-Hexanone	18000	16205	16740 ± 118	8370-25100	Y
42. Isopropylbenzene	U	0	0 ± 0	0.00-0.00	Y
43. 4-Isopropyltoluene	U	0	0 ± 0	0.00-0.00	Y
44. 4-Methyl-2-pentanone	13300	10983	11180 ± 78.8	5590-16800	Y
45. Methylene Chloride	1420	1664	1320 ± 9.31	794-1850	Y
46. MTBE	2820	3119	2760 ± 19.5	1930-3580	Y
47. Naphthalene	U	0	0 ± 0	0.00-721	Y
48. n-Propylbenzene	U	0	0 ± 0	0.00-0.00	Y
49. Styrene	U	0	0 ± 0	0.00-1200	Y
50. TAME	U	0	0 ± 0	0.00-0.00	Y
51. 1,1,1,2-Tetrachloroethane	9720	8928	8690 ± 61.3	6490-10900	Y
52. 1,1,2,2-Tetrachloroethane	1820	1718	1570 ± 11.1	501-2500	Y
53. Tetrachloroethene	1850	1787	1650 ± 11.6	1180-2330	Y

Remedial Soil Mid-Level Volatiles QC Sample
Project#: 88809

Reported: 2/14/2019

Parameter	Result, ug/Kg	Study Mean, ug/Kg	Gravimetric Concentration, ug/Kg	Acceptance Limits, ug/Kg	Acceptable, Y/N
54. Toluene	6690	7024	6480 ± 45.7	4860-8100	Y
55. 1,2,3-Trichlorobenzene	U	0	0 ± 0	0.00-0.00	Y
56. 1,2,4-Trichlorobenzene	U	0	0 ± 0	0.00-1200	Y
57. 1,1,1-Trichloroethane	2810	2636	2570 ± 18.1	1540-3600	Y
58. 1,1,2-Trichloroethane	U	0	0 ± 0	0.00-650	Y
59. Trichloroethene	8040	8567	7170 ± 50.5	5240-9190	Y
60. Trichlorofluoromethane	6040	5918	6280 ± 44.3	2010-9920	Y
61. 1,2,3-Trichloropropane	5010	4083	4340 ± 30.6	2380-6290	Y
62. 1,2,4-Trimethylbenzene	U	0	0 ± 0	0.00-0.00	Y
63. 1,3,5-Trimethylbenzene	U	0	0 ± 0	0.00-0.00	Y
64. Vinyl Chloride	U	0	0 ± 0	0.00-0.00	Y
65. m&p-Xylene	1730	-	- - -	-	-
66. o-Xylene	U	-	- - -	-	-
67. Xylenes	2600	2450	2520 ± 17.8	1760-3280	Y

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 698 /PAR)

Client: PT Study SM-119 **Project/Document Control Number:** 87529

Sample Number(s): 003 **Date Initiated:** 01/07/2019 **Date Due:** 01/21/2019

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Wet Chemistry ☐ Metals ☐ Digestions ☑ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Multiple pesticide compounds failed low as follows: (all values are ug/Kg)
alpha-BHC: reported: 84.1; study mean: 243; assigned value: 322; range:87.4 to 399. Endosulfan I: reported: 82.9; study mean:250; assigned value: 305; range 98.0 to 402. Endrin: reported:168; study mean: 344; assigned value: 435; range: 174 to 514. gamma-BHC: reported: 96.7; study mean: 356; assigned value: 422; range 129 to 583. Heptachlor: reported: 67.4; study mean: 229; assigned value: 283; range: 90.0 to 368. Please investigate the cause of this issue and provide an explanation and proposed corrective action.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The mass was entered into LIMS incorrectly. We typically prepare 15g for each sample. The PE comes as a 10g sample. 15g was entered into LIMS, causing all of the results to be low, and for some to fail. If the correct mass had been entered, all of the compounds would have passed. See attached sheets. The correct mass was written on the bench sheet, but was not entered into LIMS correctly.

Investigator(s): BDA

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Typically prep weighs out all their samples, but does not enter the batch into LIMS until after the whole batch is weighed out. They record the mass on the bench sheet (which is kept with the project) as they are weighing samples out, and then use that bench sheet for entering the data into LIMS. For samples that are not the typical mass, they will now enter the mass in LIMS immediately after weighing the sample. They were also reminded to highlight on the bench sheet any mass that is not the typical value.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☐

Follow-Up Date: ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:**

Quality Assurance:

Date Closed:

SM-119-Remedial PT Study

SM-PTX558

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 02/20/2019 - Closed: 03/20/2019 - Reports Printed On: 03/20/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCO-003B Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX558

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B -- 2007	185	218	ug/kg	77.6 to 338	ACCEPT.	3/8/19	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B -- 2007	136	183	ug/kg	61.2 to 267	ACCEPT.	3/8/19	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B -- 2007	170	193	ug/kg	53.2 to 321	ACCEPT.	3/8/19	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B -- 2007	147	247	ug/kg	74.6 to 333	ACCEPT.	3/8/19	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B -- 2007	340	429	ug/kg	137 to 599	ACCEPT.	3/8/19	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	180	239	ug/kg	66.4 to 342	ACCEPT.	3/8/19	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	118	122	ug/kg	25.1 to 191	ACCEPT.	3/8/19	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B -- 2007	85.0	99.9	ug/kg	31.8 to 144	ACCEPT.	3/8/19	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B -- 2007	394	478	ug/kg	180 to 682	ACCEPT.	3/8/19	RDK
7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	252	245	ug/kg	82.9 to 389	ACCEPT.	3/8/19	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	280	259	ug/kg	61.3 to 411	ACCEPT.	3/8/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	114	141	ug/kg	44.6 to 187	ACCEPT.	3/8/19	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	117	162	ug/kg	13.3 to 255	ACCEPT.	3/8/19	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	348	457	ug/kg	149 to 661	ACCEPT.	3/8/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	71.8	89.0	ug/kg	25.5 to 130	ACCEPT.	3/8/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	87.2	109	ug/kg	43.3 to 175	ACCEPT.	3/8/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	159	163	ug/kg	19.3 to 367	ACCEPT.	3/8/19	RDK

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

This PT report shall only be reproduced in full. This report shall not be used to claim approval, certification or endorsement by NSI Lab Solutions. This report has been released only to entities requested by the participant. This report is held in confidence by NSI Lab Solutions with additional reports available by written request of participant.

Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

UST-094

Fall, 2018

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-094 - Shipped: 10/23/2018 - Closed: 12/06/2018 - Reports Printed On: 12/27/2018
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

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Attention: Kenneth Mueller
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LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

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1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-094

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	213	260	331	mg/kg	77.9	0.00 to 745	0.603	ACCEPT.	11/1/18	RKP

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-094

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	573	565	761	mg/kg	119	260 to 1260	0.0672	ACCEPT.	11/1/18	TKT

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

2019 PT Studies

WP-253

Winter, 2019

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-253 - Shipped: 01/15/2019 - Closed: 02/28/2019 - Reports Printed On: 03/06/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Kenneth Mueller, Quality Assurance Officer
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This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	48.5	47.3	47.5	mg/L	8.03	24.6 to 70.4	0.149	ACCEPT.	2/4/19	SEM
1555	CBOD	20135255	GALV	SM 5210 B - 2001	35.4	41.9	43.0	mg/L	9.18	18.8 to 67.2	0.708	ACCEPT.	2/11/19	AMW
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	109	75.2	76.7	mg/L	12.1	56.2 to 94.2	2.79	NOT ACCEPT.	2/1/19	VO
2040	TOC	20137615	TOC-IR	SM 5310 B 22nd ED 2011	28.4	29.0	30.3	mg/L	2.12	24.9 to 35.6	0.283	ACCEPT.	1/30/19	AMW
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	28.4	29.0	30.3	mg/L	2.12	24.9 to 35.6	0.283	ACCEPT.	1/30/19	AMW

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	70.0	69.8	78.6	mg/L	10.1	54.4 to 92.6	0.0198	ACCEPT.	2/1/19	SEM
1935	Total Recoverable Petroleum Hydrocarbons(TRPH)	-- Not Reported --												

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.679	0.777	0.791	mg/L	0.0819	0.514 to 1.07	1.20	ACCEPT.	2/7/19	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.347	0.415	0.400	mg/L	0.0648	0.250 to 0.550	1.05	ACCEPT.	2/7/19	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	3.00	1.74	1.69	mg/L	0.563	0.857 to 2.53	2.24	NOT ACCEPT.	1/24/19	AMW
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	3.00	1.74	1.69	mg/L	0.563	0.857 to 2.53	2.24	NOT ACCEPT.	1/24/19	AMW

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	2.11	1.97	2.01	mg/L	0.268	1.48 to 2.35	0.522	ACCEPT.	1/30/19	SEM

1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	2.19	1.97	2.01	mg/L	0.268	1.48 to 2.35	0.821	ACCEPT.	2/4/19	SEM
1945	Residual Free Chlorine	-- Not Reported --												

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	503	519	517	ug/L	23.1	411 to 624	0.693	ACCEPT.	2/5/19	JLH
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	503	519	517	ug/L	23.1	411 to 624	0.693	ACCEPT.	2/5/19	JLH
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	278	276	283	ug/L	19.7	220 to 336	0.102	ACCEPT.	2/5/19	JLH
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	278	276	283	ug/L	19.7	220 to 336	0.102	ACCEPT.	2/5/19	JLH
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	612	625	650	ug/L	34.1	548 to 744	0.381	ACCEPT.	2/5/19	JLH
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	612	625	650	ug/L	34.1	548 to 744	0.381	ACCEPT.	2/5/19	JLH
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1420	1566	1580	ug/L	68.5	1350 to 1820	2.13	ACCEPT.	2/5/19	JLH
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	1420	1566	1580	ug/L	68.5	1350 to 1820	2.13	ACCEPT.	2/5/19	JLH
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	231	228	233	ug/L	12.0	198 to 268	0.250	ACCEPT.	2/5/19	JLH
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	231	228	233	ug/L	12.0	198 to 268	0.250	ACCEPT.	2/5/19	JLH
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	168	180	183	ug/L	6.75	156 to 210	1.78	ACCEPT.	2/5/19	JLH
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	168	180	183	ug/L	6.75	156 to 210	1.78	ACCEPT.	2/5/19	JLH
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	246	249	250	ug/L	15.3	213 to 288	0.196	ACCEPT.	2/5/19	JLH
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	246	249	250	ug/L	15.3	213 to 288	0.196	ACCEPT.	2/5/19	JLH
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	324	333	333	ug/L	14.3	283 to 383	0.629	ACCEPT.	2/5/19	JLH
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	324	333	333	ug/L	14.3	283 to 383	0.629	ACCEPT.	2/5/19	JLH
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	386	367	367	ug/L	19.3	312 to 422	0.984	ACCEPT.	2/5/19	JLH
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	386	367	367	ug/L	19.3	312 to 422	0.984	ACCEPT.	2/5/19	JLH

1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	2020	1951	1980	ug/L	100	1690 to 2280	0.690	ACCEPT.	2/5/19	JLH
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	2020	1951	1980	ug/L	100	1690 to 2280	0.690	ACCEPT.	2/5/19	JLH
1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	157	151	150	ug/L	8.84	128 to 173	0.679	ACCEPT.	2/5/19	JLH
1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	157	151	150	ug/L	8.84	128 to 173	0.679	ACCEPT.	2/5/19	JLH
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1220	1235	1250	ug/L	74.3	1060 to 1440	0.202	ACCEPT.	2/5/19	JLH
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	1220	1235	1250	ug/L	74.3	1060 to 1440	0.202	ACCEPT.	2/5/19	JLH
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	530	550	550	ug/L	24.2	478 to 616	0.826	ACCEPT.	2/5/19	JLH
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	530	550	550	ug/L	24.2	478 to 616	0.826	ACCEPT.	2/5/19	JLH
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	895	885	900	ug/L	106	792 to 1010	0.0943	ACCEPT.	2/5/19	JLH
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	895	885	900	ug/L	106	792 to 1010	0.0943	ACCEPT.	2/5/19	JLH
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	304	309	317	ug/L	18.2	269 to 365	0.275	ACCEPT.	2/5/19	JLH
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	304	309	317	ug/L	18.2	269 to 365	0.275	ACCEPT.	2/5/19	JLH
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	525	555	567	ug/L	49.5	482 to 652	0.606	ACCEPT.	2/5/19	JLH
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	525	555	567	ug/L	49.5	482 to 652	0.606	ACCEPT.	2/5/19	JLH
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	141	148	150	ug/L	6.62	128 to 173	1.06	ACCEPT.	2/5/19	JLH
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	141	148	150	ug/L	6.62	128 to 173	1.06	ACCEPT.	2/5/19	JLH
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	391	382	383	ug/L	24.3	312 to 447	0.370	ACCEPT.	2/5/19	JLH
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	391	382	383	ug/L	24.3	312 to 447	0.370	ACCEPT.	2/5/19	JLH
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	781	813	833	ug/L	40.6	708 to 958	0.788	ACCEPT.	2/5/19	JLH
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	781	813	833	ug/L	40.6	708 to 958	0.788	ACCEPT.	2/5/19	JLH
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1500	1560	1580	ug/L	63.2	1350 to 1820	0.949	ACCEPT.	2/5/19	JLH
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	1500	1560	1580	ug/L	63.2	1350 to 1820	0.949	ACCEPT.	2/5/19	JLH

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	982	1059	1080	ug/L	96.7	758 to 1410	0.796	ACCEPT.	2/5/19	JLH
1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	982	1059	1080	ug/L	96.7	758 to 1410	0.796	ACCEPT.	2/5/19	JLH
1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	145	149	150	ug/L	8.36	128 to 173	0.478	ACCEPT.	2/5/19	JLH
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	145	149	150	ug/L	8.36	128 to 173	0.478	ACCEPT.	2/5/19	JLH

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105015	ISE	SM 4500-H+ B 22nd ED 2011	6.18	6.24	6.18	units	0.315	5.98 to 6.38	0.190	ACCEPT.	1/29/19	SEM
1900	pH	10244403	ISE	SW-846 9040C - 2002	6.18	6.24	6.18	units	0.315	5.98 to 6.38	0.190	ACCEPT.	1/29/19	SEM

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051212	GRAV	SM 2540 D-2011 2011	24.8	25.1	26.6	mg/L	2.95	18.1 to 32.4	0.102	ACCEPT.	2/4/19	AMW
1950	Total Solids	20049416	GRAV	SM 2540 B-2011 2011	366	388	365	mg/L	83.6	320 to 410	0.263	ACCEPT.	2/6/19	AMW

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	7.83	7.51	7.69	mg/L	1.01	3.67 to 10.9	0.317	ACCEPT.	1/30/19	VO

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 - 1994	6.46	6.69	6.60	ug/L	0.573	4.62 to 8.58	0.401	ACCEPT.	2/7/19	JLH
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	6.46	6.69	6.60	ug/L	0.573	4.62 to 8.58	0.401	ACCEPT.	2/7/19	JLH

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	16.5	16.2	16.9	NTU	2.13	14.1 to 19.8	0.141	ACCEPT.	1/29/19	SEM

2055	Turbidity	20042619	TURB	SM 2130 B 22nd Ed 2011	16.5	16.2	16.9	NTU	2.13	14.1 to 19.8	0.141	ACCEPT.	1/29/19	SEM

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	667	688	706	ug/L	129	594 to 809	0.163	ACCEPT.	1/25/19	AMW
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	667	688	706	ug/L	129	594 to 809	0.163	ACCEPT.	1/25/19	AMW

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.23	2.29	2.25	mg/L	0.121	1.92 to 2.58	0.496	ACCEPT.	1/22/19	AMS
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	2.23	2.29	2.25	mg/L	0.121	1.92 to 2.58	0.496	ACCEPT.	1/22/19	AMS

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	9.84	9.48	9.11	mg/L	0.745	7.78 to 10.5	0.483	ACCEPT.	1/22/19	AMS
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	9.84	9.48	9.11	mg/L	0.745	7.78 to 10.5	0.483	ACCEPT.	1/22/19	AMS

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1860	1842	1820	ug/L	63.8	1540 to 2090	0.282	ACCEPT.	2/6/19	JLH
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1860	1842	1820	ug/L	63.8	1540 to 2090	0.282	ACCEPT.	2/6/19	JLH

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	239	260	258	mg/L	63.7	185 to 303	0.330	ACCEPT.	2/6/19	AMW
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	239	260	258	mg/L	63.7	185 to 303	0.330	ACCEPT.	2/6/19	AMW

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	38.5	38.3	38.1	mg/L	2.67	32.8 to 43.6	0.0749	ACCEPT.	1/22/19	AMS
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	38.5	38.3	38.1	mg/L	2.67	32.8 to 43.6	0.0749	ACCEPT.	1/22/19	AMS
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	3.59	3.98	3.92	mg/L	0.226	3.18 to 4.49	1.73	ACCEPT.	1/30/19	AMS
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	3.59	3.98	3.92	mg/L	0.226	3.18 to 4.49	1.73	ACCEPT.	1/30/19	AMS
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	37.7	37.4	37.8	mg/L	3.73	30.2 to 45.4	0.0804	ACCEPT.	2/5/19	JLH
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	37.7	37.4	37.8	mg/L	3.73	30.2 to 45.4	0.0804	ACCEPT.	2/5/19	JLH
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	94.7	91.1	93.2	mg/L	6.04	74.6 to 112	0.596	ACCEPT.	2/5/19	JLH
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	94.7	91.1	93.2	mg/L	6.04	74.6 to 112	0.596	ACCEPT.	2/5/19	JLH
1610	Specific Conductance (at 25C)	20048413	COND	SM 2510 B 22nd Ed 2011	536	517	517	umhos/cm	41.8	465 to 569	0.455	ACCEPT.	1/25/19	AMW
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	536	517	517	umhos/cm	41.8	465 to 569	0.455	ACCEPT.	1/25/19	AMW
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	49.5	46.8	46.4	mg/L	3.00	38.1 to 53.2	0.900	ACCEPT.	1/22/19	AMS
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	49.5	46.8	46.4	mg/L	3.00	38.1 to 53.2	0.900	ACCEPT.	1/22/19	AMS
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	141	136	144	mg/L	25.7	122 to 166	0.195	ACCEPT.	2/12/19	SEM
1505	Total Alkalinity (CaCO3)	20045618	TITR	SM 2320 B-2011 2011	144	136	144	mg/L	25.7	122 to 166	0.311	ACCEPT.	2/1/19	AMW
1955	Total Dissolved Solids (TDS)	20050424	GRAV	SM 2540 C 22nd Ed 2011	474	461	461	mg/L	33.6	415 to 507	0.387	ACCEPT.	2/6/19	AMW

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	25.4	26.2	26.6	mg/L	1.71	22.6 to 30.6	0.468	ACCEPT.	2/5/19	JLH
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	25.4	26.2	26.6	mg/L	1.71	22.6 to 30.6	0.468	ACCEPT.	2/5/19	JLH
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	62.4	68.1	66.4	mg/L	17.5	56.4 to 76.4	0.326	ACCEPT.	2/5/19	JLH
1550	Calcium Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	62.4	68.1	66.4	mg/L	17.5	56.4 to 76.4	0.326	ACCEPT.	2/5/19	JLH
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	62.4	68.1	66.4	mg/L	17.5	56.4 to 76.4	0.326	ACCEPT.	2/5/19	JLH
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	19.8	19.8	20.3	mg/L	1.16	17.3 to 23.3	0	ACCEPT.	2/5/19	JLH

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	19.8	19.8	20.3	mg/L	1.16	17.3 to 23.3	0	ACCEPT.	2/5/19	JLH
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	144	146	150	mg/L	9.08	128 to 173	0.220	ACCEPT.	2/5/19	JLH
1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	144	146	150	mg/L	9.08	128 to 173	0.220	ACCEPT.	2/5/19	JLH
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	144	146	150	mg/L	9.08	128 to 173	0.220	ACCEPT.	2/5/19	JLH

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	12.4	11.3	11.3	mg/L	0.799	9.02 to 13.5	1.38	ACCEPT.	2/4/19	AMW
1515	Ammonia as N	20111211	AUTO	SM 4500-NH3 G 22nd ED 2011	12.2	11.3	11.3	mg/L	0.799	9.02 to 13.5	1.13	ACCEPT.	1/30/19	SEM
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	13.2	13.4	13.9	mg/L	1.86	11.6 to 16.2	0.108	ACCEPT.	1/30/19	AMS
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	13.2	13.4	13.9	mg/L	1.86	11.6 to 16.2	0.108	ACCEPT.	1/30/19	AMS
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	13.2	13.0	13.9	mg/L	2.65	11.6 to 16.1	0.0755	ACCEPT.	1/30/19	AMS
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	13.2	13.0	13.9	mg/L	2.65	11.6 to 16.1	0.0755	ACCEPT.	1/30/19	AMS
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	2.04	2.22	2.22	mg/L	0.181	1.89 to 2.55	0.994	ACCEPT.	1/30/19	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	2.04	2.22	2.22	mg/L	0.181	1.89 to 2.55	0.994	ACCEPT.	1/30/19	AMS

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	2.95	3.32	3.38	mg/L	0.326	2.78 to 3.95	1.13	ACCEPT.	2/5/19	AMS
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	2.95	3.32	3.38	mg/L	0.326	2.78 to 3.95	1.13	ACCEPT.	2/5/19	AMS
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8885	Arochlor 1221	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK

8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8890	Arochlor 1232	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8895	Arochlor 1242	10103603	GC-ECD	EPA 608	7.68	7.21	7.92	ug/L	1.09	2.89 to 10.7	0.431	ACCEPT.	1/23/19	RDK
8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	7.68	7.21	7.92	ug/L	1.09	2.89 to 10.7	0.431	ACCEPT.	1/23/19	RDK
8900	Arochlor 1248	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8905	Arochlor 1254	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8910	Arochlor 1260	10103603	GC-ECD	EPA 608	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8912	Arochlor 1262	10103603	GC-ECD	EPA 608	<0.750	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	<0.750	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8913	Arochlor 1268	10103603	GC-ECD	EPA 608	<0.750	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	<0.750	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10107401	GC-MS	EPA 625	119	106	135	ug/L	19.0	49.5 to 166	0.684	ACCEPT.	1/24/19	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	119	106	135	ug/L	19.0	49.5 to 166	0.684	ACCEPT.	1/24/19	GJP
6840	2,4,6-Trichlorophenol	10107401	GC-MS	EPA 625	67.1	59.2	75.6	ug/L	9.68	28.4 to 92.3	0.816	ACCEPT.	1/24/19	GJP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	67.1	59.2	75.6	ug/L	9.68	28.4 to 92.3	0.816	ACCEPT.	1/24/19	GJP
6000	2,4-Dichlorophenol	10107401	GC-MS	EPA 625	71.1	68.8	91.9	ug/L	11.5	30.8 to 110	0.200	ACCEPT.	1/24/19	GJP
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	71.1	68.8	91.9	ug/L	11.5	30.8 to 110	0.200	ACCEPT.	1/24/19	GJP
6130	2,4-Dimethylphenol	10107401	GC-MS	EPA 625	166	153	183	ug/L	26.3	50.6 to 227	0.494	ACCEPT.	1/24/19	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	166	153	183	ug/L	26.3	50.6 to 227	0.494	ACCEPT.	1/24/19	GJP
6175	2,4-Dinitrophenol	10107401	GC-MS	EPA 625	98.0	119	134	ug/L	28.6	13.4 to 185	0.734	ACCEPT.	1/29/19	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	98.0	119	134	ug/L	28.6	13.4 to 185	0.734	ACCEPT.	1/29/19	GJP
6005	2,6-Dichlorophenol	10107401	GC-MS	EPA 625	143	136	182	ug/L	32.6	55.0 to 226	0.215	ACCEPT.	1/24/19	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	143	136	182	ug/L	32.6	55.0 to 226	0.215	ACCEPT.	1/24/19	GJP
5800	2-Chlorophenol	10107401	GC-MS	EPA 625	57.4	65.1	93.4	ug/L	24.9	27.0 to 112	0.309	ACCEPT.	1/24/19	GJP

5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	57.4	65.1	93.4	ug/L	24.9	27.0 to 112	0.309	ACCEPT.	1/24/19	GJP
6360	2-Methyl-4,6-Dinitrophenol	10107401	GC-MS	EPA 625	87.6	118	129	ug/L	27.1	40.9 to 176	1.12	ACCEPT.	1/24/19	GJP
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	87.6	118	129	ug/L	27.1	40.9 to 176	1.12	ACCEPT.	1/24/19	GJP
6400	2-Methylphenol	10107401	GC-MS	EPA 625	37.7	40.5	57.8	ug/L	6.90	13.5 to 69.8	0.406	ACCEPT.	1/24/19	GJP
6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	37.7	40.5	57.8	ug/L	6.90	13.5 to 69.8	0.406	ACCEPT.	1/24/19	GJP
6490	2-Nitrophenol	10107401	GC-MS	EPA 625	66.6	68.3	89.2	ug/L	14.8	27.8 to 111	0.115	ACCEPT.	1/24/19	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	66.6	68.3	89.2	ug/L	14.8	27.8 to 111	0.115	ACCEPT.	1/24/19	GJP
5700	4-Chloro-3-methylphenol	10107401	GC-MS	EPA 625	134	132	173	ug/L	19.1	65.2 to 213	0.105	ACCEPT.	1/24/19	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	134	132	173	ug/L	19.1	65.2 to 213	0.105	ACCEPT.	1/24/19	GJP
6410	4-Methylphenol	10107401	GC-MS	EPA 625	49.2	58.8	85.9	ug/L	10.8	8.59 to 112	0.889	ACCEPT.	1/24/19	GJP
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	49.2	58.8	85.9	ug/L	10.8	8.59 to 112	0.889	ACCEPT.	1/24/19	GJP
6500	4-Nitrophenol	10107401	GC-MS	EPA 625	67.4	96.8	189	ug/L	29.6	18.9 to 252	0.993	ACCEPT.	1/24/19	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	67.4	96.8	189	ug/L	29.6	18.9 to 252	0.993	ACCEPT.	1/24/19	GJP
6605	Pentachlorophenol	10107401	GC-MS	EPA 625	60.7	55.9	62.4	ug/L	11.9	18.3 to 85.8	0.403	ACCEPT.	1/29/19	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	60.7	55.9	62.4	ug/L	11.9	18.3 to 85.8	0.403	ACCEPT.	1/29/19	GJP
6625	Phenol	10107401	GC-MS	EPA 625	53.9	70.9	172	ug/L	25.3	17.2 to 229	0.672	ACCEPT.	1/24/19	GJP
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	53.9	70.9	172	ug/L	25.3	17.2 to 229	0.672	ACCEPT.	1/24/19	GJP
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10103603	GC-ECD	EPA 608	9.15	11.9	11.5	ug/L	2.88	4.76 to 15.6	0.955	ACCEPT.	1/31/19	TKT
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	9.15	11.9	11.5	ug/L	2.88	4.76 to 15.6	0.955	ACCEPT.	1/31/19	TKT

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10103603	GC-ECD	EPA 608	31.9	31.9	35.9	ug/L	5.03	7.95 to 53.8	0	ACCEPT.	1/31/19	TKT
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	31.9	31.9	35.9	ug/L	5.03	7.95 to 53.8	0	ACCEPT.	1/31/19	TKT

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	6.41	4.62	6.00	ug/L	1.93	1.28 to 8.75	0.927	ACCEPT.	1/23/19	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	3.45	1.93	2.57	ug/L	0.835	0.257 to 4.20	1.82	ACCEPT.	1/23/19	RDK
8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	8.75	6.05	8.01	ug/L	2.64	1.91 to 11.2	1.02	ACCEPT.	1/23/19	RDK
8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	8.40	6.74	8.03	ug/L	2.42	1.87 to 11.8	0.686	ACCEPT.	1/23/19	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/23/19	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1950	2663	3850	ug/L	981	973 to 4830	0.727	ACCEPT.	1/24/19	BDA

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	747	1047	1250	ug/L	455	411 to 2240	0.659	ACCEPT.	2/5/19	RKP

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10107207	GC-MS	EPA 624	44.4	44.2	44.3	ug/L	3.69	28.8 to 59.7	0.0542	ACCEPT.	2/6/19	DAR
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	44.4	44.2	44.3	ug/L	3.69	28.8 to 59.7	0.0542	ACCEPT.	2/6/19	DAR
5160	1,1,1-Trichloroethane	10107207	GC-MS	EPA 624	31.3	32.6	33.4	ug/L	3.60	20.0 to 46.7	0.361	ACCEPT.	2/6/19	DAR
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	31.3	32.6	33.4	ug/L	3.60	20.0 to 46.7	0.361	ACCEPT.	2/6/19	DAR
5110	1,1,2,2-Tetrachloroethane	10107207	GC-MS	EPA 624	143	134	136	ug/L	14.5	88.2 to 183	0.621	ACCEPT.	2/6/19	DAR
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	143	134	136	ug/L	14.5	88.2 to 183	0.621	ACCEPT.	2/6/19	DAR
5165	1,1,2-Trichloroethane	10107207	GC-MS	EPA 624	55.7	54.0	55.3	ug/L	3.28	38.7 to 71.9	0.518	ACCEPT.	2/6/19	DAR

5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	55.7	54.0	55.3	ug/L	3.28	38.7 to 71.9	0.518	ACCEPT.	2/6/19	DAR
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	134	128	142	ug/L	19.1	67.3 to 212	0.314	ACCEPT.	2/6/19	DAR
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	134	128	142	ug/L	19.1	67.3 to 212	0.314	ACCEPT.	2/6/19	DAR
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	<4.30	99.3	122	ug/L	32.2	54.8 to 165	n/a	NOT ACCEPT.	2/6/19	DAR
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<4.30	99.3	122	ug/L	32.2	54.8 to 165	n/a	NOT ACCEPT.	2/6/19	DAR
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	14.2	18.7	14.0	ug/L	23.7	9.07 to 18.8	0.190	ACCEPT.	2/6/19	DAR
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	14.2	18.7	14.0	ug/L	23.7	9.07 to 18.8	0.190	ACCEPT.	2/6/19	DAR
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	50.3	50.8	56.4	ug/L	7.37	36.7 to 76.1	0.0678	ACCEPT.	2/6/19	DAR
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	50.3	50.8	56.4	ug/L	7.37	36.7 to 76.1	0.0678	ACCEPT.	2/6/19	DAR
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	134	135	139	ug/L	14.6	87.4 to 189	0.0685	ACCEPT.	2/6/19	DAR
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	134	135	139	ug/L	14.6	87.4 to 189	0.0685	ACCEPT.	2/6/19	DAR
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	120	124	127	ug/L	29.1	72.7 to 183	0.137	ACCEPT.	2/6/19	DAR
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	120	124	127	ug/L	29.1	72.7 to 183	0.137	ACCEPT.	2/6/19	DAR
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	<9.00	0.00	<9	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	39.9	40.1	42.1	ug/L	3.25	29.5 to 54.8	0.0615	ACCEPT.	2/6/19	DAR
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	39.9	40.1	42.1	ug/L	3.25	29.5 to 54.8	0.0615	ACCEPT.	2/6/19	DAR
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	<10.6	0.00	<10.6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.6	0.00	<10.6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	92.0	88.2	91.8	ug/L	6.62	64.3 to 119	0.574	ACCEPT.	2/6/19	DAR
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	92.0	88.2	91.8	ug/L	6.62	64.3 to 119	0.574	ACCEPT.	2/6/19	DAR
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	102	108	120	ug/L	8.47	83.9 to 156	0.708	ACCEPT.	2/6/19	DAR
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	102	108	120	ug/L	8.47	83.9 to 156	0.708	ACCEPT.	2/6/19	DAR
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	51.2	55.3	55.7	ug/L	13.0	39.0 to 72.4	0.315	ACCEPT.	2/6/19	DAR
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	51.2	55.3	55.7	ug/L	13.0	39.0 to 72.4	0.315	ACCEPT.	2/6/19	DAR
4410	2-Butanone	10107207	GC-MS	EPA 624	<25.0	0.00	<17	ug/L	0.00	0.00 to 17.0	n/a	ACCEPT.	2/6/19	DAR
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0.00	<17	ug/L	0.00	0.00 to 17.0	n/a	ACCEPT.	2/6/19	DAR
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM

4860	2-Hexanone	10107207	GC-MS	EPA 624	137	122	126	ug/L	27.5	62.0 to 188	0.545	ACCEPT.	2/6/19	DAR
4860	2-Hexanone	10184802	GC-MS	SW-846 8260B - 1996	137	122	126	ug/L	27.5	62.0 to 188	0.545	ACCEPT.	2/6/19	DAR
4995	4-Methyl-2-pentanone	10107207	GC-MS	EPA 624	68.5	63.3	64.8	ug/L	12.6	33.2 to 94.6	0.413	ACCEPT.	2/6/19	DAR
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846 8260B - 1996	68.5	63.3	64.8	ug/L	12.6	33.2 to 94.6	0.413	ACCEPT.	2/6/19	DAR
4315	Acetone	10107207	GC-MS	EPA 624	145	162	176	ug/L	37.7	47.1 to 271	0.451	ACCEPT.	2/6/19	DAR
4315	Acetone	10184802	GC-MS	SW-846 8260B - 1996	145	162	176	ug/L	37.7	47.1 to 271	0.451	ACCEPT.	2/6/19	DAR
4325	Acrolein	10107207	GC-MS	EPA 624	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
4325	Acrolein	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
4340	Acrylonitrile	10107207	GC-MS	EPA 624	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4340	Acrylonitrile	10184802	GC-MS	SW-846 8260B - 1996	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4375	Benzene	10107207	GC-MS	EPA 624	80.1	82.0	81.2	ug/L	7.15	56.8 to 106	0.266	ACCEPT.	2/6/19	DAR
4375	Benzene	10184802	GC-MS	SW-846 8260B - 1996	80.1	82.0	81.2	ug/L	7.15	56.8 to 106	0.266	ACCEPT.	2/6/19	DAR
4395	Bromodichloromethane	10107207	GC-MS	EPA 624	30.2	29.8	32.4	ug/L	2.36	19.4 to 45.3	0.169	ACCEPT.	2/6/19	DAR
4395	Bromodichloromethane	10184802	GC-MS	SW-846 8260B - 1996	30.2	29.8	32.4	ug/L	2.36	19.4 to 45.3	0.169	ACCEPT.	2/6/19	DAR
4400	Bromoform	10107207	GC-MS	EPA 624	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4400	Bromoform	10184802	GC-MS	SW-846 8260B - 1996	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4950	Bromomethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4950	Bromomethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4450	Carbon disulfide	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4450	Carbon disulfide	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4455	Carbon tetrachloride	10107207	GC-MS	EPA 624	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4455	Carbon tetrachloride	10184802	GC-MS	SW-846 8260B - 1996	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4475	Chlorobenzene	10107207	GC-MS	EPA 624	<7.00	0.00	<7.0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4475	Chlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<7.00	0.00	<7.0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4485	Chloroethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4485	Chloroethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4505	Chloroform	10107207	GC-MS	EPA 624	<7.00	0.00	<7	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4505	Chloroform	10184802	GC-MS	SW-846 8260B - 1996	<7.00	0.00	<7	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4960	Chloromethane	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4960	Chloromethane	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4645	cis-1,2-Dichloroethene	10107207	GC-MS	EPA 624	134	130	137	ug/L	16.9	91.7 to 181	0.237	ACCEPT.	2/6/19	DAR
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846	134	130	137	ug/L	16.9	91.7 to 181	0.237	ACCEPT.	2/6/19	DAR

				8260B - 1996										
4680	cis-1,3-Dichloropropene	10107207	GC-MS	EPA 624	18.9	18.1	19.6	ug/L	1.84	12.7 to 26.4	0.435	ACCEPT.	2/6/19	DAR
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846	18.9	18.1	19.6	ug/L	1.84	12.7 to 26.4	0.435	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4575	Dibromochloromethane	10107207	GC-MS	EPA 624	64.2	60.8	66.6	ug/L	5.52	39.9 to 93.2	0.616	ACCEPT.	2/6/19	DAR
4575	Dibromochloromethane	10184802	GC-MS	SW-846	64.2	60.8	66.6	ug/L	5.52	39.9 to 93.2	0.616	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4595	Dibromomethane	10107207	GC-MS	EPA 624	80.3	85.7	82.8	ug/L	9.27	53.8 to 112	0.583	ACCEPT.	2/6/19	DAR
4595	Dibromomethane	10184802	GC-MS	SW-846	80.3	85.7	82.8	ug/L	9.27	53.8 to 112	0.583	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4625	Dichlorodifluoromethane	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4765	Ethylbenzene	10107207	GC-MS	EPA 624	56.5	56.1	55.8	ug/L	4.28	39.1 to 72.5	0.0935	ACCEPT.	2/6/19	DAR
4765	Ethylbenzene	10184802	GC-MS	SW-846	56.5	56.1	55.8	ug/L	4.28	39.1 to 72.5	0.0935	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4585	Ethylene dibromide	10107207	GC-MS	EPA 624	32.7	35.4	34.8	ug/L	6.85	22.6 to 47.0	0.394	ACCEPT.	2/6/19	DAR
4585	Ethylene dibromide	10184802	GC-MS	SW-846	32.7	35.4	34.8	ug/L	6.85	22.6 to 47.0	0.394	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4975	Methylene chloride	10107207	GC-MS	EPA 624	96.6	100	98.5	ug/L	8.31	59.1 to 138	0.409	ACCEPT.	2/6/19	DAR
4975	Methylene chloride	10184802	GC-MS	SW-846	96.6	100	98.5	ug/L	8.31	59.1 to 138	0.409	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5000	MTBE	10107207	GC-MS	EPA 624	147	143	148	ug/L	14.4	100 to 201	0.278	ACCEPT.	2/6/19	DAR
5000	MTBE	10184802	GC-MS	SW-846	147	143	148	ug/L	14.4	100 to 201	0.278	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5005	Naphthalene	10107207	GC-MS	EPA 624	<6.30	0.00	<6.3	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5005	Naphthalene	10184802	GC-MS	SW-846	<6.30	0.00	<6.3	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5100	Styrene	10107207	GC-MS	EPA 624	<13.0	0.00	<13	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5100	Styrene	10184802	GC-MS	SW-846	<13.0	0.00	<13	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5115	Tetrachloroethene	10107207	GC-MS	EPA 624	138	133	148	ug/L	15.1	85.3 to 193	0.331	ACCEPT.	2/6/19	DAR
5115	Tetrachloroethene	10184802	GC-MS	SW-846	138	133	148	ug/L	15.1	85.3 to 193	0.331	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5140	Toluene	10107207	GC-MS	EPA 624	18.1	17.9	18.4	ug/L	1.84	12.9 to 24.0	0.109	ACCEPT.	2/6/19	DAR
5140	Toluene	10184802	GC-MS	SW-846	18.1	17.9	18.4	ug/L	1.84	12.9 to 24.0	0.109	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5240	m+p-Xylene	10107207	GC-MS	EPA 624	41.4	42.2	44.0	ug/L	4.02	26.4 to 61.6	0.199	ACCEPT.	2/6/19	DAR
5240	m+p-Xylene	10184802	GC-MS	SW-846	41.4	42.2	44.0	ug/L	4.02	26.4 to 61.6	0.199	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5250	o-Xylene	10107207	GC-MS	EPA 624	53.8	55.0	56.9	ug/L	4.73	34.1 to 79.6	0.254	ACCEPT.	2/6/19	DAR
5250	o-Xylene	10184802	GC-MS	SW-846	53.8	55.0	56.9	ug/L	4.73	34.1 to 79.6	0.254	ACCEPT.	2/6/19	DAR
				8260B - 1996										
5260	Total Xylenes	10107207	GC-MS	EPA 624	95.2	95.7	101	ug/L	7.47	60.5 to 141	0.0669	ACCEPT.	2/6/19	DAR
5260	Total Xylenes	10184802	GC-MS	SW-846	95.2	95.7	101	ug/L	7.47	60.5 to 141	0.0669	ACCEPT.	2/6/19	DAR
				8260B - 1996										
4700	trans-1,2-Dichloroethene	10107207	GC-MS	EPA 624	71.0	70.1	70.1	ug/L	13.2	42.1 to 98.2	0.0682	ACCEPT.	2/6/19	DAR

4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	71.0	70.1	70.1	ug/L	13.2	42.1 to 98.2	0.0682	ACCEPT.	2/6/19	DAR
4685	trans-1,3-Dichloropropene	10107207	GC-MS	EPA 624	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW-846 8260B - 1996	<6.50	0.00	<6.5	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5170	Trichloroethene	10107207	GC-MS	EPA 624	23.4	25.9	23.1	ug/L	9.43	14.6 to 31.0	0.265	ACCEPT.	2/6/19	DAR
5170	Trichloroethene	10184802	GC-MS	SW-846 8260B - 1996	23.4	25.9	23.1	ug/L	9.43	14.6 to 31.0	0.265	ACCEPT.	2/6/19	DAR
5175	Trichlorofluoromethane	10107207	GC-MS	EPA 624	100	110	109	ug/L	32.2	43.6 to 174	0.311	ACCEPT.	2/6/19	DAR
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	100	110	109	ug/L	32.2	43.6 to 174	0.311	ACCEPT.	2/6/19	DAR
5225	Vinyl acetate	10107207	GC-MS	EPA 624	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
5235	Vinyl chloride	10107207	GC-MS	EPA 624	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	<8.00	0.00	<8	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107401	GC-MS	EPA 625	<5.00	0.00	<2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	<2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5795	2-Chloronaphthalene	10107401	GC-MS	EPA 625	34.0	31.6	44.0	ug/L	4.96	12.7 to 54.7	0.484	ACCEPT.	1/24/19	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	34.0	31.6	44.0	ug/L	4.96	12.7 to 54.7	0.484	ACCEPT.	1/24/19	GJP
4610	1,2-Dichlorobenzene	10107401	GC-MS	EPA 625	<5.00	0.00	<2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	<2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6220	1,2-Diphenylhydrazine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
4615	1,3-Dichlorobenzene	10107401	GC-MS	EPA 625	92.5	94.4	134	ug/L	22.7	13.4 to 156	0.0837	ACCEPT.	1/24/19	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	92.5	94.4	134	ug/L	22.7	13.4 to 156	0.0837	ACCEPT.	1/24/19	GJP
4620	1,4-Dichlorobenzene	10107401	GC-MS	EPA 625	41.7	41.4	63.9	ug/L	9.69	6.95 to 72.7	0.0310	ACCEPT.	1/24/19	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	41.7	41.4	63.9	ug/L	9.69	6.95 to 72.7	0.0310	ACCEPT.	1/24/19	GJP
6185	2,4-Dinitrotoluene	10107401	GC-MS	EPA 625	46.3	41.2	49.5	ug/L	11.3	18.3 to 63.9	0.451	ACCEPT.	1/24/19	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	46.3	41.2	49.5	ug/L	11.3	18.3 to 63.9	0.451	ACCEPT.	1/24/19	GJP

6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	41.9	33.1	44.3	ug/L	7.59	18.0 to 53.9	1.16	ACCEPT.	1/24/19	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	41.9	33.1	44.3	ug/L	7.59	18.0 to 53.9	1.16	ACCEPT.	1/24/19	GJP
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	111	101	151	ug/L	17.3	39.5 to 176	0.578	ACCEPT.	1/24/19	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	111	101	151	ug/L	17.3	39.5 to 176	0.578	ACCEPT.	1/24/19	GJP
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/29/19	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/29/19	GJP
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	129	119	147	ug/L	19.7	53.2 to 179	0.508	ACCEPT.	1/24/19	GJP
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	129	119	147	ug/L	19.7	53.2 to 179	0.508	ACCEPT.	1/24/19	GJP
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5500	Acenaphthene	10107401	GC-MS	EPA 625	142	124	177	ug/L	28.8	61.8 to 214	0.625	ACCEPT.	1/24/19	GJP
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	142	124	177	ug/L	28.8	61.8 to 214	0.625	ACCEPT.	1/24/19	GJP
5505	Acenaphthylene	10107401	GC-MS	EPA 625	36.4	39.3	42.0	ug/L	28.3	14.4 to 52.5	0.102	ACCEPT.	1/24/19	GJP
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	36.4	39.3	42.0	ug/L	28.3	14.4 to 52.5	0.102	ACCEPT.	1/24/19	GJP
5545	Aniline	10107401	GC-MS	EPA 625	46.8	0.00	0	ug/L	0.00	0.00	n/a	NOT ACCEPT.	1/24/19	GJP
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	46.8	0.00	0	ug/L	0.00	0.00	n/a	NOT ACCEPT.	1/24/19	GJP
5555	Anthracene	10107401	GC-MS	EPA 625	75.4	70.2	87.0	ug/L	8.29	37.0 to 106	0.627	ACCEPT.	1/24/19	GJP
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	75.4	70.2	87.0	ug/L	8.29	37.0 to 106	0.627	ACCEPT.	1/24/19	GJP
5595	Benzidine	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	119	121	155	ug/L	39.1	74.5 to 186	0.0512	ACCEPT.	1/24/19	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	119	121	155	ug/L	39.1	74.5 to 186	0.0512	ACCEPT.	1/24/19	GJP

5580	Benzo(a)pyrene	10107401	GC-MS	EPA 625	84.1	89.6	109	ug/L	15.4	39.6 to 139	0.357	ACCEPT.	1/24/19	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	84.1	89.6	109	ug/L	15.4	39.6 to 139	0.357	ACCEPT.	1/24/19	GJP
5585	Benzo(b)fluoranthene	10107401	GC-MS	EPA 625	<7.50	0.00	<7.5	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.50	0.00	<7.5	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5590	Benzo(g,h,i)perylene	10107401	GC-MS	EPA 625	91.3	98.1	115	ug/L	19.5	42.9 to 151	0.349	ACCEPT.	1/24/19	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	91.3	98.1	115	ug/L	19.5	42.9 to 151	0.349	ACCEPT.	1/24/19	GJP
5600	Benzo(k)fluoranthene	10107401	GC-MS	EPA 625	64.4	57.1	72.0	ug/L	14.8	17.6 to 105	0.493	ACCEPT.	1/24/19	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	64.4	57.1	72.0	ug/L	14.8	17.6 to 105	0.493	ACCEPT.	1/24/19	GJP
5630	Benzyl alcohol	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5760	bis(2-Chloroethoxy)methane	10107401	GC-MS	EPA 625	98.4	78.8	94.5	ug/L	13.4	33.9 to 111	1.46	ACCEPT.	1/24/19	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	98.4	78.8	94.5	ug/L	13.4	33.9 to 111	1.46	ACCEPT.	1/24/19	GJP
5765	bis(2-Chloroethyl)ether	10107401	GC-MS	EPA 625	<5.90	0.00	<5.9	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	<5.90	0.00	<5.9	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
4659	2,2-Oxybis(1-chloropropane)	10107401	GC-MS	EPA 625	120	101	140	ug/L	20.4	40.2 to 167	0.931	ACCEPT.	1/24/19	GJP
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	120	101	140	ug/L	20.4	40.2 to 167	0.931	ACCEPT.	1/24/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10107401	GC-MS	EPA 625	41.3	38.3	45.2	ug/L	8.37	14.2 to 63.8	0.358	ACCEPT.	1/24/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	41.3	38.3	45.2	ug/L	8.37	14.2 to 63.8	0.358	ACCEPT.	1/24/19	GJP
5670	Butyl benzyl phthalate	10107401	GC-MS	EPA 625	138	117	143	ug/L	28.1	43.0 to 196	0.747	ACCEPT.	1/24/19	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	138	117	143	ug/L	28.1	43.0 to 196	0.747	ACCEPT.	1/24/19	GJP
5680	Carbazole	10107401	GC-MS	EPA 625	82.8	77.3	82.4	ug/L	15.1	8.24 to 90.6	0.364	ACCEPT.	1/24/19	GJP
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	82.8	77.3	82.4	ug/L	15.1	8.24 to 90.6	0.364	ACCEPT.	1/24/19	GJP
5855	Chrysene	10107401	GC-MS	EPA 625	<5.80	0.00	<5.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	<5.80	0.00	<5.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5895	Dibenzo(a,h)anthracene	10107401	GC-MS	EPA 625	83.4	92.4	110	ug/L	18.0	39.1 to 143	0.500	ACCEPT.	1/24/19	GJP
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	83.4	92.4	110	ug/L	18.0	39.1 to 143	0.500	ACCEPT.	1/24/19	GJP
5905	Dibenzofuran	10107401	GC-MS	EPA 625	38.2	35.1	45.9	ug/L	5.18	17.6 to 55.9	0.598	ACCEPT.	1/24/19	GJP
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	38.2	35.1	45.9	ug/L	5.18	17.6 to 55.9	0.598	ACCEPT.	1/24/19	GJP
6070	Diethyl phthalate	10107401	GC-MS	EPA 625	82.1	74.1	85.6	ug/L	11.4	15.1 to 120	0.702	ACCEPT.	1/24/19	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	82.1	74.1	85.6	ug/L	11.4	15.1 to 120	0.702	ACCEPT.	1/24/19	GJP

6135	Dimethyl phthalate	10107401	GC-MS	EPA 625	93.1	77.6	95.1	ug/L	18.4	9.51 to 139	0.842	ACCEPT.	1/24/19	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	93.1	77.6	95.1	ug/L	18.4	9.51 to 139	0.842	ACCEPT.	1/24/19	GJP
5925	Di-n-butyl phthalate	10107401	GC-MS	EPA 625	<15.8	0.00	<15.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<15.8	0.00	<15.8	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6200	Di-n-octyl phthalate	10107401	GC-MS	EPA 625	108	111	143	ug/L	17.6	42.3 to 198	0.170	ACCEPT.	1/29/19	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	108	111	143	ug/L	17.6	42.3 to 198	0.170	ACCEPT.	1/29/19	GJP
6265	Fluoranthene	10107401	GC-MS	EPA 625	<15.6	0.00	<15.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<15.6	0.00	<15.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6270	Fluorene	10107401	GC-MS	EPA 625	149	141	185	ug/L	22.7	76.8 to 212	0.352	ACCEPT.	1/24/19	GJP
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	149	141	185	ug/L	22.7	76.8 to 212	0.352	ACCEPT.	1/24/19	GJP
6275	Hexachlorobenzene	10107401	GC-MS	EPA 625	138	122	153	ug/L	22.9	68.4 to 183	0.699	ACCEPT.	1/24/19	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	138	122	153	ug/L	22.9	68.4 to 183	0.699	ACCEPT.	1/24/19	GJP
4835	Hexachlorobutadiene	10107401	GC-MS	EPA 625	98.6	97.9	122	ug/L	25.5	14.4 to 144	0.0275	ACCEPT.	1/24/19	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	98.6	97.9	122	ug/L	25.5	14.4 to 144	0.0275	ACCEPT.	1/24/19	GJP
6285	Hexachlorocyclopentadiene	10107401	GC-MS	EPA 625	<5.00	0.00	<5	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	<5	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
4840	Hexachloroethane	10107401	GC-MS	EPA 625	121	115	191	ug/L	28.8	19.1 to 210	0.208	ACCEPT.	1/24/19	GJP
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	121	115	191	ug/L	28.8	19.1 to 210	0.208	ACCEPT.	1/24/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10107401	GC-MS	EPA 625	40.6	44.6	47.8	ug/L	9.27	14.2 to 63.8	0.431	ACCEPT.	1/24/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	40.6	44.6	47.8	ug/L	9.27	14.2 to 63.8	0.431	ACCEPT.	1/24/19	GJP
6320	Isophorone	10107401	GC-MS	EPA 625	126	85.6	111	ug/L	18.5	40.6 to 138	2.18	ACCEPT.	1/24/19	GJP
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	126	85.6	111	ug/L	18.5	40.6 to 138	2.18	ACCEPT.	1/24/19	GJP
5005	Naphthalene	10107401	GC-MS	EPA 625	31.2	28.9	41.7	ug/L	5.60	9.77 to 53.6	0.411	ACCEPT.	1/24/19	GJP
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	31.2	28.9	41.7	ug/L	5.60	9.77 to 53.6	0.411	ACCEPT.	1/24/19	GJP
5015	Nitrobenzene	10107401	GC-MS	EPA 625	<6.20	0.00	<6.2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	<6.20	0.00	<6.2	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6530	N-Nitrosodimethylamine	10107401	GC-MS	EPA 625	43.2	42.5	81.6	ug/L	19.5	8.16 to 97.9	0.0359	ACCEPT.	1/24/19	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	43.2	42.5	81.6	ug/L	19.5	8.16 to 97.9	0.0359	ACCEPT.	1/24/19	GJP
6545	N-Nitrosodi-n-propylamine	10107401	GC-MS	EPA 625	84.7	76.4	96.4	ug/L	13.3	31.3 to 121	0.624	ACCEPT.	1/24/19	GJP
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846 8270C - 1996	84.7	76.4	96.4	ug/L	13.3	31.3 to 121	0.624	ACCEPT.	1/24/19	GJP
6535	N-Nitrosodiphenylamine	10107401	GC-MS	EPA 625	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP

6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846 8270C - 1996	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6615	Phenanthrene	10107401	GC-MS	EPA 625	66.2	58.6	69.8	ug/L	7.97	32.6 to 84.9	0.954	ACCEPT.	1/24/19	GJP
6615	Phenanthrene	10185805	GC-MS	SW-846 8270C - 1996	66.2	58.6	69.8	ug/L	7.97	32.6 to 84.9	0.954	ACCEPT.	1/24/19	GJP
6665	Pyrene	10107401	GC-MS	EPA 625	80.0	77.8	90.9	ug/L	10.1	37.3 to 119	0.218	ACCEPT.	1/24/19	GJP
6665	Pyrene	10185805	GC-MS	SW-846 8270C - 1996	80.0	77.8	90.9	ug/L	10.1	37.3 to 119	0.218	ACCEPT.	1/24/19	GJP
5095	Pyridine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5095	Pyridine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												
6420	1,4-Naphthoquinone	-- Not Reported --												
6425	1-Naphthylamine	-- Not Reported --												
6430	2-Naphthylamine	-- Not Reported --												
6510	4-Nitroquinoline-1-oxide	-- Not Reported --												
6555	N-Nitrosomorpholine	-- Not Reported --												

6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
7065	Atrazine	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10103603	GC-ECD	EPA 608	5.52	6.83	7.99	ug/L	0.915	2.83 to 10.8	1.43	ACCEPT.	1/31/19	TKT
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	5.52	6.83	7.99	ug/L	0.915	2.83 to 10.8	1.43	ACCEPT.	1/31/19	TKT
7110	alpha-BHC	10103603	GC-ECD	EPA 608	12.5	12.5	15.0	ug/L	1.15	6.63 to 20.4	0	ACCEPT.	2/7/19	TKT
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	12.5	12.5	15.0	ug/L	1.15	6.63 to 20.4	0	ACCEPT.	2/7/19	TKT
7115	beta-BHC	10103603	GC-ECD	EPA 608	5.31	4.72	5.28	ug/L	0.557	2.48 to 7.30	1.06	ACCEPT.	1/31/19	TKT
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	5.31	4.72	5.28	ug/L	0.557	2.48 to 7.30	1.06	ACCEPT.	1/31/19	TKT
7355	4,4'-DDD	10103603	GC-ECD	EPA 608	2.70	2.59	2.65	ug/L	0.279	0.991 to 4.00	0.394	ACCEPT.	1/31/19	TKT

7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	2.70	2.59	2.65	ug/L	0.279	0.991 to 4.00	0.394	ACCEPT.	1/31/19	TKT
7360	4,4'-DDE	10103603	GC-ECD	EPA 608	8.07	7.61	8.49	ug/L	0.761	3.68 to 11.4	0.604	ACCEPT.	2/7/19	TKT
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	8.07	7.61	8.49	ug/L	0.761	3.68 to 11.4	0.604	ACCEPT.	2/7/19	TKT
7365	4,4'-DDT	10103603	GC-ECD	EPA 608	4.04	4.54	4.94	ug/L	0.579	1.96 to 7.14	0.864	ACCEPT.	1/31/19	TKT
7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	4.04	4.54	4.94	ug/L	0.579	1.96 to 7.14	0.864	ACCEPT.	1/31/19	TKT
7105	delta-BHC	10103603	GC-ECD	EPA 608	5.57	5.06	5.65	ug/L	0.643	2.42 to 7.99	0.793	ACCEPT.	1/31/19	TKT
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	5.57	5.06	5.65	ug/L	0.643	2.42 to 7.99	0.793	ACCEPT.	1/31/19	TKT
7470	Dieldrin	10103603	GC-ECD	EPA 608	5.85	6.97	7.83	ug/L	0.708	3.99 to 10.4	1.58	ACCEPT.	1/31/19	TKT
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	5.85	6.97	7.83	ug/L	0.708	3.99 to 10.4	1.58	ACCEPT.	1/31/19	TKT
7510	Endosulfan I	10103603	GC-ECD	EPA 608	5.43	6.13	6.98	ug/L	0.722	2.60 to 9.42	0.970	ACCEPT.	1/31/19	TKT
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	5.43	6.13	6.98	ug/L	0.722	2.60 to 9.42	0.970	ACCEPT.	1/31/19	TKT
7515	Endosulfan II	10103603	GC-ECD	EPA 608	4.53	4.64	5.05	ug/L	0.527	1.99 to 7.06	0.209	ACCEPT.	1/31/19	TKT
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	4.53	4.64	5.05	ug/L	0.527	1.99 to 7.06	0.209	ACCEPT.	1/31/19	TKT
7520	Endosulfan sulfate	10103603	GC-ECD	EPA 608	12.1	10.9	12.2	ug/L	0.820	5.66 to 16.8	1.46	ACCEPT.	2/7/19	TKT
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	12.1	10.9	12.2	ug/L	0.820	5.66 to 16.8	1.46	ACCEPT.	2/7/19	TKT
7540	Endrin	10103603	GC-ECD	EPA 608	7.00	8.23	9.38	ug/L	1.33	4.12 to 13.3	0.925	ACCEPT.	1/31/19	TKT
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	7.00	8.23	9.38	ug/L	1.33	4.12 to 13.3	0.925	ACCEPT.	1/31/19	TKT
7530	Endrin aldehyde	10103603	GC-ECD	EPA 608	4.22	5.29	5.76	ug/L	0.705	2.10 to 8.76	1.52	ACCEPT.	1/31/19	TKT
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	4.22	5.29	5.76	ug/L	0.705	2.10 to 8.76	1.52	ACCEPT.	1/31/19	TKT
7120	gamma-BHC	10103603	GC-ECD	EPA 608	7.19	8.17	9.08	ug/L	0.897	4.03 to 12.5	1.09	ACCEPT.	1/31/19	TKT
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	7.19	8.17	9.08	ug/L	0.897	4.03 to 12.5	1.09	ACCEPT.	1/31/19	TKT
7685	Heptachlor	10103603	GC-ECD	EPA 608	4.65	5.77	6.83	ug/L	0.832	2.44 to 9.22	1.35	ACCEPT.	1/31/19	TKT
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	4.65	5.77	6.83	ug/L	0.832	2.44 to 9.22	1.35	ACCEPT.	1/31/19	TKT
7690	Heptachlor epoxide	10103603	GC-ECD	EPA 608	3.20	3.73	4.17	ug/L	0.431	2.07 to 5.59	1.23	ACCEPT.	1/31/19	TKT
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	3.20	3.73	4.17	ug/L	0.431	2.07 to 5.59	1.23	ACCEPT.	1/31/19	TKT
7810	Methoxychlor	10103603	GC-ECD	EPA 608	2.17	2.23	2.20	ug/L	0.467	0.630 to 3.94	0.128	ACCEPT.	1/31/19	TKT
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	2.17	2.23	2.20	ug/L	0.467	0.630 to 3.94	0.128	ACCEPT.	1/31/19	TKT
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-253

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	77.4	73.3	73.2	ng/L	3.53	55.5 to 90.0	1.16	ACCEPT.	2/26/19	JLH

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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WP-253

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 702 /PAR)

Client: Fibertec WP-253 **Project/Document Control Number:** 88652

Sample Number(s): 001 **Date Initiated:** 3/19/19 **Date Due:** 4/5/19

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

COD failed on the PT sample. The reported result of 109 mg/L was outside of the acceptance limits. The assigned value was 76.7 mg/L, the study mean was 75.2 mg/L and the acceptance range was 56.2 to 94.2 mg/L. Please investigate the cause for this failure and provide a corrective action that will prevent this from occurring in the future.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The initial PT was higher than the accepted range. The PT value being at the low end of the High Range may have influenced the sample result. When first analyzed on the High Range the sample result came out at 109mg/L, which is the lower end of the high range (20-1650 mg/L). This lower end of the range is encompassed by the Low Range COD Vials (3-150mg/L). The result being on the extreme end of calibration may have caused the reading to be less accurate than if it was in the upper half of the range. Upon reanalysis of the PT sample after failure, using the Low Range Vials, the result was found to be acceptable, at 78mg/L. This result is in the middle of the calibration for the low range.

Investigator(s): Vedad Omerovic

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

All samples in future, if found to be on the extreme end of a COD calibration range, will be reanalyzed using a different vial range if necessary, or with a different dilution. If any samples are analyzed on the High Range and fall into the overlapping range of the COD Vials, will be reanalyzed on the Low Range to ensure that the result is in the middle or upper half of the calibration.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: either remedial PT passes ***Follow-Up Complete:*** ***Yes*** ☑ ***No*** ☐

VI. Approvals:

Technical : [signature] **Supervisory:** [signature]

Quality Assurance: [signature]

Date Closed: 10/8/19

PrepMaster Batch Report

Samples and Dilutions included in this Batch

Prep Batch: **PW19C27B**

Department: **Wet Chemistry** Procedure: **COD-LR Digestion, Liquid**

Date: **03/27/19** Procedure Code: **COD01L00**

Standard(s)

	Description:	Lot Number/ID:
1	SPK [100_uL]	W-017505

Consumables

	Description:	Lot Number/ID:
1	COD-LR Vials	A7265D

	Prep ID:	Source ID (Vial):	Initial Mass/Vol: (gram or mL)		Final Vol: (mL)	Current Prep Factor:	Overall Prep Factor*:	Wet Weight?	Comment:
1	88652-001.07	88652-001 (1)	2	mL	2	1.00	1.00	No	COD*****
2	89594-009D.01	89594-009D (1)	2	mL	2	1.00	1.00	No	COD*****
3	89594-010D.01	89594-010D (1)	2	mL	2	1.00	1.00	No	COD*****
4	89594-011D.02	89594-011D (1)	2	mL	2	1.00	1.00	No	COD*****
5	89594-011D.01	89594-011D (1)	2	mL	2	1.00	1.00	No	COD*****

*Overall prep factor based on current prep factor multiplied by the source prep factor. D - Indicates Dilution

DCSID: G-6016.4 (08/14/18)

PW19C27B

Fibertec environmental services

FOR LABORATORY USE ONLY

Batch ID: PW19C27
Page: 1 of 1
Date: 03/27/19

Quality Control Report
Preparation Batch QC Summary
Ultraviolet-Visible Spectroscopy
Aqueous

Preparation Batch: PW19C27B **Preparation Date: 03/27/19**

	Method Blank (MB)			Laboratory Control Sample (LCS)					LCS Duplicate (LCD)				Run Code		
Parameter	Result µg/L	PQL µg/L	Q	Result µg/L	Spike µg/L	Rec. %	LCL - UCL %	Q	Rec. %	RPD %	UCL %	Q	MB	LCS	LCD
1. CQD	U	3,000		54,000	50,000	108	90 - 110		94	14	20		MB-1	LCS-1	LCD-1

Definitions/ Qualifiers:

U: The analyte was not detected at or above the PQL.
*: Value reported is outside QC limits

Run Code (Analysis Sequence/Run Time):

MB-1	WF19C27B	03/27/19 14:44
LCS-1	WF19C27B	03/27/19 14:46
LCD-1	WF19C27B	03/27/19 14:47

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:

Vedad O

By Vedad Omerovic at 3:11 PM, Mar 27, 2019

1914 Holloway Drive, Holt, MI 48842, T: (517) 699-0345, F: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116, T: (810) 220-3300, F: (810) 220-3311
8660 S. Mackinaw Trail, Cadillac, MI 49601, T: (231) 775-8368, F: (231) 775-8584
lab@fibertec.us

Department: Wet Chemistry

Analysis: COD Low-Range (3-150 mg/L)

Method Ref.: HACH 8000

Calibration Range: 3 - 150mg/L

Analysis Batch: WF19C27B

Matrix Type: Liquid

Analyst/Date: Vecfac O 3/27/19

Review/Date: 3/29/19

LCS Spike Conc: 50 mg/L

Control Limits: 90 - 110%

Sample ID	Initial Volume (mL)	Final Volume (mL)	Dilution Factor	Instr. Reading (mg/L)	Final Value (mg/L)	LCS Eval.	Analyst:	Run Time:	Comments:
1 . PW19C27B.MB	2	2	1	0	0		VO	03/27/19 14:44	
2 . PW19C27B.LCS	2	2	1	54	54	108% P	VO	03/27/19 14:46	
3 . PW19C27B.LCD	2	2	1	47	47		VO	03/27/19 14:47	
4 . 88652-001.07	2	2	1	78	78		VO	03/27/19 14:47	
5 . 89594-009D.01	2	2	1	24	24		VO	03/27/19 14:47	
6 . 89594-010D.01	2	2	1	12	12		VO	03/27/19 14:48	
7 . 89594-011D.01	2	2	1	26	26		VO	03/27/19 14:48	
8 . 89594-011D.02	2	2	1	21	21		VO	03/27/19 14:48	
9 . CCB	2	2	1	0	0		VO	03/27/19 14:49	
10 . CCV	2	2	1	54	54		VO	03/27/19 14:50	

*Initial and final volumes imported from preparation data.

(Report printed on 03/27/19 14:51 by vomerovic)

QCI-026B Demand - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	61.0	62.3	mg/L	43.9 to 78.1	ACCEPT.	5/24/19	VO

QCI-032B Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM

QCO-120B Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624 1984	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 703 /PAR)

Client: Fibertec WP-253 **Project/Document Control Number:** 88652

Sample Number(s): 008 **Date Initiated:** 3/19/19 **Date Due:** 4/5/19

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Total Phenolics failed on the PT sample. The reported result of 3.00 mg/L was outside of the acceptance limits. The assigned value was 1.69 mg/L, the study mean was 1.74 mg/L and the acceptance range was 0.857 to 2.53 mg/L. Please investigate the cause for this failure and provide a corrective action that will prevent this from occurring in the future.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The original PT sample for Total Phenolics was ran on the AquaKem and it had be having problems around the time the PT was analyzed. The QC for that batch and calibration were fine so it was assumed that the sample was in range. The PT was repreped and reanalyized manually using the spectrophotometer. The PT is now in the accepted range with a final result of 1.870 mg/L.

Investigator(s): Alicia Warren

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Total Phenolics will now be done using the spectophotometer instead of on the AquaKem. This will allow us to have confidence in the results we get.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☑ CAR will be closed upon successful analysis of a remedial PT

Follow-Up Date: ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:**

Quality Assurance:

Date Closed: 10/8/19

PrepMaster Batch Report

Samples and Dilutions included in this Batch

Prep Batch: **PW19C26A**

Department: **Wet Chemistry** Procedure: **Phenolics Prep (DA), Liquid**

Date: **03/26/19** Procedure Code: **PHL00L00**

Reagent(s)

	Description:	Lot Number/ID:
1	Copper Sulfate	W-017639
2	4-AAP	W-017640
3	Potass. Ferricyanide	W-017641
4	Buffer	W-017642
5	Phosphoric Acid	38756

Standard(s)

	Description:	Lot Number/ID:
1	Phenolics SPK [1.25 mL]	W-017733
2	Phenolics CAL	W-017734

	Prep ID:	Source ID (Vial):	Initial Mass/Vol: (gram or mL)		Final Vol: (mL)	Current Prep Factor:	Overall Prep Factor*:	Wet Weight?	Comment:
1	88652-008.03	88652-008 (1)	10	mL	50	5.00	5.00	No	PHENOLIC
2	89509-002B.02	89509-002B (1)	50	mL	50	1.00	1.00	No	PHENOLIC PHENOLIC
3	89509-002B.01	89509-002B (1)	50	mL	50	1.00	1.00	No	PHENOLIC
4	89509-004B.01	89509-004B (1)	50	mL	50	1.00	1.00	No	PHENOLIC
5	89535-002B.01	89535-002B (1)	50	mL	50	1.00	1.00	No	PHENOLIC

*Overall prep factor based on current prep factor multiplied by the source prep factor. D - Indicates Dilution

DCSID: G-6016.4 (08/14/18)

PW19C26A

Phenolics-Aqueous

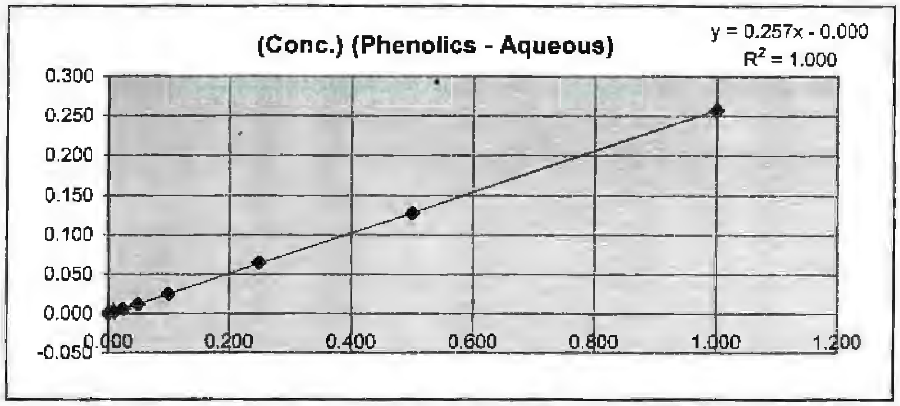
Preparation Method:	EPA 420.1	Analysis Method:	EPA 420.1
Prep Batch ID:	W219C27C-PHL	Batch Number:	W219C27C-PHL
Prep. Date:	3/26/19	Analysis Dete:	03/27/19
Prep Analyst:	AW	Analyst:	AW

PQL: 0.010 mg/L PQL Test: 0.009 OK

Calibration Curve Data

Cal Level	Conc. (mg/L)	Abs. 510 nm
1	0.000	0.000
2	0.010	0.002
3	0.025	0.006
4	0.050	0.012
5	0.100	0.026
6	0.250	0.065
7	0.500	0.128
8	1.000	0.257

R^2	Slope	Intercept
1.0000	0.2573	-0.0002



Quality Control Sample Data

Sample Identification	$Vol._{Initial}$ (mL)	$Vol._{Final}$ (mL)	ABS	Raw Conc. (mg/L)	Final Result (mg/L)	Spike (mg/L)	QC Eval.
MB	25	25	0.000	0.001	<0.010	---	---
LCS	25	25	0.062	0.242	0.242	0.250	97%
LCD	25	25	0.065	0.254	0.254	0.250	102%

Matrix Quality Control Sample Data

Sample Identification for Matrix QC: 89509-002B

Sample Identification	$Vol._{Initial}$ (mL)	$Vol._{Final}$ (mL)	ABS	Raw Conc. (mg/L)	Bench Dilution	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	QC Eval.
MS	25.0	25	0.073	0.285	1.0	1.00	0.285	0.250	98%

Enter "CCV" or "CCB" for continuing calibration verification and blanks

Sample Identification	$Vol._{Initial}$ (mL)	$Vol._{Final}$ (mL)	ABS	Raw Conc. (mg/L)	Bench Dilution	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	QC Eval.
89509-002B	25.0	25.0	0.010	0.040	1.0	1.0	0.040	---	---
89509-004B	25.0	25.0	0.026	0.102	1.0	1.0	0.102	---	---
89535-002B	25.0	25.0	0.011	0.044	1.0	1.0	0.044	---	---
88652-008	10.0	50.0	0.096	0.374	1.0	5.0	1.870	---	---
CCV	25.0	25.0	0.062	0.242	1.0	1.0	0.242	0.250	97%
CCB	25.0	25.0	0.000	0.001	1.0	1.0	<0.010	---	---
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		25.0						---	---

Definitions

* Recovery Exceeds control limts

DCSID: W-475.0 (06/30/16)

Alicia Warren 3/27/19
Analyst Approval/Date

[signature] 3/27/19
Review Approval/Date

Fibertec
environmental
services

Quality Control Summary
Wet Chemistry Department
Phenolics - Aqueous
Analysis Batch: W219C27C-PHL
Analysis Date: 03/27/19

Method Blank (MB)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phenolics	U	0.010	

Laboratory Control Sample (LCS)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phenolics	0	0.250	97	90-110	

Laboratory Control Sample Duplicate (LCD)

	Parameter	Spike (mg/L)	LCD % Rec	LCS % Rec	RPD (%)	UCL (%)	Q
1.	Sulfide	0.250	102	97	5	20	

MB/LCS/LCD Exception Summary

Method Blank

No exceptions noted.

Laboratory Control Sample

No exceptions noted.

Laboratory Control Sample Duplicate

No target parameter recovery exceptions noted.
No target parameter RPD exceptions noted.

Parent Sample (89509-002B) (DF=1.00)

	Parameter	Result (mg/L)	PQL (mg/L)	Q
1.	Phenolics	0.040	0.010	

Matrix Spike (MS) (DF=1.00)

	Parameter	Result (mg/L)	Spike (mg/L)	Rec %	LCL - UCL %	Q
1.	Phenolics	0.285	0.250	98	80-120	

Matrix Spike Duplicate (MSD) (DF=0.000)

	Parameter	Spike (mg/L)	MSD % Rec	MS % Rec	RPD (%)	UCL (%)	Q
1.	Phenolics	0.250	-16	98	278	20	*

PQL = Practical Quantitation Limit RPD = Relative Percent Difference DF = Dilution Factor

U = Result below PQL * = Exceeds control limits.

E = The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.

J = The concentration is an estimated value.

Alicia Warren 3/27/1
Laboratory Approval/Date

Sue McKee 3/27/1
Quality Assurance Review/Date

W219C27C-PHL

Cal	Conc.	Abs
1	0.000	0.000
2	0.010	0.002
3	0.025	0.006
4	0.050	0.012
5	0.100	0.026
6	0.250	0.065
7	0.500	0.128
8	1.000	0.257

$r^2 = 1.0000$

PQL = 0.009

Prep batch
PW19C26A

Sample	Vol(i)	Vol(f)	Abs
MB	25	25	0.000
LCS	25	25	0.062
LCD	25	25	0.065
89509-002B	25	25	0.010
89509-004B	25	25	0.026
89585-002B	25	25	0.011
88652-008 (PT rerun)	10	50	0.096
~~CCV~~ 89509-002B MS	25	25	0.073
NW 3/27/19 ~~CCB~~ CCV	25	25	0.062
CCB	25	25	0.000

Alicia Warren 3/27/19

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	58.7	74.1	76.8	mg/L	14.9	40.8 to 113	1.03	ACCEPT.	8/21/19	SEM
1555	CBOD	20135255	GALV	SM 5210 B - 2001	53.3	72.6	69.6	mg/L	15.8	31.8 to 107	1.22	ACCEPT.	8/21/19	SEM
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	147	123	125	mg/L	19.9	97.5 to 148	1.21	ACCEPT.	7/26/19	CMB
2040	TOC	20137615	TOC-IR	SM 5310 B 22nd ED 2011	47.3	49.3	49.2	mg/L	6.60	41.0 to 57.0	0.303	ACCEPT.	8/6/19	CMB
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	47.3	49.3	49.2	mg/L	6.60	41.0 to 57.0	0.303	ACCEPT.	8/6/19	CMB

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	44.3	46.9	50.2	mg/L	6.65	32.3 to 61.2	0.391	ACCEPT.	7/30/19	AMS
1935	Total Recoverable Petroleum Hydrocarbons(TRPH)	-- Not Reported --												

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.765	0.949	0.896	mg/L	0.294	0.582 to 1.21	0.626	ACCEPT.	8/14/19	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.307	0.445	0.449	mg/L	0.0677	0.281 to 0.617	2.04	ACCEPT.	8/14/19	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.45	1.53	1.63	mg/L	0.219	0.827 to 2.44	0.365	ACCEPT.	7/26/19	AMS
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.45	1.53	1.63	mg/L	0.219	0.827 to 2.44	0.365	ACCEPT.	7/26/19	AMS

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	2.01	1.79	1.90	mg/L	0.298	1.40 to 2.23	0.738	ACCEPT.	8/22/19	AMW

QCI-026B Demand - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	61.0	62.3	mg/L	43.9 to 78.1	ACCEPT.	5/24/19	VO

QCI-032B Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM

QCO-120B Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624 1984	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Anelyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 704 /PAR)

Client: Fibertec WP-253 **Project/Document Control Number:** 88652

Sample Number(s): 024 **Date Initiated:** 3/19/19 **Date Due:** 4/5/19

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☑ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Aniline failed on the PT sample. The reported result of 46.8 ug/L was outside of the acceptance limits. The assigned value was 0.00 ug/L, the study mean was 0.00 ug/L and the acceptance range was 0.00 to 0.00 ug/L. Please investigate the cause for this failure and provide a corrective action that will prevent this from occurring in the future.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

After looking at the data, it was evident that the phenol peak had been quantified twice - once as phenol and once as aniline. It was decided that some additional training was needed on peak identification, specifically on aniline, and on checking retention times while reviewing data.

Investigator(s): BDA

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

The data file was pulled up on the instrument, and each analyst was told that one peak was mis-identified, and I wanted them to identify which peak. Each analyst individually looked at the data file, and identified the aniline peak as being incorrect. Training was conducted on proper peak identification. This included using the confirmatory ions to identify a peak, making sure that no peak is quantified twice, and also updating the retention times more often. (the retention times were off, so the peak ID line was directly over the peak when looking at aniline, and off the peak at phenol)

Follow-Up Required? (If required, reference this Report) *Yes* ☑ *No* ☐

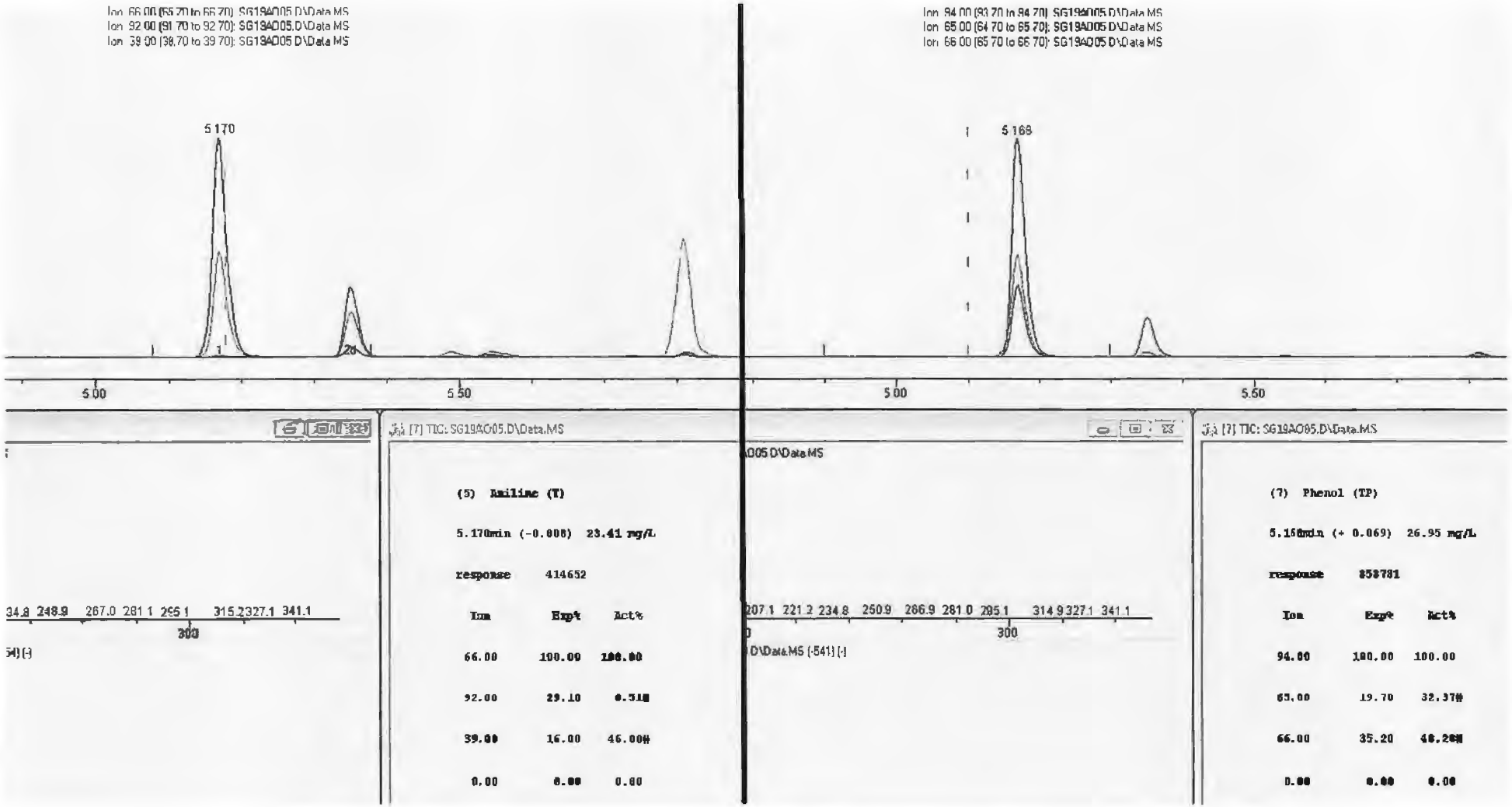
Follow-Up Date: when remedial PT passes ***Follow-Up Complete:*** *Yes* ☑ *No* ☐

VI. Approvals:

Technical : [signature] **Supervisory:** Bethany D. Arnett

Quality Assurance: [signature]

Date Closed: 10/8/19



Retention times were not updated recently - the peak ID line (the dotted line showing where the peak is expected to be) - looks better for aniline than phenol, which confused the analyst.

Training Documentation

OBJECTIVE: Proper peak identification on GC/MS

DATE: 4/12/19 **by whom:** Bethany Annett

Attendance

SIGN HERE		PRINT NAME HERE
[signature]	4-12-19	Terisa Talamantez
[signature]	4-12-19	Curt J. Payne
[signature]	4/12/19	Rhonda Penn
[signature]	4/12/19	RD Kubajd.

The above signatories agree to employ the information presented within this training.

DCSID: G-118.0 (07/24/12)

6190	2,6-Dinitrotoluene	10107401	GC-MS	EPA 625	41.9	33.1	44.3	ug/L	7.59	18.0 to 53.9	1.16	ACCEPT.	1/24/19	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	41.9	33.1	44.3	ug/L	7.59	18.0 to 53.9	1.16	ACCEPT.	1/24/19	GJP
6385	2-Methylnaphthalene	10107401	GC-MS	EPA 625	111	101	151	ug/L	17.3	39.5 to 176	0.578	ACCEPT.	1/24/19	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	111	101	151	ug/L	17.3	39.5 to 176	0.578	ACCEPT.	1/24/19	GJP
6460	2-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT	1/24/19	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6465	3-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5945	3,3'-Dichlorobenzidine	10107401	GC-MS	EPA 625	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5660	4-Bromophenyl phenyl ether	10107401	GC-MS	EPA 625	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	<8.60	0.00	<8.6	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5745	4-Chloroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0 00	n/a	ACCEPT.	1/29/19	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT	1/29/19	GJP
5825	4-Chlorophenyl phenyl ether	10107401	GC-MS	EPA 625	129	119	147	ug/L	19.7	53.2 to 179	0.508	ACCEPT.	1/24/19	GJP
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	129	119	147	ug/L	19.7	53.2 to 179	0.508	ACCEPT.	1/24/19	GJP
6470	4-Nitroaniline	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0 00	0.00	n/a	ACCEPT.	1/24/19	GJP
5500	Acenaphthene	10107401	GC-MS	EPA 625	142	124	177	ug/L	28.8	61.8 to 214	0.625	ACCEPT.	1/24/19	GJP
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	142	124	177	ug/L	28.8	61.8 to 214	0.625	ACCEPT.	1/24/19	GJP
5505	Acenaphthylene	10107401	GC-MS	EPA 625	36.4	39.3	42.0	ug/L	28.3	14.4 to 52.5	0.102	ACCEPT.	1/24/19	GJP
5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	36.4	39.3	42.0	ug/L	28.3	14.4 to 52.5	0.102	ACCEPT.	1/24/19	GJP
5545	Aniline	10107401	GC-MS	EPA 625	46.8	0.00	0	ug/L	0.00	0.00	n/a	NOT ACCEPT.	1/24/19	GJP
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	46.8	0.00	0	ug/L	0.00	0.00	n/a	NOT ACCEPT.	1/24/19	GJP
5555	Anthracene	10107401	GC-MS	EPA 625	75.4	70.2	87.0	ug/L	8.29	37.0 to 106	0.627	ACCEPT.	1/24/19	GJP
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	75.4	70.2	87.0	ug/L	8.29	37.0 to 106	0.627	ACCEPT.	1/24/19	GJP
5595	Benzidine	10107401	GC-MS	EPA 625	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	1/24/19	GJP
5575	Benzo(a)anthracene	10107401	GC-MS	EPA 625	119	121	155	ug/L	39.1	74.5 to 186	0.0512	ACCEPT.	1/24/19	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	119	121	155	ug/L	39.1	74 5 to 186	0.0512	ACCEPT.	1/24/19	GJP

Quantitation Report (QT Reviewed)

Data Path : C:\SG\SG_DATA\SG19A24a\
Data File : SG19A005.D
Acq On : 24 Jan 19 16:17
Operator :
Sample : 88652-024.01
Misc : pe a24b water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 24 18:10:00 2019
Quant Method : C:\SG\SG_METHOD\SGBNAA36.M
Quant Title :
QLast Update : Wed Jan 23 10:16:52 2019
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4(I)	5.543	152	349419	20.00	mg/L	0.01
19) Naphthalene-d8(I)	7.635	136	1363076	20.00	mg/L	0.03
41) Acenaphthene-d10(I)	12.201	164	718958	20.00	mg/L	0.01
63) Phenanthrene-d10(I)	14.978	188	1243317	20.00	mg/L	0.03
75) Chrysene-d12(I)	24.479	240	1333541	20.00	mg/L	0.05
82) Perylene-d12(I)	28.824	264	986690	20.00	mg/L	0.04
System Monitoring Compounds						
4) 2-Fluorophenol(S)	4.395	112	792775	36.82	mg/L	0.07
Spiked Amount 80.000	Range 22 - 85			Recovery	=	46.02%
6) Phenol-d6(S)	5.156	99	759160	26.71	mg/L	0.07
Spiked Amount 80.000	Range 11 - 60			Recovery	=	33.39%
31) 1-Fluoronaphthalene(S)	7.650	146	1703503	28.72	mg/L	0.03
Spiked Amount 40.000	Range 44 - 103			Recovery	=	71.80%
45) 2-Fluorobiphenyl(S)	10.999	172	1535826	31.76	mg/L	0.02
Spiked Amount 40.000	Range 44 - 109			Recovery	=	79.40%
62) 2,4,6-Tribromophenol(S)	13.495	330	328338m	89.15	mg/L	0.03
Spiked Amount 80.000	Range 38 - 138			Recovery	=	111.44%
77) 4-Terphenyl-d14(S)	20.784	244	2224227	40.15	mg/L	0.05
Spiked Amount 40.000	Range 44 - 124			Recovery	=	100.37%

Target Compounds (Multiplier applied to Results = NO)				ppb	Qvalue		Raw Result
2) N-Nitrosodimethylamine	3.311	74	325217m	21.58			21.58
5) Aniline	5.170	66	414652	23.41	#	40	23.41
7) Phenol	5.168	94	858781	26.95	#	76	26.95
9) 2-Chlorophenol	5.350	128	690524	28.71	#	80	28.71
10) 1,3-Dichlorobenzene	5.489	146	1236443	46.23		95	46.23
11) 1,4-Dichlorobenzene	5.563	146	559058	20.84		94	20.84
14) 2-Methylphenol	5.813	107	359586	18.83	#	46	18.83
15) Bis(2-chloroisopropyl)...	5.807	45	2264423	60.20	#	80	60.20
16) N-Nitrosodi-n-propylamine	5.981	70	892709	42.35	#	79	42.35
17) 3&4-Methylphenol	6.006	107	727750m	24.58			24.58
18) Hexachloroethane	6.208	117	612030	60.28	#	74	60.28
22) Isophorone	6.647	82	2610566	63.14		94	63.14
23) 2-Nitrophenol	6.812	139	418919	33.30		91	33.30
24) 2,4-Dimethylphenol	6.854	107	1963421	82.90	#	97	82.90
25) Bis(2-chloroethoxy)met...	6.992	93	1464017	49.21	#	75	49.21
26) 2,4-Dichlorophenol	7.325	162	622086	35.53		94	35.53
32) Naphthalene	7.689	128	1120573	15.59		98	15.59
35) 2,6-Dichlorophenol	7.838	162	1235342	71.56		94	71.56
37) Hexachlorobutadiene	7.978	225	673854	49.32		98	49.32
39) 4-Chloro-3-methylphenol	9.401	107	1538284	66.87		93	66.87
40) 2-Methylnaphthalene	9.943	142	2579541	55.63		98	55.63
43) 2,4,6-Trichlorophenol	10.828	196	380075	33.54		97	33.54
44) 2,4,5-Trichlorophenol	10.950	196	691569m	59.30			59.30
46) 2-Chloronaphthalene	11.246	162	722915	17.00		90	17.00
49) Dimethyl Phthalate	11.798	163	2160167	46.54		99	46.54
50) Acenaphthylene	11.984	152	1243942	18.20		100	18.20
51) 2,6-Dinitrotoluene	11.891	165	208223	20.96	#	79	20.96
52) Acenaphthene	12.255	153	3166978	71.05		97	71.05
53) 3-Nitroaniline	12.255	138	3114	0.29	#	7	0.29
54) 2,4-Dinitrophenol	12.321	184	148548	32.71	#	69	32.71
55) Dibenzofuran	12.515	168	1095326	19.12		88	19.12
56) 4-Nitrophenol	12.546	65	289827m	33.72			33.72
57) 2,4-Dinitrotoluene	12.511	165	326432	23.13	#	89	23.13
58) Fluorene	13.071	166	3378203	74.38		98	74.38
59) Diethyl Phthalate	12.879	149	2149420	41.06		99	41.06
60) 4-Chlorophenyl Phenyle...	13.061	204	1329138	64.27		90	64.27
61) 4-Nitroaniline	13.071	138	47589	5.55	#	1	5.55
64) 2-Methyl-4,6-dinitroph...	13.169	198	318051	43.81	#	86	43.81
65) N-Nitrosodiphenylamine	13.295	169	5501	0.17	#	1	0.17
68) Hexachlorobenzene	14.109	284	815664	68.96		98	68.96
69) Pentachlorophenol	14.564	266	78366m	15.76			15.76

Data Path : C:\SG\SG_DATA\SG19A24a\
Data File : SG19A005.D
Acq On : 24 Jan 19 16:17
Operator :
Sample : 88652-024.01
Misc : pe a24b water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 24 18:10:00 2019
Quant Method : C:\SG\SG_METHOD\SGBNAA36.M
Quant Title :
QLast Update : Wed Jan 23 10:16:52 2019
Response via : Initial Calibration

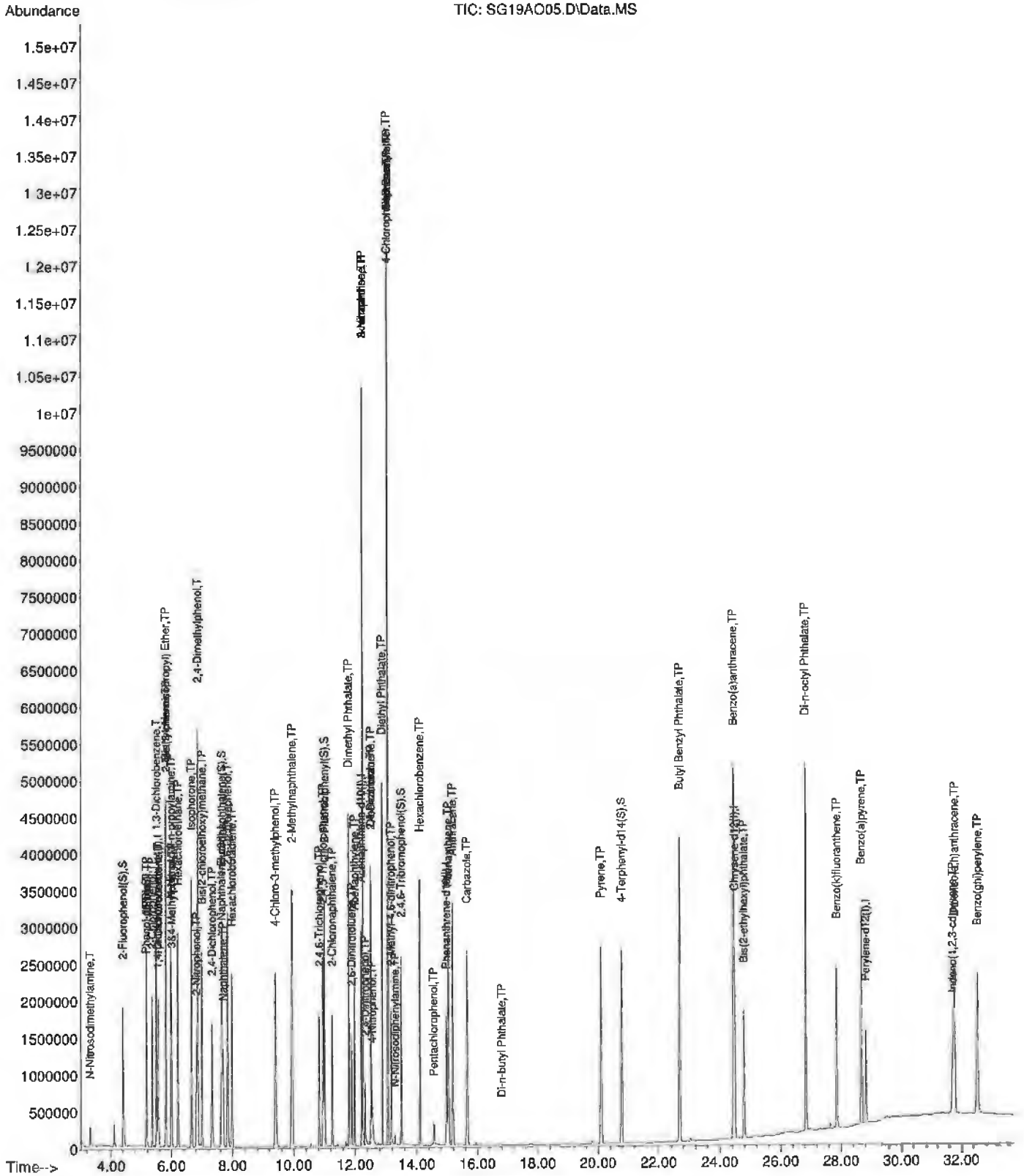
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)	
70) Phenanthrene	15.044	178	2064765	33.10			99	33.10
71) Anthracene	15.178	178	2438421	37.70			100	37.70
72) Carbazole	15.652	167	2321033	41.41			98	41.41
73) Di-n-butyl Phthalate	16.797	149	11140	0.14		#	90	0.14
76) Pyrene	20.100	202	2754238	40.02			100	40.02
78) Butyl Benzyl Phthalate	22.695	149	2432904	68.92			99	68.92
79) Benzo(a)anthracene	24.452	228	4687948	59.26			96	59.26
81) Bis(2-ethylhexyl)phtha...	24.783	149	1047995	20.64			92	20.64
83) Di-n-octyl Phthalate	26.832	149	5301986	70.73		#	89	70.73
85) Benzo(k)fluoranthene	27.860	252	1712190	32.20		#	95	32.20
86) Benzo(a)pyrene	28.679	252	2286106	42.03		#	79	42.03
87) Indeno(1,2,3-cd)pyrene	31.712	276	959290	20.30		#	59	20.30
88) Dibenzo(a,h)anthracene	31.772	278	2038665	41.70			96	41.70
89) Benzo(ghi)perylene	32.550	276	2153843	45.64		#	80	45.64

(#) = qualifier out of range (m) = manual integration (+) = signals summed
(OR) = >300 ppb epa.mac Rev 3.0 8.28.06 ATD

Quantitation Report (QT Reviewed)

Data Path : C:\SG\SG_DATA\SG19A24a\
Data File : SG19AO05.D
Acq On : 24 Jan 19 16:17
Operator :
Sample : 88652-024.01
Misc : pe a24b water
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 24 18:10:00 2019
Quant Method : C:\SG\SG_METHOD\SGBNAA36.M
Quant Title :
QLast Update : Wed Jan 23 10:16:52 2019
Response via : Initial Calibration



QCI-026B Demand - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	61.0	62.3	mg/L	43.9 to 78.1	ACCEPT.	5/24/19	VO

QCI-032B Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM

QCO-120B Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624 1984	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #. AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

				8260B - 1996									
5175	Trichlorofluoromethane	10298121	GC-MS	EPA 624.1 2016	61.8	53.9	66.4	ug/L	8.02	26.6 to 106	0.985	ACCEPT.	7/29/19	MAK
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	61.8	53.9	66.4	ug/L	8.02	26.6 to 106	0.985	ACCEPT.	7/29/19	MAK
5225	Vinyl acetate	10298121	GC-MS	EPA 624.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
5235	Vinyl chloride	10298121	GC-MS	EPA 624.1 2016	74.1	76.5	69.6	ug/L	8.75	27.9 to 111	0.274	ACCEPT.	7/29/19	MAK
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	74.1	76.5	69.6	ug/L	8.75	27.9 to 111	0.274	ACCEPT.	7/29/19	MAK
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10300024	GC-MS	EPA 625.1 2016	97.3	94.4	134	ug/L	13.0	26.4 to 157	0.223	ACCEPT.	8/9/19	GJP
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	97.3	94.4	134	ug/L	13.0	26.4 to 157	0.223	ACCEPT.	8/9/19	GJP
5795	2-Chloronaphthalene	10300024	GC-MS	EPA 625.1 2016	86.2	79.0	104	ug/L	7.12	28.6 to 123	1.01	ACCEPT.	8/9/19	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	86.2	79.0	104	ug/L	7.12	28.6 to 123	1.01	ACCEPT.	8/9/19	GJP
4610	1,2-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	77.2	71.3	104	ug/L	7.23	13.0 to 121	0.816	ACCEPT.	8/9/19	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	77.2	71.3	104	ug/L	7.23	13.0 to 121	0.816	ACCEPT.	8/9/19	GJP
6220	1,2-Diphenylhydrazine	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
4615	1,3-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	93.4	86.4	134	ug/L	11.3	13.4 to 156	0.619	ACCEPT.	8/9/19	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	93.4	86.4	134	ug/L	11.3	13.4 to 156	0.619	ACCEPT.	8/9/19	GJP
4620	1,4-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	47.0	44.4	69.1	ug/L	4.73	7.34 to 78.2	0.550	ACCEPT.	8/9/19	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	47.0	44.4	69.1	ug/L	4.73	7.34 to 78.2	0.550	ACCEPT.	8/9/19	GJP

5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	<2.90	0.00	<2.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5545	Aniline	10300024	GC-MS	EPA 625.1 2016	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5555	Anthracene	10300024	GC-MS	EPA 625.1 2016	76.8	70.8	85.5	ug/L	5.24	36.4 to 104	1.15	ACCEPT.	8/9/19	GJP
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	76.8	70.8	85.5	ug/L	5.24	36.4 to 104	1.15	ACCEPT.	8/9/19	GJP
5595	Benzidine	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5575	Benzo(a)anthracene	10300024	GC-MS	EPA 625.1 2016	62.8	68.7	74.7	ug/L	4.90	35.3 to 91.0	1.20	ACCEPT.	8/9/19	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	62.8	68.7	74.7	ug/L	4.90	35.3 to 91.0	1.20	ACCEPT.	8/9/19	GJP
5580	Benzo(a)pyrene	10300024	GC-MS	EPA 625.1 2016	120	128	170	ug/L	27.4	62.3 to 216	0.292	ACCEPT.	8/9/19	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	120	128	170	ug/L	27.4	62.3 to 216	0.292	ACCEPT.	8/9/19	GJP
5585	Benzo(b)fluoranthene	10300024	GC-MS	EPA 625.1 2016	129	129	139	ug/L	21.1	53.1 to 178	0	ACCEPT.	8/9/19	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	129	129	139	ug/L	21.1	53.1 to 178	0	ACCEPT.	8/9/19	GJP
5590	Benzo(g,h,i)perylene	10300024	GC-MS	EPA 625.1 2016	<5.10	0.00	<5.1	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	<5.10	0.00	<5.1	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5600	Benzo(k)fluoranthene	10300024	GC-MS	EPA 625.1 2016	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5630	Benzyl alcohol	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5760	bis(2-Chloroethoxy)methane	10300024	GC-MS	EPA 625.1 2016	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5765	bis(2-Chloroethyl)ether	10300024	GC-MS	EPA 625.1 2016	86.0	66.5	97.6	ug/L	23.4	25.3 to 118	0.833	ACCEPT.	8/9/19	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	86.0	66.5	97.6	ug/L	23.4	25.3 to 118	0.833	ACCEPT.	8/9/19	GJP

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 705 /PAR)

Client: Fibertec WP-253 **Project/Document Control Number:** 88652

Sample Number(s): 025 **Date Initiated:** 3/19/19 **Date Due:** 4/5/19

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☐ Wet Chemistry ☐ Metals ☐ Digestions ☑ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

1,2,4-Trichlorobenzene failed on the PT sample. The reported result of <4.30 ug/L was outside of the acceptance limits (see attached). The assigned value was 122 ug/L, the study mean was 99.3 ug/L and the acceptance range was 54.8 to 165 ug/L. Please investigate the cause for this failure and provide a corrective action that will prevent this from occurring in the future.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

See attached

Investigator(s): Liana Solis, Alex Bergeon

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

See attached

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☐

Follow-Up Date: 10/8/19 ***Follow-Up Complete:*** ***Yes*** ☑ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:** Alex Bergeon

Quality Assurance: Ken Mueller

Date Closed: 10/8/19

III. Investigation into Non-Conformance:

It was found that 1,2,4-Trichlorobenzene and 1,2,3-Trichlorobenzene has the same retention time in the method the PT sample ran under; causing 1,2,4-Trichlorobenzene to be missed. Upon looking at the current curve it was found that 1,2,3-Trichlorobenzene was selected as both 1,2,3-Trichlorobenzene and 1,2,4-Trichlorobenzene. Once the error was discovered all curves were looked at until the curve where the error originally occurred. The original curve was VBWATC24. The error was present in curves: VBWATC24, VBWATC26, VBWAT32, VBWAT34, VBWATC31, VBWATC30 VBWATC29. VBWATC28. VBWATC28, VBWATC27, VBWATC33, VBWATC35. All curves were re-worked up for ISSS and 1,2,4-Trichlorobenzene. All data that requested 1,2,4-Trichlorobenzene was redone for that compound only. The list of samples was then checked to see if 1,2,4-trichlorobenzene had been reported out. List of batches and sample numbers is attached.

IV. Corrective/Preventive Action Plan and/or Action Taken:

All samples where 1,2,4-Trichlorobenzene was requested by the client were re-evaluated for 1,2,4-Trichlorbenzene. None were found to have 1,2,4-Trichlorbenzene at a level that would effect client data. VBWATC36 was corrected for 1,2,4-Trichlorobenzene. All reworked curves are located with the parent curve. All reworked data will be stored together in boxes labeled 1,2,4-TCB approx "Date-Date". A new line has been added to the cal curve check lists stating "Verify retention times and check for duplications". Updated lists will be attached to this corrective action report.

5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	55.7	54.0	55.3	ug/L	3.28	38.7 to 71.9	0.518	ACCEPT.	2/6/19	DAR
5150	1,2,3-Trichlorobenzene	10107207	GC-MS	EPA 624	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
5180	1,2,3-Trichloropropane	10107207	GC-MS	EPA 624	134	128	142	ug/L	19.1	67.3 to 212	0.314	ACCEPT.	2/6/19	DAR
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	134	128	142	ug/L	19.1	67.3 to 212	0.314	ACCEPT.	2/6/19	DAR
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624	<4.30	99.3	122	ug/L	32.2	54.8 to 165	n/a	NOT ACCEPT.	2/6/19	DAR
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<4.30	99.3	122	ug/L	32.2	54.8 to 165	n/a	NOT ACCEPT.	2/6/19	DAR
5210	1,2,4-Trimethylbenzene	10107207	GC-MS	EPA 624	14.2	18.7	14.0	ug/L	23.7	9.07 to 18.8	0.190	ACCEPT.	2/6/19	DAR
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	14.2	18.7	14.0	ug/L	23.7	9.07 to 18.8	0.190	ACCEPT.	2/6/19	DAR
5215	1,3,5-Trimethylbenzene	10107207	GC-MS	EPA 624	50.3	50.8	56.4	ug/L	7.37	36.7 to 76.1	0.0678	ACCEPT.	2/6/19	DAR
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	50.3	50.8	56.4	ug/L	7.37	36.7 to 76.1	0.0678	ACCEPT.	2/6/19	DAR
4630	1,1-Dichloroethane	10107207	GC-MS	EPA 624	134	135	139	ug/L	14.6	87.4 to 189	0.0685	ACCEPT.	2/6/19	DAR
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	134	135	139	ug/L	14.6	87.4 to 189	0.0685	ACCEPT.	2/6/19	DAR
4640	1,1-Dichloroethene	10107207	GC-MS	EPA 624	120	124	127	ug/L	29.1	72.7 to 183	0.137	ACCEPT.	2/6/19	DAR
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	120	124	127	ug/L	29.1	72.7 to 183	0.137	ACCEPT.	2/6/19	DAR
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	<9.00	0.00	<9	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4610	1,2-Dichlorobenzene	10107207	GC-MS	EPA 624	39.9	40.1	42.1	ug/L	3.25	29.5 to 54.8	0.0615	ACCEPT.	2/6/19	DAR
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	39.9	40.1	42.1	ug/L	3.25	29.5 to 54.8	0.0615	ACCEPT.	2/6/19	DAR
4635	1,2-Dichloroethane	10107207	GC-MS	EPA 624	<10.6	0.00	<10.6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.6	0.00	<10.6	ug/L	0.00	0.00	n/a	ACCEPT.	2/6/19	DAR
4655	1,2-Dichloropropane	10107207	GC-MS	EPA 624	92.0	88.2	91.8	ug/L	6.62	64.3 to 119	0.574	ACCEPT.	2/6/19	DAR
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	92.0	88.2	91.8	ug/L	6.62	64.3 to 119	0.574	ACCEPT.	2/6/19	DAR
4615	1,3-Dichlorobenzene	10107207	GC-MS	EPA 624	102	108	120	ug/L	8.47	83.9 to 156	0.708	ACCEPT.	2/6/19	DAR
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	102	108	120	ug/L	8.47	83.9 to 156	0.708	ACCEPT.	2/6/19	DAR
4620	1,4-Dichlorobenzene	10107207	GC-MS	EPA 624	51.2	55.3	55.7	ug/L	13.0	39.0 to 72.4	0.315	ACCEPT.	2/6/19	DAR
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	51.2	55.3	55.7	ug/L	13.0	39.0 to 72.4	0.315	ACCEPT.	2/6/19	DAR
4410	2-Butanone	10107207	GC-MS	EPA 624	<25.0	0.00	<17	ug/L	0.00	0.00 to 17.0	n/a	ACCEPT.	2/6/19	DAR
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0.00	<17	ug/L	0.00	0.00 to 17.0	n/a	ACCEPT.	2/6/19	DAR
4500	2-Chloroethyl vinyl ether	10107207	GC-MS	EPA 624	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846 8250B - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	2/7/19	JLM

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☐ ADDITIONAL DOCUMENTATION ON BACK
☐ ADDITIONAL DOCUMENTATION ATTACHED

Volatiles Calibration Checklist
EPA 8260B, EPA 624.1 / EPA 5030A/C, EPA 5035A
GC/MS

Cal Curve ID:_____

Acceptance criteria are found in the applicable laboratory SOP(s) and apply to reported analytes.

Item for review	Analyst Yes	Analyst No	Peer/GL Yes	Peer/GL No	Notes
Tune					
Tune Report					
BFB tune criteria passing (criteria on report)	❑	❑	❑	❑	
Calibration Curve					
Quant Report (signed and dated)					
Analyzed within 12 hrs of BFB tune	❑	❑	❑	❑	
Each curve consists of at least 5 standards	❑	❑	❑	❑	
Lowest concentrations support reporting limits	❑	❑	❑	❑	
Chromatograms reviewed, and analytes correctly identified	❑	❑	❑	❑	
Manual integrations identified, correct, and coded	❑	❑	❑	❑	
RSDs ≤ 15% or coefficient of determination (r^2) ≥ 0.990	❑	❑	❑	❑	
CCC RSDs ≤ 30%, prefer ≤ 15% (no linear regression)	❑	❑	❑	❑	
Average response factors for SPCCs passing	❑	❑	❑	❑	
Internal stds identified and response factors are stable	❑	❑	❑	❑	
Software method updated	❑	❑	❑	❑	
Response factor report printed (linear regression r^2 values are written in).	❑	❑	❑	❑	
Linear regressed analytes are weighted 1/c, verified and pics of cal curves printed.	❑	❑	❑	❑	
Equipment maintenance log updated	❑	❑	❑	❑	
Initial Calibration Verification					
Quant Report for ICV (signed and dated)					
Manual integrations identified, correct, and coded	❑	❑	❑	❑	
Internal stds identified (RTs within 30 sec), and responses 50-200% of mid cal std	❑	❑	❑	❑	
Analyte %D ≤ 30% of spiked values (see NOTE 1)	❑	❑	❑	❑	
CCC %D ≤ 20% (full list only)	❑	❑	❑	❑	
Verify retention times and check for duplication	❑	❑	❑	❑	
Notes / Comments					

NOTE 1: %D = %difference when using average response factor cal and %drift when using regression fit cal

NOTE 2: If any boxes are checked "NO," indicate affected analytes in the Notes section. This cal curve may not be useable to quantify data for those analytes.

The following intermediate / stock standard solutions were used to make the calibration working standards and the ICV. These standards were made according to SOP V-245 or V-254.

VCCV -_____ VTTO-CCV-_____

VLCS -_____ VTTO-LCS-_____

VACCV -_____ Methanol ID#_____

VALCS -_____ Other CCV / ICal soln ID#_____

VISSS -_____ Other ICV soln ID#_____

Balance ID # Sand ID #

Curve Type: MeOH / Bulk Soil / Water / TTO (Circle One)

Preparer Initials:_____ Date:_____

Reviewed by Analyst_____Date:_____

Reviewed by Peer/GL_____Date:_____

By signing in "Reviewed by" above, I agree that I have reviewed the data as indicated on this checklist.

DCSID: V-528.7 (04/12/19)

Fibertec environmental services

Volatiles Calibration Checklist
TO-15
GC/MS

☐ Documentation on back of this form

Cal Curve ID:_____
Acceptance criteria are found in the applicable laboratory SOP(s) and apply to reported analytes.

Item for review	Analyst Yes	Analyst No	Peer/GL Yes	Peer/GL No	Notes
Tune					
Tune Report					
BFB tune criteria passing (criteria on report)	☐	☐	☐	☐	
Calibration Curve					
Quant Report (signed and dated)					
Analyzed within 24 hrs of BFB tune	☐	☐	☐	☐	
Correct volumes pulled	☐	☐	☐	☐	
Each curve consists of at least 5 standards	☐	☐	☐	☐	
No points deleted from middle of curve	☐	☐	☐	☐	
Lowest concentrations meet reporting limits.	☐	☐	☐	☐	
Chromatograms reviewed and analytes correctly identified	☐	☐	☐	☐	
Manual integrations identified, correct, and coded	☐	☐	☐	☐	
RSDs ≤ 30% (2 may be > 30% & < 40%.)	☐	☐	☐	☐	
Benzyl Chloride Linear Regressed, (0,0), 1/C, and $r^2 \geq 0.990$. Print cal curve pic.	☐	☐	☐	☐	
Internal stds identified, and response factors are stable (60-140% of CCV level)	☐	☐	☐	☐	
Software method updated	☐	☐	☐	☐	
Calibration table levels correct for all compounds. Include verification printouts.	☐	☐	☐	☐	
Response factor report printed, and linear regression r^2 written in.	☐	☐	☐	☐	
Equipment maintenance log updated	☐	☐	☐	☐	
Expected Ion ratios updated	☐	☐	☐	☐	
In Data Analysis, load CCV level Standard. Continuing Calibration → Update Reference Spectra. Save Method.	☐	☐			
Curve backed up on the network	☐	☐			
Create and post cal curve info note.	☐	☐	☐	☐	
Initial Calibration Verification and Blank					
Quant Report for ICV (signed and dated)					
Manual integrations identified, correct, and coded	☐	☐	☐	☐	
Internal stds identified (RTs within 0.2 min), and areas 60-140% of CCV level std	☐	☐	☐	☐	
Analyte %Recovery is 70-130% of expected values	☐	☐	☐	☐	
Verify retention times and check for duplication	☐	☐	☐	☐	
Notes / Comments					

NOTE 1: If any boxes are checked "No," indicate affected analytes in the Notes section. This cal curve may not be useable to quantify data for those analytes.

Analyst_____Date:_____ Reviewer_____Date:_____
The following intermediate / stock standard solutions were used to make the calibration working standards, the CCV and the ICV.
These standards were made according to SOP V-263.

VT-CCV- _____ VT-STD-2.5- _____

VT-LCS- _____ VT-STD-0.25- _____

VT-ISS- _____

Other ICV soln ID#_____

Other CCV / ICal soln ID#_____

Prep Batch:_____

Preparer Initials:_____ Date:_____

By signing above, I agree that I have reviewed the data as indicated on this checklist.

DCSID: V-529.15 (04/11/19)

Batch Number	SampleNumber
VB18F04A	84977-002B
VB18F04A	84977-004B
VB18F05A	84991-008
VB18F05A	84993-015
VB18F05A	84993-016
VB18F06A	84993-001
VB18F06A	84993-009
VB18F06A	85013-013
VB18F06B	85006-001
VB18F06B	85006-002
VB18F06B	85006-003
VB18F06B	85006-004B
VB18F06B	85027-010A
VB18F06B	85027-038A
VB18F06B	85030-001C
VB18F06B	85030-002C
VB18F08A	85030-003C
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VB18F18A	85183-002B
VB18F18A	85183-003B
VB18F18A	85183-004B
VB18F18A	85183-005B
VB18F18A	85183-006B
VB18F18A	85183-017
VB18F18A	85188-009

Batch Number	SampleNumber
VB18F18B	85228-004B
VB18F19A	85225-005A
VB18F19A	85225-006A
VB18F19A	85225-007A
VB18F19A	85225-008A
VB18F19A	85225-009
VB18F20A	85266-005B
VB18F20A	85266-006B
VB18F20A	85267-002B
VB18F20A	85267-004B
VB18F21A	85279-005F
VB18F21A	85279-006F
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VB18F21A	85279-015F
VB18F21A	85279-016F
VB18F21A	85279-017F
VB18F21A	85279-018F
VB18F21A	85279-019F
VB18F21A	85279-020F
VB18F22A	85312-001D
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VB18F26A	85322-002B
VB18F26A	85354-005
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VB18F26A	85372-001
VB18F26A	85373-002B
VB18F26A	85375-003B
VB18F26A	85375-005B
VB18F26B	85372-002B
VB18F26B	85372-003
VB18F26B	85372-004
VB18F27A	85307-001E
VB18F28B	85408-001B
VB18F28B	85408-003B
VB18F28B	85408-005G
VB18F28B	85408-006G
VB18F28B	85408-008G
VB18F28B	85417-004B

Batch Number	SampleNumber
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VB18F28B	85417-006B
VB18F28B	85417-007B
VB18F28B	85417-008B
VB18F28B	85432-010B
VB18F28B	85432-011B
VB18F29A	85408-002
VB18F29A	85408-014G
VB18F29A	85408-015G
VB18F29A	85408-016G
VB18F29A	85408-017
VB18F29A	85408-018G
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VB18F29A	85408-023G
VB18F29A	85449-006
VB18F29A	85449-038
VB18F29A	85449-039
VB18F29B	85422-001
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VB18F29B	85449-009
VB18F29B	85449-011
VB18F29B	85449-012
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VB18G06A	85503-016
VB18G06A	85503-017
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VB18G06A	85503-020
VB18G06A	85503-021
VB18G06A	85503-022
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VB18G09A	85533-005
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Batch Number	SampleNumber
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VB18G31A	85925-004A
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VB18G31A	85948-007A
VB18G31A	85948-011
VB18G31A	85948-012A
VB18H01A	85839-001
VB18H01A	85948-002D
VB18H01A	85948-004D
VB18H01A	85948-005D
VB18H01A	85957-001F

Batch Number	SampleNumber
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VB18H02A	85979-006
VB18H02A	85979-007
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VB18H02A	86012-001G
VB18H02A	86012-002G
VB18H02A	86012-004G
VB18H03A	86012-003G
VB18H06A	86030-001C
VB18H06A	86030-002C
VB18H06A	86035-007C
VB18H07B	85949-001
VB18H08A	85979-001
VB18H08A	85979-005
VB18H08A	86064-003B
VB18H09A	86064-004B
VB18H09A	86086-014B
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VB18H09A	86086-018B
VB18H09A	86086-019
VB18H09A	86086-020B
VB18H09A	86086-028B
VB18H10A	86081-008
VB18H10A	86086-011B
VB18H10A	86086-012B
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VB18H10A	86097-014
VB18H10A	86097-015
VB18H10A	86122-005B

Batch Number	SampleNumber
VB18H10A	86123-001B
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VB18H10A	86123-003B
VB18H10A	86123-004B
VB18H10A	86123-010B
VB18H10A	86123-011B
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VB18H14A	86073-001
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VB18H14A	86189-004
VB18H15A	86165-001B
VB18H15A	86165-004B
VB18H16B	86188-001
VB18H16B	86188-009C
VB18H16B	86188-017C
VB18H16B	86188-020C
VB18H16B	86188-024
VB18H16B	86188-025
VB18H16B	86188-027C
VB18H16B	86195-012
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VB18K20A	87838-012
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VB18L10A	88122-005
VB18L10A	88122-006
VB18L10A	88122-007
VB18L10A	88122-008
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VB18L11A	88138-014B
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VB18L13A	88190-009A
VB18L13A	88190-010A

Batch Number	SampleNumber
VB18L13A	88190-011A
VB18L13A	88190-012A
VB18L13A	88190-013A
VB18L13A	88190-014A
VB18L17A	88263-005B
VB18L17A	88263-006B
VB18L17A	88272-001B
VB18L17A	88272-002
VB18L18A	88170-001
VB18L18A	88293-001B
VB18L19C	88271-001
VB18L19C	88271-002
VB18L19C	88271-003
VB18L19C	88271-004
VB18L19C	88271-005
VB18L19C	88271-006
VB18L19C	88271-007
VB18L19C	88271-010
VB18L19C	88271-011
VB18L19C	88271-012
VB18L19C	88271-013
VB18L19C	88271-014
VB18L19C	88322-001B
VB18L20A	88271-015
VB18L20A	88271-016
VB18L20A	88271-017
VB18L20A	88271-018
VB18L20A	88271-019
VB18L20A	88271-020
VB18L21A	88289-026A
VB18L21A	88289-027A
VB18L21A	88289-028A
VB18L21A	88289-029A
VB18L21A	88289-030A
VB18L21A	88289-031A
VB18L21A	88289-032A
VB18L21A	88289-033A
VB18L21A	88289-034A
VB18L21A	88289-035A
VB18L21A	88289-036A
VB18L21A	88299-012B
VB18L21A	88299-013
VB18L21A	88299-023
VB18L21B	88308-001D
VB18L21B	88308-002D
VB18L21B	88308-003D
VB18L21B	88308-004D
VB18L21B	88308-005D
VB18L21B	88308-006D
VB18L26A	88289-037A
VB18L26A	88333-008
VB18L26A	88333-010
VB18L26A	88333-011
VB18L26A	88333-017
VB18L26A	88333-018
VB18L26A	88333-019
VB18L26A	88333-020
VB18L26A	88333-021
VB18L26A	88333-022
VB18L28A	88350-001F
VB18L28A	88369-001D
VB18L28A	88369-003D
VB19A02A	88369-002D
VB19A02A	88369-004D
VB19A02A	88377-002A
VB19A02A	88377-004A
VB19A02A	88378-003B
VB19A02A	88418-001B
VB19A02A	88418-002B
VB19A02A	88418-003B
VB19A02A	88418-004B
VB19A02A	88418-011
VB19A04A	88468-001A
VB19A04A	88468-003A
VB19A04B	88468-002A
VB19A09A	88429-001
VB19A09A	88489-015B
VB19A09A	88489-016B
VB19A09A	88492-020B
VB19A09A	88492-021B
VB19A09A	88492-022B
VB19A09A	88492-023B
VB19A09A	88492-024B
VB19A10A	88499-007D
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VB19A10A	88499-009D
VB19A10A	88499-010
VB19A10A	88506-001C
VB19A10A	88506-002C
VB19A10A	88534-001
VB19A15A	88493-001
VB19A15A	88560-011A
VB19A15A	88587-025B
VB19A15A	88587-026B
VB19A15A	88587-027
VB19A16A	88600-004B
VB19A16A	88600-005B
VB19A16A	88600-006B
VB19A16A	88600-007B
VB19A18A	88643-001A
VB19A18A	88643-002A
VB19A18A	88644-001A

Batch Number	SampleNumber
VB19A22A	88596-001
VB19A22A	88600-013B
VB19A23A	88673-001
VB19A23A	88673-002
VB19A23A	88673-003
VB19A23A	88673-004B
VB19A23A	88673-005
VB19A24A	88657-001B
VB19A24A	88695-001A
VB19A24A	88696-002F
VB19A24A	88702-003B
VB19A24A	88702-005A
VB19A24A	88702-007A
VB19A24A	88702-009A
VB19A28A	88722-001J
VB19A28A	88724-001
VB19A30A	88679-001
VB19A30A	88730-001K
VB19A30A	88731-001K
VB19A30A	88744-001K
VB19A31A	88747-001E
VB19B01A	88755-014C
VB19B01A	88755-015C
VB19B05A	88794-004
VB19B05A	88794-005
VB19B05A	88798-001K
VB19B05A	88813-002B
VB19B05A	88813-003
VB19B05A	88813-004
VB19B05A	88813-005
VB19B05A	88813-006
VB19B05A	88813-008
VB19B05A	88813-009
VB19B06A	88652-025
VB19B06A	88753-001
VB19B06A	88813-001
VB19B06A	88813-007
VB19B06A	88813-010
VB19B07A	88815-001K
VB19B07A	88819-001A
VB19B07A	88829-001A
VB19B07A	88829-002A
VB19B07A	88829-003A
VB19B07A	88850-001B
VB19B08A	88819-002A
VB19B08A	88829-004A
VB19B11A	88851-008
VB19B11B	88851-001D
VB19B11B	88851-002D
VB19B11B	88851-003
VB19B11B	88851-005D

Batch Number	SampleNumber
VB19B11B	88851-007
VB19B11B	88851-009
VB19B11B	88858-003B
VB19B11B	88858-005B
VB19B11B	88858-008B
VB19B11B	88858-010B
VB19B11B	88858-012B
VB19B11B	88858-015B
VB19B11B	88858-017B
VB19B12A	88822-001
VB19B12A	88851-004D
VB19B12A	88851-006D
VB19B12A	88858-019B
VB19B12A	88869-005B
VB19B12A	88869-006B
VB19B12B	88845-001D
VB19B12B	88846-003D
VB19B12B	88846-004D
VB19B12B	88846-005D
VB19B12B	88859-003D
VB19B13A	88846-001D
VB19B13A	88846-002D
VB19B13A	88846-006D
VB19B13A	88846-007D
VB19B13A	88854-001K
VB19B13A	88859-001D
VB19B13A	88859-002D
VB19B13A	88859-004D
VB19B13A	88859-005D
VB19B13A	88872-001A
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VB19B15A	88914-003
VB19B15A	88914-004B
VB19B19A	88903-001
VB19B19A	88985-004B
VB19B19A	88985-005B

Batch Number	SampleNumber
VB19B19A	88985-009B
VB19B19A	88998-005B
VB19B19A	88998-006B
VB19B19A	88998-007B
VB19B19A	89014-001
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VB19B20A	89029-005
VB19B21A	89043-011C
VB19B21A	89043-012C
VB19B21A	89043-015B
VB19B21A	89057-003B
VB19B21A	89057-007B
VB19B21A	89057-008B
VB19B21A	89057-009B
VB19B21A	89057-011B
VB19B21A	89057-013B
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VB19B22A	89057-005B
VB19B22A	89058-008A
VB19B22A	89072-001B
VB19B22A	89072-002B
VB19B22A	89072-003B
VB19B26A	88989-001
VB19B26A	89068-001E
VB19B26A	89097-003
VB19B26A	89097-004
VB19B26A	89097-005
VB19B26A	89097-006
VB19B26A	89097-008
VB19B26A	89102-001
VB19B26A	89120-009B
VB19B27A	89097-007
VB19B28A	89139-006B
VB19C05A	89107-001
VB19C05A	89154-005C
VB19C05A	89154-013C
VB19C05A	89192-001D
VB19C05A	89192-002D
VB19C05A	89192-003D
VB19C05A	89192-004
VB19C05A	89195-001C
VB19C05A	89195-002C
VB19C05A	89196-002
VB19C05A	89196-003
VB19C05A	89196-004

Batch Number	SampleNumber
VB19C05A	89196-005
VB19C05A	89196-006
VB19C05A	89196-007
VB19C05A	89196-008
VB19C05A	89196-009
VB19C05A	89196-010
VB19C05A	89196-011
VB19C05A	89230-001B
VB19C05B	89170-004A
VB19C05B	89176-001B
VB19C05B	89176-002B
VB19C05B	89176-003B
VB19C05B	89176-005B
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VB19C05B	89176-007B
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VB19C05B	89176-009B
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VB19C05B	89195-006C
VB19C05B	89195-007
VB19C06A	89176-004B
VB19C06A	89192-005
VB19C06A	89192-006
VB19C06A	89195-008
VB19C06A	89196-001
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VB19C08A	89226-002F
VB19C08A	89228-002F
VB19C08A	89244-007
VB19C13A	89228-003
VB19C13A	89266-001
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VB19C14A	89305-007B
VB19C15A	89317-009
VB19C15A	89317-010
VB19C15A	89318-001
VB19C15A	89318-002
VB19C15A	89318-003
VB19C15A	89318-004

Batch Number	SampleNumber
VB19C15A	89318-005
VB19C15A	89318-006
VB19C15A	89318-007
VB19C15A	89318-008
VB19C15A	89318-010
VB19C15A	89318-021
VB19C15A	89318-022
VB19C15A	89327-013
VB19C15A	89327-017
VB19C15B	89324-001A
VB19C15B	89324-002A
VB19C15B	89324-003A
VB19C15B	89324-004A
VB19C15B	89324-005A
VB19C15B	89324-006A
VB19C15B	89324-007A
VB19C15B	89324-008A
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VB19C15B	89337-002B
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VB19C16A	89383-005E
VB19C16A	89383-006E
VB19C16A	89399-002B
VB19C16A	89399-004B
VB19C16A	89399-006B
VB19C18A	89219-001
VB19C18A	89318-020
VB19C18A	89348-001A
VB19C19A	89360-005
VB19C19A	89391-015
VB19C19A	89395-026
VB19C19A	89395-025C
VB19C19A	89391-014C
VB19C19B	89395-024C
VB19C19B	89395-018C
VB19C19B	89395-015C
VB19C19B	89395-006C
VB19C19B	89391-001C
VB19C19B	89391-010C

QCI-026B Demand - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	61.0	62.3	mg/L	43.9 to 78.1	ACCEPT.	5/24/19	VO

QCI-032B Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Anelyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM

QCO-120B Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624 1984	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/15/19	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	2470	2679	4420	ug/L	1031	1180 to 5510	0.203	ACCEPT.	7/24/19	BDA

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1270	1760	2650	ug/L	478	998 to 4640	1.03	ACCEPT.	8/12/19	RKP

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10298121	GC-MS	EPA 624.1 2016	94.8	91.6	96.9	ug/L	5.23	63.0 to 131	0.612	ACCEPT.	7/29/19	MAK
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	94.8	91.6	96.9	ug/L	5.23	63.0 to 131	0.612	ACCEPT.	7/29/19	MAK
5160	1,1,1-Trichloroethane	10298121	GC-MS	EPA 624.1 2016	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5110	1,1,2,2-Tetrachloroethane	10298121	GC-MS	EPA 624.1 2016	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5165	1,1,2-Trichloroethane	10298121	GC-MS	EPA 624.1 2016	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5150	1,2,3-Trichlorobenzene	10298121	GC-MS	EPA 624.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5180	1,2,3-Trichloropropane	10298121	GC-MS	EPA 624.1 2016	61.1	70.2	76.5	ug/L	13.3	34.7 to 115	0.684	ACCEPT.	7/29/19	MAK
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	61.1	70.2	76.5	ug/L	13.3	34.7 to 115	0.684	ACCEPT.	7/29/19	MAK
5155	1,2,4-Trichlorobenzene	10298121	GC-MS	EPA 624.1 2016	33.6	33.0	38.1	ug/L	3.59	15.2 to 52.0	0.167	ACCEPT.	7/29/19	MAK

WP-253-Remedial PT Study

WP-PTX3414

CWA - Non-Potable Water
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 05/17/2019 - Closed: 05/30/2019 - Reports Printed On: 05/31/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

QCI-026B Demand - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	61.0	62.3	mg/L	43.9 to 78.1	ACCEPT.	5/24/19	VO

QCI-032B Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.52	2.01	mg/L	1.02 to 3.00	ACCEPT.	5/23/19	SEM

QCO-120B Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10107207	GC-MS	EPA 624 1984	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM
5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	38.2	38.3	ug/L	15.3 to 52.2	ACCEPT.	5/28/19	JLM

QCO-121B Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-PTX3414

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
5545	Aniline	10107401	GC-MS	EPA 625	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0	ug/L	0.00	ACCEPT.	5/28/19	BDA

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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SM-121

Spring, 2019

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-121 - Shipped: 04/10/2019 - Closed: 05/24/2019 - Reports Printed On: 06/10/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
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517-699-0345

Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	17000	17515	18390	mg/kg	5447	9400 to 24400	0.0945	ACCEPT.	5/2/19	SEM
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	200	145	218	mg/kg	50.9	21.8 to 392	1.08	ACCEPT.	4/23/19	JLH
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	244	153	99.5	mg/kg	54.1	89.5 to 214	1.68	NOT ACCEPT.	4/23/19	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	487	432	485	mg/kg	142	341 to 568	0.387	ACCEPT.	4/23/19	JLH
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	125	140	147	mg/kg	70.3	90.8 to 162	0.213	ACCEPT.	4/23/19	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	97.8	96.2	126	mg/kg	18.2	70.7 to 139	0.0879	ACCEPT.	4/23/19	JLH
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	7350	7228	8660	mg/kg	1994	5380 to 9530	0.0612	ACCEPT.	4/23/19	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	181	153	179	mg/kg	52.6	113 to 210	0.532	ACCEPT.	4/23/19	JLH
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	67.6	64.4	71.0	mg/kg	10.2	48.0 to 80.0	0.314	ACCEPT.	4/23/19	JLH
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	123	122	134	mg/kg	29.9	94.9 to 158	0.0334	ACCEPT.	4/23/19	JLH
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	23300	17392	17500	mg/kg	6208	7150 to 27700	0.952	ACCEPT.	4/23/19	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	358	319	381	mg/kg	127	257 to 432	0.307	ACCEPT.	4/23/19	JLH
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	3280	3164	3920	mg/kg	834	2110 to 4310	0.139	ACCEPT.	4/23/19	JLH
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	806	736	907	mg/kg	215	594 to 998	0.326	ACCEPT.	4/23/19	JLH
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	22.8	20.9	27.2	mg/kg	6.22	13.1 to 30.5	0.305	ACCEPT.	4/22/19	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	223	202	247	mg/kg	53.1	147 to 271	0.395	ACCEPT.	4/23/19	JLH
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	336	325	381	mg/kg	93.8	223 to 419	0.117	ACCEPT.	4/23/19	JLH
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	12600	11252	12000	mg/kg	3025	8030 to 14600	0.446	ACCEPT.	4/23/19	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	249	272	327	mg/kg	76.1	190 to 360	0.302	ACCEPT.	4/23/19	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	63.5	54.7	91.5	mg/kg	24.9	40.7 to 101	0.353	ACCEPT.	4/23/19	JLH
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	2110	2188	2730	mg/kg	607	1460 to 3000	0.129	ACCEPT.	4/23/19	JLH

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	154	149	178	mg/kg	66.2	97.3 to 196	0.0755	ACCEPT.	4/23/19	JLH
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	211	158	214	mg/kg	53.5	95.1 to 221	0.991	ACCEPT.	4/23/19	JLH
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	333	331	385	mg/kg	87.3	257 to 423	0.0229	ACCEPT.	4/23/19	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	519	530	641	mg/kg	140	374 to 705	0.0786	ACCEPT.	4/23/19	JLH
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	61.5	78.6	86.8	mg/kg	18.9	16.2 to 140	0.905	ACCEPT.	4/23/19	AMS

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	<0.0400	0.00	<0.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	5/2/19	SEM
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	9.81	8.83	11.6	mg/L	0.868	6.23 to 12.8	1.13	ACCEPT.	5/2/19	SEM
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	<0.0250	0.00	<0.1	mg/L	0.00	0.00 to 0.100	n/a	ACCEPT.	5/2/19	SEM
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0800	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/2/19	SEM
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	7.04	7.32	9.00	mg/L	0.526	5.74 to 9.90	0.532	ACCEPT.	5/2/19	SEM
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	5/2/19	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	4.00	5.50	5.89	mg/L	0.678	3.47 to 7.53	2.21	ACCEPT.	5/2/19	SEM
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	12.3	7.85	15.5	mg/L	5.36	1.55 to 23.9	0.830	ACCEPT.	5/2/19	SEM
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	0.406	0.00	<1.0	mg/L	0.00	0.00 to 1.00	n/a	ACCEPT.	5/2/19	SEM
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	8.62	8.26	8.50	pH units	0.303	7.90 to 9.10	1.19	ACCEPT.	4/17/19	VO

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	199	196	195	oF	14.9	178 to 212	0.201	ACCEPT.	4/17/19	AMS

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	85.3	88.2	99.0	mg/kg	10.3	64.6 to 112	0.282	ACCEPT.	4/25/19	AMS
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	391	494	404	mg/kg	97.1	346 to 642	1.06	ACCEPT.	4/25/19	AMS
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	215	178	229	mg/kg	17.4	76.8 to 279	2.13	ACCEPT.	4/25/19	AMS
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	44.9	51.2	48.6	mg/kg	7.03	33.4 to 69.0	0.896	ACCEPT.	4/25/19	AMS
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	74.9	79.7	112	mg/kg	12.6	41.9 to 124	0.381	ACCEPT.	4/25/19	AMS
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	484	728	716	mg/kg	181	417 to 1040	1.35	ACCEPT.	4/25/19	AMS
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242407	GC-MS	SW 8270C SIM --1996	100	168	240	ug/kg	46.9	28.0 to 308	1.45	ACCEPT.	4/25/19	GJP
5500	Acenaphthene	10242407	GC-MS	SW 8270C SIM --1996	290	479	675	ug/kg	120	147 to 809	1.58	ACCEPT.	4/25/19	GJP
5505	Acenaphthylene	10242407	GC-MS	SW 8270C SIM --1996	384	636	856	ug/kg	187	85.6 to 1260	1.35	ACCEPT.	4/25/19	GJP
5555	Anthracene	10242407	GC-MS	SW 8270C SIM --1996	302	460	659	ug/kg	131	196 to 722	1.21	ACCEPT.	4/25/19	GJP
5575	Benzo(a)anthracene	10242407	GC-MS	SW 8270C SIM --1996	197	301	360	ug/kg	61.7	152 to 452	1.69	ACCEPT.	4/25/19	GJP
5580	Benzo(a)pyrene	10242407	GC-MS	SW 8270C SIM --1996	151	200	258	ug/kg	37.8	25.8 to 554	1.30	ACCEPT.	4/25/19	GJP
5585	Benzo(b)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	282	350	453	ug/kg	80.2	196 to 501	0.848	ACCEPT.	4/25/19	GJP
5590	Benzo(g,h,i)perylene	10242407	GC-MS	SW 8270C SIM --1996	97.6	116	150	ug/kg	21.9	42.1 to 189	0.840	ACCEPT.	4/25/19	GJP
5600	Benzo(k)fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	187	245	291	ug/kg	42.3	133 to 357	1.37	ACCEPT.	4/25/19	GJP

5855	Chrysene	10242407	GC-MS	SW 8270C SIM --1996	249	350	447	ug/kg	71.2	140 to 504	1.42	ACCEPT.	4/25/19	GJP
5895	Dibenz(a,h)anthracene	10242407	GC-MS	SW 8270C SIM --1996	217	271	335	ug/kg	49.2	134 to 408	1.10	ACCEPT.	4/25/19	GJP
6265	Fluoranthene	10242407	GC-MS	SW 8270C SIM --1996	242	377	494	ug/kg	87.6	192 to 562	1.54	ACCEPT.	4/25/19	GJP
6270	Fluorene	10242407	GC-MS	SW 8270C SIM --1996	79.4	134	183	ug/kg	33.1	40.1 to 228	1.65	ACCEPT.	4/25/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10242407	GC-MS	SW 8270C SIM --1996	264	322	383	ug/kg	73.1	174 to 467	0.793	ACCEPT.	4/25/19	GJP
5005	Naphthalene	10242407	GC-MS	SW 8270C SIM --1996	306	498	761	ug/kg	134	76.1 to 963	1.43	ACCEPT.	4/25/19	GJP
6615	Phenanthrene	10242407	GC-MS	SW 8270C SIM --1996	347	588	799	ug/kg	148	249 to 929	1.63	ACCEPT.	4/25/19	GJP
6665	Pyrene	10242407	GC-MS	SW 8270C SIM --1996	232	335	444	ug/kg	86.8	146 to 522	1.19	ACCEPT.	4/25/19	GJP
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	28.5	37.8	41.0	mg/kg	7.42	12.3 to 63.3	1.25	ACCEPT.	4/29/19	SEM

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B --2007	215	214	231	ug/kg	24.5	80.4 to 347	0.0408	ACCEPT.	4/30/19	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B --2007	118	140	154	ug/kg	23.4	50.5 to 230	0.940	ACCEPT.	4/27/19	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B --2007	94.0	97.7	103	ug/kg	16.4	24.1 to 172	0.226	ACCEPT.	4/27/19	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B --2007	49.6	57.9	69.2	ug/kg	7.68	17.2 to 98.6	1.08	ACCEPT.	4/27/19	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B --2007	152	179	234	ug/kg	20.5	61.9 to 296	1.32	ACCEPT.	4/27/19	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B --2007	284	277	331	ug/kg	23.1	100 to 454	0.303	ACCEPT.	5/1/19	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B --2007	320	264	296	ug/kg	32.0	85.6 to 442	1.75	ACCEPT.	5/1/19	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B --2007	380	402	462	ug/kg	51.5	188 to 616	0.427	ACCEPT.	5/1/19	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B --2007	127	153	192	ug/kg	22.2	54.0 to 252	1.17	ACCEPT.	4/27/19	RDK

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	257	229	271	ug/kg	31.3	80.1 to 378	0.895	ACCEPT.	5/1/19	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	523	429	484	ug/kg	48.4	117 to 739	1.94	ACCEPT.	5/1/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	370	360	429	ug/kg	46.9	184 to 536	0.213	ACCEPT.	5/1/19	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	186	203	246	ug/kg	27.5	32.0 to 373	0.618	ACCEPT.	4/30/19	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	326	358	440	ug/kg	37.0	130 to 586	0.865	ACCEPT.	5/1/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	236	249	303	ug/kg	28.0	98.4 to 399	0.464	ACCEPT.	5/1/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	226	246	302	ug/kg	28.5	107 to 385	0.702	ACCEPT.	5/1/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	279	282	301	ug/kg	44.6	35.4 to 526	0.0673	ACCEPT.	5/1/19	RDK
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	285	281	317	ug/kg	17.1	229 to 349	0.234	ACCEPT.	4/27/19	BDA

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	12.4	11.1	16.7	mg/kg	4.25	8.78 to 18.4	0.306	ACCEPT.	4/29/19	RDK
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	4/29/19	RDK
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<1.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	4/29/19	RDK
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<1.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	4/29/19	RDK

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	422	484	646	ug/kg	71.8	269 to 711	0.864	ACCEPT.	5/3/19	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	284	264	511	ug/kg	91.7	51.1 to 562	0.218	ACCEPT.	5/1/19	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	226	199	253	ug/kg	73.0	25.3 to 418	0.370	ACCEPT.	5/1/19	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	108	0.00	0	ug/kg	0.00	0.00	n/a	NOT ACCEPT.	5/1/19	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	705	666	865	ug/kg	109	339 to 993	0.358	ACCEPT.	5/3/19	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	5/1/19	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	179	140	242	ug/kg	28.8	53.6 to 266	1.35	ACCEPT.	5/1/19	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	224	175	222	ug/kg	38.8	58.6 to 291	1.26	ACCEPT.	5/1/19	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	6450	7581	11220	ug/kg	967	2630 to 12500	1.17	ACCEPT.	4/24/19	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	5530	7951	12620	ug/kg	1260	1260 to 14800	1.92	ACCEPT.	4/24/19	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	2390	3675	6010	ug/kg	608	601 to 7500	2.11	ACCEPT.	4/24/19	GJP
6160	1,3-Dinitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	1700	2400	4080	ug/kg	389	408 to 4820	1.80	ACCEPT.	4/24/19	GJP
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	6060	5764	7700	ug/kg	726	1720 to 9800	0.408	ACCEPT.	4/24/19	GJP

6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	6460	6386	8400	ug/kg	1062	2280 to 10500	0.0697	ACCEPT.	4/24/19	GJP
6000	2,4-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5910	6216	8600	ug/kg	1079	2100 to 10300	0.284	ACCEPT.	4/24/19	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW 8270C -- 1996	9570	8999	11370	ug/kg	1420	4740 to 13300	0.402	ACCEPT.	4/25/19	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	2460	4309	10230	ug/kg	1506	1000 to 11100	1.23	ACCEPT.	4/24/19	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	2120	2072	2840	ug/kg	254	711 to 3430	0.189	ACCEPT.	4/24/19	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW 8270C -- 1996	7360	6696	10190	ug/kg	1462	2310 to 11100	0.454	ACCEPT.	4/25/19	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	4710	4427	6350	ug/kg	890	1980 to 6990	0.318	ACCEPT.	4/24/19	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW 8270C -- 1996	6310	6449	9280	ug/kg	640	2210 to 10700	0.217	ACCEPT.	4/24/19	GJP
5800	2-Chlorophenol	10185805	GC-MS	SW 8270C -- 1996	7270	7558	10570	ug/kg	1077	2030 to 13100	0.267	ACCEPT.	4/25/19	GJP
6360	2-Methyl-4,6-dinitrophenol	10185805	GC-MS	SW 8270C -- 1996	5770	6088	9600	ug/kg	1544	960 to 14300	0.206	ACCEPT.	4/24/19	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	4830	4699	6510	ug/kg	627	948 to 8450	0.209	ACCEPT.	4/24/19	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	5300	6080	8850	ug/kg	864	1440 to 10700	0.903	ACCEPT.	4/24/19	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5660	4-Bromophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW 8270C -- 1996	10200	9831	12800	ug/kg	1796	3810 to 15900	0.205	ACCEPT.	4/25/19	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5825	4-Chlorophenyl-phenylether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	9480	7451	12310	ug/kg	2443	1230 to 13500	0.831	ACCEPT.	4/25/19	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW 8270C -- 1996	5710	5596	7170	ug/kg	1626	717 to 12200	0.0701	ACCEPT.	4/24/19	GJP
5500	Acenaphthene	10185805	GC-MS	SW 8270C -- 1996	1880	2023	2440	ug/kg	682	821 to 3220	0.210	ACCEPT.	4/24/19	GJP

5505	Acenaphthylene	10185805	GC-MS	SW 8270C -- 1996	4480	4761	6120	ug/kg	819	1740 to 7780	0.343	ACCEPT.	4/24/19	GJP
5545	Aniline	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5555	Anthracene	10185805	GC-MS	SW 8270C -- 1996	2800	2710	3650	ug/kg	269	1140 to 4280	0.335	ACCEPT.	4/24/19	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW 8270C -- 1996	7280	7309	8930	ug/kg	1766	3580 to 11000	0.0164	ACCEPT.	4/25/19	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW 8270C -- 1996	2930	2869	3800	ug/kg	423	1120 to 4620	0.144	ACCEPT.	4/24/19	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW 8270C -- 1996	5910	5381	6820	ug/kg	1100	2140 to 8620	0.481	ACCEPT.	4/24/19	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW 8270C -- 1996	8190	6692	9350	ug/kg	1264	2360 to 10300	1.19	ACCEPT.	4/25/19	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW 8270C -- 1996	4130	4436	5250	ug/kg	693	1570 to 7310	0.442	ACCEPT.	4/24/19	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW 8270C -- 1996	3050	3047	3940	ug/kg	290	1080 to 5020	0.0103	ACCEPT.	4/24/19	GJP
5680	Carbazole	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5855	Chrysene	10185805	GC-MS	SW 8270C -- 1996	3620	3721	4730	ug/kg	727	1820 to 5620	0.139	ACCEPT.	4/24/19	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW 8270C -- 1996	7610	7512	8750	ug/kg	1532	2410 to 12600	0.0640	ACCEPT.	4/25/19	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW 8270C -- 1996	5520	5742	7300	ug/kg	1327	1610 to 9870	0.167	ACCEPT.	4/24/19	GJP
5895	Dibenz(a,h)anthracene	10185805	GC-MS	SW 8270C -- 1996	9250	7572	9420	ug/kg	1821	3080 to 12100	0.921	ACCEPT.	4/25/19	GJP
5905	Dibenzofuran	10185805	GC-MS	SW 8270C -- 1996	2570	2477	3580	ug/kg	237	1060 to 3900	0.392	ACCEPT.	4/24/19	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	7760	7848	9910	ug/kg	1546	3210 to 12500	0.0569	ACCEPT.	4/25/19	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW 8270C -- 1996	4640	4938	6260	ug/kg	849	2020 to 7860	0.351	ACCEPT.	4/24/19	GJP
6265	Fluoranthene	10185805	GC-MS	SW 8270C -- 1996	2790	2736	3550	ug/kg	214	1090 to 4390	0.252	ACCEPT.	4/24/19	GJP
6270	Fluorene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP

6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	8180	8469	10770	ug/kg	1616	4100 to 12800	0.179	ACCEPT.	4/25/19	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	6950	9145	12370	ug/kg	1787	2780 to 15500	1.23	ACCEPT.	4/25/19	GJP
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	4630	7374	11680	ug/kg	1400	1170 to 14800	1.96	ACCEPT.	4/24/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW 8270C -- 1996	2860	3012	3320	ug/kg	1373	665 to 5360	0.111	ACCEPT.	4/24/19	GJP
6320	Isophorone	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
6545	N-Nitroso-di-n-propylamine	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5005	Naphthalene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	4/24/19	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	6190	6531	9260	ug/kg	731	926 to 12700	0.466	ACCEPT.	4/24/19	GJP
6615	Phenanthrene	10185805	GC-MS	SW 8270C -- 1996	3060	2998	4120	ug/kg	274	1360 to 4640	0.226	ACCEPT.	4/24/19	GJP
6625	Phenol	10185805	GC-MS	SW 8270C -- 1996	5250	5691	7860	ug/kg	852	1550 to 9830	0.518	ACCEPT.	4/24/19	GJP
6665	Pyrene	10185805	GC-MS	SW 8270C -- 1996	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	4/24/19	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												
5610	Benzoic acid	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6697	Benzo(b)fluoranthene + Benzo(k)fluoranthene	-- Not Reported --
6715	1,2,4,5-	-- Not Reported --

	Tetrachlorobenzene	
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	<520	0.00	<520	ug/kg	0.00	0.00 to 520	n/a	ACCEPT.	4/22/19	MAK
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	1600	1942	1510	ug/kg	846	905 to 2110	0.404	ACCEPT.	4/22/19	MAK
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW 8260B -- 1996	4820	4903	4810	ug/kg	305	2800 to 6600	0.272	ACCEPT.	4/22/19	MAK
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW 8260B -- 1996	4660	4708	4190	ug/kg	392	2720 to 5660	0.122	ACCEPT.	4/22/19	MAK
4630	1,1-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	1760	1903	1710	ug/kg	147	1110 to 2310	0.973	ACCEPT.	4/22/19	MAK
4640	1,1-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	12200	11101	9990	ug/kg	2718	5000 to 15000	0.404	ACCEPT.	4/22/19	MAK
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW 8260B -- 1996	<407	0.00	<825	ug/kg	0.00	0.00 to 825	n/a	ACCEPT.	4/22/19	MAK

5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	3580	3270	3000	ug/kg	183	1800 to 4190	1.69	ACCEPT.	4/22/19	MAK
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW 8260B SIM -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/22/19	MAK
4585	1,2-Dibromoethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/22/19	MAK
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	6960	6881	6480	ug/kg	284	4860 to 8100	0.278	ACCEPT.	4/22/19	MAK
4635	1,2-Dichloroethane	10184802	GC-MS	SW 8260B -- 1996	<663	0.00	<930	ug/kg	0.00	0.00 to 930	n/a	ACCEPT.	4/22/19	MAK
4655	1,2-Dichloropropane	10184802	GC-MS	SW 8260B -- 1996	3940	3938	3870	ug/kg	169	2710 to 5030	0.0118	ACCEPT.	4/22/19	MAK
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	<1400	0.00	<606	ug/kg	0.00	0.00 to 606	n/a	ACCEPT.	4/22/19	MAK
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW 8260B -- 1996	8750	8522	8060	ug/kg	458	6230 to 9750	0.498	ACCEPT.	4/22/19	MAK
4410	2-Butanone	10184802	GC-MS	SW 8260B -- 1996	13800	15631	15250	ug/kg	1814	4250 to 23200	1.01	ACCEPT.	4/22/19	MAK
4535	2-Chlorotoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4860	2-Hexanone	10184802	GC-MS	SW 8260B -- 1996	<2000	0.00	<2000	ug/kg	0.00	0.00 to 2000	n/a	ACCEPT.	4/22/19	MAK
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW 8260B -- 1996	7530	7657	7500	ug/kg	903	3750 to 11200	0.141	ACCEPT.	4/22/19	MAK
4315	Acetone	10184802	GC-MS	SW 8260B -- 1996	13000	14179	14360	ug/kg	2833	4070 to 21900	0.416	ACCEPT.	4/22/19	MAK
4375	Benzene	10184802	GC-MS	SW 8260B -- 1996	3570	3913	3800	ug/kg	370	2850 to 4750	0.927	ACCEPT.	4/22/19	MAK
4385	Bromobenzene	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4390	Bromochloromethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4395	Bromodichloromethane	10184802	GC-MS	SW 8260B -- 1996	5710	6087	5870	ug/kg	244	3810 to 7920	1.55	ACCEPT.	4/22/19	MAK
4400	Bromoform	10184802	GC-MS	SW 8260B -- 1996	10400	9917	9550	ug/kg	1040	5730 to 13400	0.464	ACCEPT.	4/22/19	MAK
4950	Bromomethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4450	Carbon disulfide	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4455	Carbon tetrachloride	10184802	GC-MS	SW 8260B -- 1996	7770	7396	6660	ug/kg	644	4220 to 8990	0.581	ACCEPT.	4/22/19	MAK

4475	Chlorobenzene	10184802	GC-MS	SW 8260B -- 1996	9740	9230	8960	ug/kg	635	6720 to 11200	0.803	ACCEPT.	4/22/19	MAK
4485	Chloroethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4505	Chloroform	10184802	GC-MS	SW 8260B -- 1996	5470	5941	5490	ug/kg	394	3840 to 7140	1.20	ACCEPT.	4/22/19	MAK
4960	Chloromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	5830	6342	5710	ug/kg	593	3420 to 8000	0.863	ACCEPT.	4/22/19	MAK
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	5970	6038	5910	ug/kg	404	3540 to 8270	0.168	ACCEPT.	4/22/19	MAK
4575	Dibromochloromethane	10184802	GC-MS	SW 8260B -- 1996	9430	8954	8310	ug/kg	860	5820 to 10800	0.553	ACCEPT.	4/22/19	MAK
4595	Dibromomethane	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/22/19	MAK
4625	Dichlorodifluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4725	Diethyl ether	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
9375	Di-isopropylether	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4765	Ethylbenzene	10184802	GC-MS	SW 8260B -- 1996	11000	10322	9930	ug/kg	1140	6950 to 12900	0.595	ACCEPT.	4/22/19	MAK
4840	Hexachloroethane	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4900	Isopropylbenzene	10184802	GC-MS	SW 8260B -- 1996	7590	7401	7450	ug/kg	423	5780 to 8990	0.447	ACCEPT.	4/22/19	MAK
5000	Methyl-tert-butyl ether (MTBE)	10184802	GC-MS	SW 8260B -- 1996	5950	6701	6480	ug/kg	661	4540 to 8420	1.14	ACCEPT.	4/22/19	MAK
4975	Methylene chloride	10184802	GC-MS	SW 8260B -- 1996	7200	7781	7130	ug/kg	1042	4270 to 9980	0.558	ACCEPT.	4/22/19	MAK
5005	Naphthalene	10184802	GC-MS	SW 8260B -- 1996	<721	0.00	<721	ug/kg	0.00	0.00 to 721	n/a	ACCEPT.	4/22/19	MAK
4435	n-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5090	n-Propylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4910	p-Isopropyltoluene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4440	sec-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5100	Styrene	10184802	GC-MS	SW 8260B -- 1996	2790	2665	2350	ug/kg	188	1410 to 3290	0.665	ACCEPT.	4/22/19	MAK
4370	T-amylmethylether (TAME)	10184802	GC-MS	SW 8260B -- 1996	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK

4420	t-Butyl alcohol	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4445	tert-Butylbenzene	10184802	GC-MS	SW 8260B -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5115	Tetrachloroethene	10184802	GC-MS	SW 8260B -- 1996	<543	0.00	<747	ug/kg	0.00	0.00 to 747	n/a	ACCEPT.	4/22/19	MAK
5140	Toluene	10184802	GC-MS	SW 8260B -- 1996	7430	8060	7770	ug/kg	744	5830 to 9720	0.847	ACCEPT.	4/22/19	MAK
5260	Total Xylenes	10184802	GC-MS	SW 8260B -- 1996	13600	13446	12600	ug/kg	945	8820 to 16400	0.163	ACCEPT.	4/22/19	MAK
4700	trans-1,2-Dichloroethene	10184802	GC-MS	SW 8260B -- 1996	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	4/22/19	MAK
4685	trans-1,3-Dichloropropene	10184802	GC-MS	SW 8260B -- 1996	3680	3885	3460	ug/kg	491	2070 to 4840	0.418	ACCEPT.	4/22/19	MAK
4605	trans-1,4-Dichloro-2-butene	10184904	GC-MS	SW 8260B SIM -- 1996	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5170	Trichloroethene	10184802	GC-MS	SW 8260B -- 1996	5330	5480	5100	ug/kg	489	3700 to 6610	0.307	ACCEPT.	4/22/19	MAK
5175	Trichlorofluoromethane	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
5235	Vinyl chloride	10184802	GC-MS	SW 8260B -- 1996	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	4/22/19	MAK
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												

4835	Hexachlorobutadiene	-- Not Reported --
4855	n-Hexane	-- Not Reported --
5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	203	209	235	ug/kg	30.2	110 to 308	0.199	ACCEPT.	4/27/19	BDA

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.0926	0.170	mg/L	0.0155	0.0170 to 0.190	n/a	ACCEPT.	4/24/19	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
4840	Hexachloroethane	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
5015	Nitrobenzene	10185805	GC-MS	SW 8270C -- 1996	8.33	9.31	14.1	mg/L	1.21	5.68 to 15.5	0.810	ACCEPT.	4/25/19	GJP
5095	Pyridine	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW 8270C -- 1996	0.787	0.946	1.19	mg/L	0.108	0.620 to 1.31	1.47	ACCEPT.	4/25/19	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6400	2-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6410	4-Methylphenol	10185805	GC-MS	SW 8270C -- 1996	5.43	6.12	9.32	mg/L	0.969	3.72 to 10.3	0.712	ACCEPT.	4/25/19	GJP
6605	Pentachlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/24/19	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	5.64	6.63	9.47	mg/L	0.675	4.61 to 10.4	1.47	ACCEPT.	4/25/19	GJP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW 8270C -- 1996	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/25/19	GJP
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.121	0.174	0.360	mg/L	0.0503	0.0360 to 0.400	1.05	ACCEPT.	5/3/19	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.156	0.192	0.380	mg/L	0.0360	0.0800 to 0.420	1.00	ACCEPT.	5/3/19	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	0.0315	0.0583	0.420	mg/L	0.0378	0.0420 to 0.460	0.709	NOT ACCEPT.	4/30/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	0.143	0.148	0.320	mg/L	0.0064	0.0320 to 0.350	0.781	ACCEPT.	5/2/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0005	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	1890	1257	1550	mg/kg	282	336 to 2180	2.24	ACCEPT.	4/24/19	AMW
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	20.7	10.8	26.0	mg/kg	9.26	3.99 to 38.4	1.07	ACCEPT.	4/23/19	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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SM-121

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 709 /PAR)

Client: Fibertec **Project/Document Control Number:** 89964

Sample Number(s): 001 **Date Initiated:** 6/12/19 **Date Due:** 6/2819

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Wet Chemistry ☑ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Arsenic failed high on this sample. We reported 244 mg/kg, the true value was 99.5, the mean was 153 and the acceptance range was 89.5 to 214 mg/kg. Please investigate this issue and propose a corrective action to prevent the recurrence of this issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The PT was reprepped and rerun at the same dilution factor that was originally reported; the reprepped sample was within the ranges outline for the sample. The performance reports (both KED and Standard Modes) were better for the original run, as was the calibration and the RSD between the 3 runs for the Arsenic Sample(0.8% vs 1.1%.). Additionally, the internal standards were closer to the 100% value during the original prep/analysis. The RPD between the reported 100x and the 20x were fairly close for the 100x and 20x dilutions (less than 10%). The reprepped sample results were higher for nearly every metal except arsenic (with all but one being within the acceptable range for the PTs). However, there was another dilution that was performed at a 200x, which did not match up very closely (RPDs around 50%). However it doesn't appear any results were reported from that dilution

Investigator(s): Sierra McKenna

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

In future all sample dilutions should be checked to make sure that the RPDs are close, even if the dilution is not used. Dilutions should be within 15% of each other. If they are not, the dilutions should reprepped and analyzed.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: when remedial PT passes ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : [signature] 6/20/19 **Supervisory:** [signature]

Quality Assurance: [signature]

Date Closed: 10 11/20/19

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	17000	17515	18390	mg/kg	5447	9400 to 24400	0.0945	ACCEPT.	5/2/19	SEM
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	200	145	218	mg/kg	50.9	21.8 to 392	1.08	ACCEPT.	4/23/19	JLH
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	244	153	99.5	mg/kg	54.1	89.5 to 214	1.68	NOT ACCEPT.	4/23/19	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	487	432	485	mg/kg	142	341 to 568	0.387	ACCEPT.	4/23/19	JLH
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	125	140	147	mg/kg	70.3	90.6 to 162	0.213	ACCEPT.	4/23/19	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	97.8	96.2	126	mg/kg	18.2	70.7 to 139	0.0879	ACCEPT.	4/23/19	JLH
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	7350	7228	8660	mg/kg	1994	5360 to 9530	0.0612	ACCEPT.	4/23/19	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	181	153	179	mg/kg	52.6	113 to 210	0.532	ACCEPT.	4/23/19	JLH
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	67.6	64.4	71.0	mg/kg	10.2	48.0 to 80.0	0.314	ACCEPT.	4/23/19	JLH
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	123	122	134	mg/kg	29.9	94.9 to 158	0.0334	ACCEPT.	4/23/19	JLH
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	23300	17392	17500	mg/kg	6208	7150 to 27700	0.952	ACCEPT.	4/23/19	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	358	319	381	mg/kg	127	257 to 432	0.307	ACCEPT.	4/23/19	JLH
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	3280	3164	3920	mg/kg	834	2110 to 4310	0.139	ACCEPT.	4/23/19	JLH
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	806	736	907	mg/kg	215	594 to 998	0.326	ACCEPT.	4/23/19	JLH
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	22.8	20.9	27.2	mg/kg	6.22	13.1 to 30.5	0.305	ACCEPT.	4/22/19	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	223	202	247	mg/kg	53.1	147 to 271	0.395	ACCEPT.	4/23/19	JLH
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	336	325	381	mg/kg	93.8	223 to 419	0.117	ACCEPT.	4/23/19	JLH
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	12600	11252	12000	mg/kg	3025	8030 to 14600	0.446	ACCEPT.	4/23/19	JLH
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	249	272	327	mg/kg	76.1	190 to 360	0.302	ACCEPT.	4/23/19	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	63.5	54.7	91.5	mg/kg	24.9	40.7 to 101	0.353	ACCEPT.	4/23/19	JLH
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	2110	2188	2730	mg/kg	607	1460 to 3000	0.129	ACCEPT.	4/23/19	JLH

Client Name:
Fibertec, Inc.

DataBridge Sequence Report (Elution Order)
Entered Parameters for Samples in Sequence (Sorted by Prep Batch/Project ID)
Sequence: **T419D23B**

Date: 04/23/19
Time: 14:20
Printed By: jhaney

PT19D23B
Acid Dig. - Sol , Std.

89964

89964-001 Validation:

4/23/2019 12:33:23 PM

Prep ID:	89964-001.07
Prep Initial (g/mL):	1
Prep Final (mL):	50
Bench/Add'l Dilution:	20
Prep Factor/Overall:	1000
Temperature (deg c):	20

		Raw	Final	CRL*	
	Units =>	ug/l	ug/l		
1	Sodium	2106	2106000	#Error	
2	Magnesium	3283	3283000	#Error	
3	Calcium	7347	7347000	#Error	
4	Chromium	180.6	180600	#Error	
5	Cobalt	67.59	67590	#Error	
6	Copper	123.1	123100	#Error	
7	Silver	63.47	63470	#Error	
8	Cadmium	97.81	97810	#Error	
9	Barium	487.2	487200	#Error	

4/23/2019 1:41:32 PM

Prep ID:	89964-001.08
Prep Initial (g/mL):	1
Prep Final (mL):	50
Bench/Add'l Dilution:	400
Prep Factor/Overall:	20000
Temperature (deg c):	20

		Raw	Final	CRL*	
	Units =>	ug/l	ug/l		
1	Iron	1167	23350000	#Error	

4/23/2019 1:43:05 PM

Prep ID:	89964-001.09
Prep Initial (g/mL):	1
Prep Final (mL):	50
Bench/Add'l Dilution:	100
Prep Factor/Overall:	5000
Temperature (deg c):	20

		Raw	Final	CRL*	
	Units =>	ug/l	ug/l		
1	Beryllium	24.97	124800	#Error	
2	Potassium	2528	12640000	#Error	
3	Vanadium	66.66	333300	#Error	
4	Manganese	161.1	805600	#Error	
5	Nickel	67.17	335900	#Error	
6	Zinc	103.7	518700	#Error	
7	Arsenic	48.80	244000	#Error	
8	Selenium	49.71	248500	#Error	
9	Molybdenum	44.59	222900	#Error	
10	Tin	42.23	211100	#Error	
11	Antimony	40.03	200200	#Error	
12	Thallium	30.73	153600	#Error	
13	Lead	71.62	358100	#Error	
	89964-001 Total Concentration:	53500000			ug/l

4/23/19

*CRL - Client Requested Reporting Limit - SUBJECT TO CHANGE!!

					True Value Range	
Element	Reprep (DF=100)	Original Prep (DF=100)	Original Prep (DF=200)	Original Prep (DF=20)	Low	High
Na	530.173	443.08	120.555	2106.099	1460	3000
Mg	748.383	653.893	178.458	3283.146	2110	4310
K	2733.518	2527.795	666.897	11977.963	8030	14600
Ca	1629.51	1597.679	442.455	7347.03	5380	9530
Cr	39.199	35.482	9.652	180.587	113	210
Mn	171.701	161.122	43.9	824.472	594	998
Fe	5223.827	1640.754	1167.292	22865.535	7150	27700
Ni	73.231	67.172	18.23	352.968	223	419
Cu	27.867	24.764	6.771	123.079	94.9	158
Zn	117.284	103.742	28.75	529.644	374	705
As	38.653	48.8	13.14	246.558	89.5	514
Se	48.855	49.706	13.488	246.976	190	360
Ag	16.774	11.65	3.176	63.468	40.7	101
Cd	20.643	19.105	5.152	97.81	70.7	139
Ba	93.718	88.261	23.724	487.236	341	568
Pb	100.571	71.623	18.547	341.421	257	432
					Acceptance Range	
	Reprep at 100x	Original at 100x	Original at 200x	Original at 20x	Low	High
Na	2650.87	2215.40	1205.55	**2106.10**	1460	3000
Mg	3741.92	3269.47	1784.58	**3283.15**	2110	4310
K	13667.59	**12638.98**	6668.97	11977.96	8030	14600
Ca	8147.55	7988.40	4424.55	**7347.03**	5380	9530
Cr	196.00	177.41	96.52	**180.59**	113	210
Mn	858.51	**805.61**	439.00	824.47	594	998
Fe	26119.14	8203.77	11672.92	22865.54	7150	27700
Ni	366.16	**335.86**	182.30	352.97	223	419
Cu	139.34	**123.82**	67.71	123.08	94.9	158
Zn	586.42	**518.71**	287.50	529.64	374	705
As	193.27	**244.00**	131.40	246.56	89.5	214
Se	244.28	**248.53**	134.88	246.98	190	360
Ag	83.87	58.25	31.76	**63.47**	40.7	101
Cd	103.22	95.53	51.52	**97.81**	70.7	139
Ba	468.59	441.31	237.24	**487.24**	341	568
Pb	502.86	**358.12**	185.47	341.42	257	432

100
200
20
50
1000

RPD			
Original v. Reprep (100X)	Original 100x v. 200x	Original 200x v. 20x	Original 100x v 20x
17.90	59.04	54.39	5.06
13.48	58.76	59.14	0.42
7.82	61.84	56.94	5.37
1.97	57.42	49.65	8.36
9.95	59.06	60.67	1.77
6.36	58.91	61.02	2.31
104.39	34.91	64.81	94.38
8.63	59.27	63.77	4.97
11.79	58.59	58.04	0.60
12.25	57.36	59.27	2.09
23.21	59.99	60.94	1.04
1.73	59.28	58.71	0.63
36.05	58.86	66.59	8.57
7.74	59.85	62.00	2.36
6.00	60.15	69.01	9.89
33.62	63.52	59.20	4.77

Bolded numbers were reported values

Concentrations

8/26/2019 4:38:48 PM

QTEGRA

Original

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

Analysis index: 15 Analysis started at: 4/23/2019 11:17:34 AM Rack: 0
Analysis label: QCS User name: FIBERTEC\chemist Vial: 10

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	15Sc (STD)	47Ti (KED)
Concentration average	52.500 ppb	51.128 ppb	46.173 ppb	47.095 ppb	50.222 ppb	49.563 ppb	50.966 ppb	66.180 ppb	101.974 %	95.266 %	49.943 ppb
Concentration per Run 1	52.469 ppb	51.086 ppb	46.484 ppb	46.504 ppb	50.732 ppb	50.881 ppb	49.588 ppb	67.276 ppb	107.572 %	93.887 %	49.450 ppb
Concentration per Run 2	53.042 ppb	51.330 ppb	45.373 ppb	47.596 ppb	49.405 ppb	47.537 ppb	51.638 ppb	65.830 ppb	101.493 %	95.950 %	48.317 ppb
Concentration per Run 3	51.989 ppb	50.968 ppb	46.663 ppb	47.186 ppb	50.528 ppb	50.270 ppb	51.672 ppb	65.434 ppb	96.765 %	95.960 %	52.063 ppb
Concentration RSD	1.0 %	0.4 %	1.5 %	1.2 %	1.4 %	3.6 %	2.3 %	1.5 %	5.4 %	1.3 %	3.8 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	74Ge (STD)	72Ge (KED)	75As (KED)
Concentration average	50.388 ppb	51.331 ppb	48.237 ppb	54.021 ppb	53.340 ppb	52.631 ppb	51.808 ppb	50.173 ppb	96.523 %	97.827 %	50.842 ppb
Concentration per Run 1	49.678 ppb	51.007 ppb	47.718 ppb	55.144 ppb	53.060 ppb	51.591 ppb	51.787 ppb	48.930 ppb	93.874 %	105.215 %	49.629 ppb
Concentration per Run 2	49.875 ppb	51.271 ppb	47.855 ppb	52.616 ppb	52.614 ppb	51.970 ppb	51.311 ppb	50.240 ppb	97.798 %	96.720 %	50.502 ppb
Concentration per Run 3	51.610 ppb	51.716 ppb	49.138 ppb	54.302 ppb	54.347 ppb	54.334 ppb	52.327 ppb	51.349 ppb	97.896 %	91.546 %	51.793 ppb
Concentration RSD	2.1 %	0.7 %	1.6 %	2.4 %	1.7 %	2.8 %	1.0 %	2.4 %	2.4 %	7.1 %	2.1 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	51.306 ppb	49.315 ppb	49.167 ppb	50.638 ppb	96.902 %	52.373 ppb	49.761 ppb	47.927 ppb	45.186 ppb	45.247 ppb	99.549 %
Concentration per Run 1	51.666 ppb	49.357 ppb	49.005 ppb	49.801 ppb	102.971 %	52.595 ppb	50.873 ppb	47.501 ppb	44.197 ppb	45.078 ppb	108.083 %
Concentration per Run 2	50.284 ppb	49.292 ppb	49.570 ppb	51.438 ppb	95.973 %	52.614 ppb	49.233 ppb	48.165 ppb	44.978 ppb	45.996 ppb	97.413 %
Concentration per Run 3	51.968 ppb	49.297 ppb	48.928 ppb	50.676 ppb	91.762 %	51.908 ppb	49.178 ppb	48.114 ppb	46.384 ppb	44.669 ppb	95.153 %
Concentration RSD	1.8 %	0.1 %	0.7 %	1.6 %	5.8 %	0.8 %	1.9 %	0.8 %	2.5 %	1.5 %	5.8 %

Category	175Lu (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	99.774 %	53.869 ppb	54.409 ppb	1,204.500 %	-0.006 ppb	3.996 ppb
Concentration per Run 1	107.026 %	52.267 ppb	53.902 ppb	1,273.970 %	-0.006 ppb	4.021 ppb
Concentration per Run 2	97.977 %	54.741 ppb	54.424 ppb	1,198.873 %	-0.005 ppb	3.911 ppb
Concentration per Run 3	94.317 %	54.599 ppb	54.900 ppb	1,140.659 %	-0.005 ppb	4.057 ppb
Concentration RSD	6.6 %	2.6 %	0.9 %	5.5 %	7.9 %	1.9 %

Concentrations

8/26/2019 4:38:48 PM

QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

Analysis index: 37
Analysis label: PT19D23B.MB*
Analysis started at: 4/23/2019 11:49:47 AM
User name: FIBERTEC\chemist
Rack: 1
Vial: 12

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	0.005 ppb	0.001 ppb	0.000 ppb	[illegible]	0.730 ppb	2.075 ppb	10.983 ppb	4.952 ppb	100.645 %	95.698 %	0.000 ppb
Concentration per Run 1	0.013 ppb	0.000 ppb	-0.004 ppb	14.205 ppb	0.586 ppb	2.054 ppb	9.445 ppb	5.630 ppb	104.266 %	92.395 %	0.009 ppb
Concentration per Run 2	0.003 ppb	0.002 ppb	-0.002 ppb	14.907 ppb	0.869 ppb	2.299 ppb	10.851 ppb	4.825 ppb	100.081 %	95.184 %	0.010 ppb
Concentration per Run 3	-0.001 ppb	0.000 ppb	0.005 ppb	15.994 ppb	0.736 ppb	1.871 ppb	12.654 ppb	4.403 ppb	97.589 %	99.515 %	-0.019 ppb
Concentration RSD	136.8 %	139.1 %	1,509.7 %	6.0 %	19.4 %	10.4 %	14.5 %	12.8 %	3.4 %	3.7 %	6,398.1 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)
Concentration average	-0.060 ppb	0.003 ppb	0.110 ppb	2.984 ppb	0.001 ppb	0.005 ppb	0.034 ppb	0.287 ppb	96.568 %	100.379 %	0.011 ppb
Concentration per Run 1	-0.059 ppb	0.004 ppb	0.210 ppb	3.089 ppb	0.001 ppb	0.008 ppb	0.034 ppb	0.275 ppb	93.404 %	103.145 %	0.007 ppb
Concentration per Run 2	-0.061 ppb	-0.003 ppb	0.067 ppb	3.191 ppb	0.003 ppb	0.008 ppb	0.039 ppb	0.301 ppb	95.363 %	98.174 %	0.018 ppb
Concentration per Run 3	-0.060 ppb	0.010 ppb	0.053 ppb	2.671 ppb	0.000 ppb	0.001 ppb	0.030 ppb	0.285 ppb	100.938 %	99.819 %	0.009 ppb
Concentration RSD	1.7 %	190.4 %	76.7 %	9.2 %	111.8 %	76.5 %	13.0 %	4.6 %	4.0 %	2.5 %	52.3 %

Category	78Se (KED)	82Sr (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	0.033 ppb	0.007 ppb	0.017 ppb	0.027 ppb	97.612 %	0.001 ppb	0.001 ppb	0.153 ppb	0.408 ppb	0.068 ppb	100.698 %
Concentration per Run 1	0.063 ppb	-0.002 ppb	0.010 ppb	0.017 ppb	100.777 %	0.001 ppb	0.003 ppb	0.212 ppb	0.401 ppb	0.072 ppb	105.564 %
Concentration per Run 2	0.047 ppb	0.004 ppb	0.021 ppb	0.032 ppb	95.177 %	0.001 ppb	0.000 ppb	0.109 ppb	0.418 ppb	0.062 ppb	99.101 %
Concentration per Run 3	-0.012 ppb	0.019 ppb	0.022 ppb	0.032 ppb	96.883 %	0.001 ppb	0.000 ppb	0.137 ppb	0.405 ppb	0.071 ppb	97.429 %
Concentration RSD	121.5 %	153.8 %	39.7 %	32.9 %	2.9 %	5.4 %	173.2 %	34.7 %	2.1 %	8.4 %	4.3 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	100.467 %	0.005 ppb	0.044 ppb	100.002 %	0.075 ppb	0.001 ppb
Concentration per Run 1	104.294 %	0.004 ppb	0.045 ppb	104.313 %	0.073 ppb	0.001 ppb
Concentration per Run 2	98.845 %	0.005 ppb	0.044 ppb	98.488 %	0.076 ppb	0.001 ppb
Concentration per Run 3	98.261 %	0.005 ppb	0.042 ppb	97.203 %	0.075 ppb	0.001 ppb
Concentration RSD	3.3 %	14.6 %	3.0 %	3.8 %	1.9 %	9.5 %

Concentrations

8/26/2019 4:38:48 PM

QTEGRA

Instrument Name	Serial Number
ICAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	_Application Data\Workspace\LabBooks

Analysis index: 38
Analysis label: PT19D23B.LCS
Analysis started at: 4/23/2019 11:51:16 AM
User name: FIBERTEC\chemist
Rack: 1
Vial: 13

Category	7Li (STD)	9Be (STD)	11B (STD)	24Mg (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	10.665 ppb	10.346 ppb	9.206 ppb	1,587.429 ppb	515.424 ppb	53.492 ppb	533.202 ppb	1,578.389 ppb	96.076 %	91.937 %	10.016 ppb
Concentration per Run 1	10.783 ppb	10.251 ppb	9.094 ppb	1,619.733 ppb	512.198 ppb	53.783 ppb	535.315 ppb	1,534.142 ppb	99.436 %	92.425 %	9.939 ppb
Concentration per Run 2	10.693 ppb	10.399 ppb	9.315 ppb	1,525.915 ppb	509.118 ppb	52.759 ppb	530.484 ppb	1,600.207 ppb	95.964 %	91.728 %	9.993 ppb
Concentration per Run 3	10.518 ppb	10.389 ppb	9.210 ppb	1,616.638 ppb	524.955 ppb	53.934 ppb	533.807 ppb	1,600.818 ppb	92.827 %	91.657 %	10.117 ppb
Concentration RSD	1.3 %	0.8 %	1.2 %	3.4 %	1.6 %	1.2 %	0.6 %	2.4 %	3.4 %	0.5 %	0.9 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	71Ga (STD)	71Ga (KED)	75As (KED)
Concentration average	10.136 ppb	20.153 ppb	48.971 ppb	260.153 ppb	9.744 ppb	20.429 ppb	20.604 ppb	50.519 ppb	91.784 %	94.672 %	10.301 ppb
Concentration per Run 1	10.279 ppb	20.541 ppb	49.127 ppb	269.688 ppb	9.775 ppb	20.653 ppb	21.090 ppb	50.978 ppb	89.452 %	96.667 %	10.387 ppb
Concentration per Run 2	10.108 ppb	20.074 ppb	49.183 ppb	256.220 ppb	9.827 ppb	20.236 ppb	20.656 ppb	49.896 ppb	93.455 %	92.670 %	10.250 ppb
Concentration per Run 3	10.021 ppb	19.842 ppb	48.604 ppb	254.552 ppb	9.629 ppb	20.399 ppb	20.065 ppb	50.682 ppb	92.444 %	94.680 %	10.266 ppb
Concentration RSD	1.3 %	1.8 %	0.7 %	3.2 %	1.1 %	1.0 %	2.6 %	1.1 %	2.3 %	2.1 %	0.7 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	10.650 ppb	10.542 ppb	10.572 ppb	21.715 ppb	90.388 %	9.865 ppb	10.566 ppb	10.095 ppb	9.219 ppb	48.185 ppb	94.976 %
Concentration per Run 1	10.941 ppb	10.783 ppb	10.857 ppb	21.460 ppb	94.008 %	9.773 ppb	10.251 ppb	10.161 ppb	8.899 ppb	48.010 ppb	99.292 %
Concentration per Run 2	11.353 ppb	10.301 ppb	10.593 ppb	21.700 ppb	88.304 %	9.975 ppb	10.639 ppb	10.079 ppb	9.341 ppb	48.541 ppb	93.347 %
Concentration per Run 3	10.270 ppb	10.541 ppb	10.267 ppb	21.984 ppb	88.851 %	9.848 ppb	10.809 ppb	10.045 ppb	9.416 ppb	48.002 ppb	92.289 %
Concentration RSD	5.0 %	2.3 %	2.8 %	1.2 %	3.5 %	1.0 %	2.7 %	0.6 %	3.0 %	0.6 %	4.0 %

Category	175Lu (KED)	208Pb (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	95.540 %	11.077 ppb	20.687 ppb	93.701 %	9.689 ppb	10.185 ppb
Concentration per Run 1	100.143 %	11.106 ppb	20.713 ppb	97.363 %	9.518 ppb	10.018 ppb
Concentration per Run 2	93.038 %	11.123 ppb	20.399 ppb	92.369 %	9.862 ppb	10.238 ppb
Concentration per Run 3	93.437 %	11.003 ppb	20.948 ppb	91.370 %	9.690 ppb	10.298 ppb
Concentration RSD	4.2 %	0.6 %	1.3 %	3.4 %	3.3 %	1.4 %

Concentrations

8/26/2019 4:38:48 PM

QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.lmexp	Application Data\Workspace\LabBooks

Analysis index: 112 Analysis started at: 4/23/2019 1:47:46 PM Rack: 3
Analysis label: CCB User name: FIBERTEC\chemist Vial: 1

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	-0.005 ppb	0.000 ppb	0.081 ppb	2.250 ppb	4.065 ppb	0.996 ppb	1.092 ppb	7.786 ppb	100.482 %	94.287 %	0.090 ppb
Concentration per Run 1	-0.006 ppb	0.000 ppb	0.088 ppb	1.591 ppb	4.336 ppb	0.929 ppb	0.925 ppb	8.240 ppb	104.422 %	93.080 %	0.149 ppb
Concentration per Run 2	-0.003 ppb	0.000 ppb	0.081 ppb	2.111 ppb	4.126 ppb	0.976 ppb	0.412 ppb	7.548 ppb	100.282 %	96.298 %	0.053 ppb
Concentration per Run 3	-0.007 ppb	0.000 ppb	0.072 ppb	3.077 ppb	3.733 ppb	1.082 ppb	1.938 ppb	7.569 ppb	96.743 %	93.483 %	0.068 ppb
Concentration RSD	35.2 %	797.0 %	10.0 %	33.4 %	7.5 %	7.9 %	71.1 %	5.1 %	3.8 %	1.9 %	57.3 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)
Concentration average	-0.086 ppb	-0.005 ppb	0.061 ppb	2.568 ppb	0.001 ppb	0.001 ppb	0.570 ppb	0.337 ppb	96.022 %	100.919 %	0.011 ppb
Concentration per Run 1	-0.091 ppb	-0.009 ppb	0.075 ppb	2.975 ppb	0.001 ppb	-0.002 ppb	0.583 ppb	0.349 ppb	94.415 %	103.387 %	0.000 ppb
Concentration per Run 2	-0.089 ppb	0.007 ppb	0.056 ppb	2.437 ppb	0.000 ppb	0.004 ppb	0.571 ppb	0.350 ppb	96.769 %	100.324 %	0.017 ppb
Concentration per Run 3	-0.076 ppb	-0.014 ppb	0.052 ppb	2.293 ppb	0.001 ppb	0.002 ppb	0.556 ppb	0.314 ppb	96.881 %	99.046 %	0.015 ppb
Concentration RSD	9.3 %	219.2 %	19.9 %	14.0 %	64.2 %	209.3 %	2.3 %	6.1 %	1.5 %	2.2 %	85.9 %

Category	78Se (KED)	82Se (STD)	85Rb (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	0.012 ppb	-0.005 ppb	0.035 ppb	-0.006 ppb	98.017 %	0.001 ppb	0.000 ppb	-0.022 ppb	0.038 ppb	0.032 ppb	101.864 %
Concentration per Run 1	-0.010 ppb	0.003 ppb	0.034 ppb	-0.010 ppb	102.614 %	0.000 ppb	0.000 ppb	0.016 ppb	0.035 ppb	0.032 ppb	104.945 %
Concentration per Run 2	0.058 ppb	-0.034 ppb	0.034 ppb	-0.011 ppb	94.697 %	0.001 ppb	0.001 ppb	-0.037 ppb	0.040 ppb	0.033 ppb	100.151 %
Concentration per Run 3	-0.013 ppb	0.017 ppb	0.036 ppb	0.003 ppb	96.741 %	0.001 ppb	0.000 ppb	-0.046 ppb	0.040 ppb	0.033 ppb	100.497 %
Concentration RSD	342.9 %	542.4 %	4.6 %	127.7 %	4.2 %	89.8 %	173.2 %	151.5 %	7.9 %	1.6 %	2.6 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	103.820 %	0.003 ppb	0.011 ppb	102.101 %	0.021 ppb	0.000 ppb
Concentration per Run 1	106.699 %	0.003 ppb	0.011 ppb	105.182 %	0.022 ppb	0.000 ppb
Concentration per Run 2	102.266 %	0.003 ppb	0.010 ppb	100.989 %	0.022 ppb	0.000 ppb
Concentration per Run 3	102.504 %	0.003 ppb	0.010 ppb	100.131 %	0.019 ppb	0.000 ppb
Concentration RSD	2.4 %	8.0 %	7.8 %	2.6 %	7.4 %	33.4 %

Concentrations

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Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

Analysis index: 113 Analysis started at: 4/23/2019 1:49:20 PM Rack: 3
Analysis label: LL QC User name: FIBERTEC\chemist Vial: 2

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	40Ca (STD)	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	0.122 ppb	0.127 ppb	1.165 ppb	7.877 ppb	0.942 ppb	1.207 ppb	6.649 ppb	6.052 ppb	100.045 %	92.597 %	1.175 ppb
Concentration per Run 1	0.116 ppb	0.127 ppb	1.122 ppb	6.644 ppb	0.768 ppb	1.285 ppb	4.811 ppb	4.532 ppb	105.647 %	91.664 %	1.230 ppb
Concentration per Run 2	0.125 ppb	0.129 ppb	1.159 ppb	9.192 ppb	1.299 ppb	1.108 ppb	8.069 ppb	4.106 ppb	97.099 %	92.960 %	1.199 ppb
Concentration per Run 3	0.126 ppb	0.125 ppb	1.213 ppb	7.793 ppb	0.758 ppb	1.228 ppb	7.067 ppb	9.516 ppb	97.389 %	93.168 %	1.094 ppb
Concentration RSD	4.4 %	1.9 %	3.9 %	16.2 %	32.8 %	7.5 %	25.1 %	49.7 %	4.9 %	0.9 %	6.1 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	71Ga (STD)	72Ge (KED)	75As (KED)
Concentration average	0.188 ppb	0.240 ppb	1.158 ppb	0.678 ppb	0.119 ppb	1.253 ppb	0.236 ppb	1.217 ppb	94.039 %	99.907 %	0.131 ppb
Concentration per Run 1	0.183 ppb	0.254 ppb	1.159 ppb	0.535 ppb	0.124 ppb	1.277 ppb	0.233 ppb	1.184 ppb	92.312 %	102.064 %	0.128 ppb
Concentration per Run 2	0.184 ppb	0.248 ppb	1.154 ppb	0.717 ppb	0.115 ppb	1.255 ppb	0.247 ppb	1.231 ppb	94.164 %	98.755 %	0.135 ppb
Concentration per Run 3	0.196 ppb	0.220 ppb	1.162 ppb	0.782 ppb	0.117 ppb	1.227 ppb	0.228 ppb	1.236 ppb	95.642 %	98.903 %	0.130 ppb
Concentration RSD	3.9 %	7.6 %	0.4 %	18.9 %	4.1 %	2.0 %	4.1 %	2.4 %	1.8 %	1.9 %	3.0 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	0.243 ppb	0.246 ppb	1.251 ppb	0.108 ppb	94.937 %	0.023 ppb	0.025 ppb	0.633 ppb	0.134 ppb	1.141 ppb	100.127 %
Concentration per Run 1	0.269 ppb	0.226 ppb	1.223 ppb	0.097 ppb	99.244 %	0.025 ppb	0.024 ppb	0.667 ppb	0.119 ppb	1.140 ppb	104.800 %
Concentration per Run 2	0.271 ppb	0.250 ppb	1.256 ppb	0.108 ppb	92.402 %	0.026 ppb	0.026 ppb	0.648 ppb	0.139 ppb	1.137 ppb	99.168 %
Concentration per Run 3	0.189 ppb	0.263 ppb	1.274 ppb	0.121 ppb	93.165 %	0.021 ppb	0.024 ppb	0.587 ppb	0.143 ppb	1.146 ppb	96.414 %
Concentration RSD	19.3 %	7.5 %	2.1 %	11.0 %	3.9 %	9.6 %	4.4 %	6.5 %	9.6 %	0.4 %	4.3 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	101.455 %	0.116 ppb	0.122 ppb	99.422 %	0.094 ppb	0.101 ppb
Concentration per Run 1	105.855 %	0.118 ppb	0.121 ppb	103.289 %	0.093 ppb	0.105 ppb
Concentration per Run 2	100.583 %	0.116 ppb	0.123 ppb	99.106 %	0.094 ppb	0.097 ppb
Concentration per Run 3	97.926 %	0.114 ppb	0.122 ppb	95.872 %	0.094 ppb	0.100 ppb
Concentration RSD	4.0 %	1.7 %	0.6 %	3.7 %	0.5 %	3.7 %

Concentrations

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Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

Analysis index: 114 Analysis started at: 4/23/2019 1:50:54 PM Rack: 3
Analysis label: CCV User name: FIBERTEC\chemist Vial: 3

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	47Ti (STD)	47Ti (KED)
Concentration average	39.918 ppb	39.002 ppb	35.183 ppb	5,948.359 ppb	2,051.765 ppb	197.663 ppb	2,025.139 ppb	6,000.577 ppb	100.935 %	94.944 %	39.811 ppb
Concentration per Run 1	39.290 ppb	39.023 ppb	34.779 ppb	6,077.074 ppb	2,038.460 ppb	204.391 ppb	2,036.631 ppb	5,963.438 ppb	103.153 %	94.348 %	40.068 ppb
Concentration per Run 2	40.962 ppb	39.434 ppb	35.929 ppb	5,796.518 ppb	2,033.603 ppb	195.050 ppb	2,011.936 ppb	6,064.957 ppb	100.371 %	93.653 %	38.293 ppb
Concentration per Run 3	39.502 ppb	38.549 ppb	34.840 ppb	5,971.484 ppb	2,083.231 ppb	193.547 ppb	2,026.851 ppb	5,973.337 ppb	99.280 %	96.833 %	41.072 ppb
Concentration RSD	2.3 %	1.1 %	1.8 %	2.4 %	1.3 %	3.0 %	0.6 %	0.9 %	2.0 %	1.8 %	3.5 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)
Concentration average	39.144 ppb	77.175 ppb	194.745 ppb	994.420 ppb	[illegible]	76.840 ppb	78.834 ppb	189.782 ppb	94.627 %	98.847 %	39.749 ppb
Concentration per Run 1	39.596 ppb	78.274 ppb	201.967 ppb	992.148 ppb	36.713 ppb	77.700 ppb	78.804 ppb	190.565 ppb	93.431 %	100.692 %	39.774 ppb
Concentration per Run 2	38.216 ppb	74.244 ppb	198.925 ppb	975.177 ppb	35.362 ppb	74.870 ppb	77.616 ppb	185.800 ppb	94.456 %	100.055 %	38.800 ppb
Concentration per Run 3	39.620 ppb	79.008 ppb	183.342 ppb	1,015.935 ppb	36.289 ppb	77.351 ppb	80.083 ppb	192.980 ppb	95.994 %	95.795 %	40.671 ppb
Concentration RSD	2.1 %	3.5 %	5.1 %	2.1 %	1.9 %	2.0 %	1.6 %	1.9 %	1.4 %	2.7 %	2.4 %

Category	78Se (KED)	82Sr (STD)	82Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	40.903 ppb	39.622 ppb	40.622 ppb	78.715 ppb	94.449 %	39.422 ppb	40.064 ppb	38.758 ppb	[illegible] ppb	188.218 ppb	99.807 %
Concentration per Run 1	41.265 ppb	39.490 ppb	39.871 ppb	78.675 ppb	97.408 %	39.619 ppb	40.219 ppb	39.327 ppb	35.627 ppb	187.262 ppb	103.096 %
Concentration per Run 2	39.749 ppb	39.616 ppb	41.233 ppb	79.143 ppb	94.004 %	39.057 ppb	39.795 ppb	37.401 ppb	35.694 ppb	187.337 ppb	98.428 %
Concentration per Run 3	41.695 ppb	39.760 ppb	40.762 ppb	78.328 ppb	91.935 %	39.591 ppb	40.178 ppb	39.548 ppb	37.179 ppb	190.055 ppb	97.896 %
Concentration RSD	2.5 %	0.3 %	1.7 %	0.5 %	2.9 %	0.3 %	0.6 %	3.0 %	2.4 %	0.8 %	2.9 %

Category	175Lu (KED)	205Tl (STD)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	102.740 %	40.449 ppb	79.803 ppb	96.289 %	39.073 ppb	38.716 ppb
Concentration per Run 1	106.167 %	40.400 ppb	80.277 ppb	100.690 %	38.292 ppb	38.387 ppb
Concentration per Run 2	100.941 %	40.345 ppb	79.299 ppb	93.425 %	39.349 ppb	39.615 ppb
Concentration per Run 3	101.113 %	40.602 ppb	79.835 ppb	94.753 %	39.576 ppb	38.147 ppb
Concentration RSD	2.9 %	0.3 %	0.6 %	4.0 %	1.8 %	2.0 %

Concentrations

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Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.lmexp	Application Data\Workspace\LabBooks

Analysis index: 99 Analysis started at: 4/23/2019 1:27:36 PM Rack: 3
Analysis label: CCB User name: FIBERTEC\chemist Vial: 1

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	0.006 ppb	0.000 ppb	0.143 ppb	4.311 ppb	4.716 ppb	2.984 ppb	1.670 ppb	2.641 ppb	95.460 %	90.904 %	0.056 ppb
Concentration per Run 1	0.000 ppb	0.000 ppb	0.133 ppb	2.866 ppb	5.718 ppb	3.717 ppb	0.385 ppb	2.784 ppb	99.124 %	90.619 %	0.114 ppb
Concentration per Run 2	0.011 ppb	0.000 ppb	0.153 ppb	5.059 ppb	4.622 ppb	2.899 ppb	2.182 ppb	2.952 ppb	93.338 %	89.975 %	0.027 ppb
Concentration per Run 3	0.005 ppb	0.000 ppb	0.144 ppb	5.007 ppb	3.809 ppb	2.337 ppb	2.444 ppb	2.188 ppb	93.917 %	92.119 %	0.027 ppb
Concentration RSD	94.1 %	32.8 %	7.0 %	29.0 %	20.3 %	23.3 %	67.1 %	15.2 %	3.3 %	1.2 %	89.9 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	74Ge (STD)	71Ga (KED)	75As (KED)
Concentration average	-0.142 ppb	0.006 ppb	0.135 ppb	7.821 ppb	0.002 ppb	0.006 ppb	0.600 ppb	0.379 ppb	93.416 %	95.328 %	0.021 ppb
Concentration per Run 1	-0.139 ppb	0.007 ppb	0.171 ppb	9.550 ppb	0.002 ppb	0.006 ppb	0.607 ppb	0.374 ppb	91.403 %	98.091 %	0.018 ppb
Concentration per Run 2	-0.141 ppb	0.008 ppb	0.144 ppb	7.369 ppb	0.003 ppb	0.009 ppb	0.583 ppb	0.404 ppb	93.245 %	93.776 %	0.025 ppb
Concentration per Run 3	-0.147 ppb	0.003 ppb	0.089 ppb	6.545 ppb	0.002 ppb	0.005 ppb	0.610 ppb	0.359 ppb	95.601 %	94.116 %	0.020 ppb
Concentration RSD	2.8 %	44.5 %	30.9 %	19.8 %	23.4 %	33.7 %	2.5 %	5.0 %	2.3 %	2.5 %	16.2 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	0.038 ppb	-0.017 ppb	0.038 ppb	0.017 ppb	93.587 %	0.000 ppb	0.000 ppb	0.025 ppb	0.032 ppb	0.046 ppb	98.012 %
Concentration per Run 1	0.053 ppb	-0.034 ppb	0.042 ppb	0.015 ppb	98.051 %	0.000 ppb	0.001 ppb	0.123 ppb	0.030 ppb	0.050 ppb	102.808 %
Concentration per Run 2	0.048 ppb	-0.021 ppb	0.042 ppb	0.016 ppb	91.458 %	0.000 ppb	0.000 ppb	-0.003 ppb	0.035 ppb	0.042 ppb	95.870 %
Concentration per Run 3	0.013 ppb	0.004 ppb	0.031 ppb	0.021 ppb	91.253 %	0.001 ppb	0.000 ppb	-0.043 ppb	0.031 ppb	0.044 ppb	95.359 %
Concentration RSD	57.6 %	111.6 %	16.7 %	18.5 %	4.1 %	41.0 %	173.2 %	340.2 %	7.9 %	9.3 %	4.2 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	99.321 %	0.002 ppb	0.026 ppb	97.745 %	0.035 ppb	0.000 ppb
Concentration per Run 1	103.753 %	0.002 ppb	0.029 ppb	101.135 %	0.035 ppb	0.001 ppb
Concentration per Run 2	96.837 %	0.002 ppb	0.026 ppb	96.021 %	0.035 ppb	0.000 ppb
Concentration per Run 3	97.371 %	0.002 ppb	0.023 ppb	96.078 %	0.035 ppb	0.000 ppb
Concentration RSD	3.9 %	7.3 %	10.6 %	3.0 %	1.0 %	25.9 %

Concentrations

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Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419d23b.lmexp	_Application Data\Workspace\LabBooks

Analysis index: 100 Analysis started at: 4/23/2019 1:29:10 PM Rack: 3
Analysis label: LL QC User name: FIBERTEC\chemist Vial: 2

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	41Ca (S...	45Sc (KED)	45Sc (STD)	47Ti (KED)
Concentration average	0.136 ppb	0.126 ppb	1.249 ppb	10.358 ppb	1.370 ppb	1.778 ppb	7.383 ppb	11.146 ppb	93.761 %	86.813 %	1.139 ppb
Concentration per Run 1	0.137 ppb	0.133 ppb	1.329 ppb	10.515 ppb	1.693 ppb	2.149 ppb	7.753 ppb	9.803 ppb	96.276 %	85.301 %	0.993 ppb
Concentration per Run 2	0.143 ppb	0.118 ppb	1.262 ppb	10.164 ppb	1.277 ppb	2.066 ppb	7.367 ppb	14.028 ppb	93.205 %	86.319 %	1.132 ppb
Concentration per Run 3	0.128 ppb	0.127 ppb	1.157 ppb	10.396 ppb	1.141 ppb	1.120 ppb	7.028 ppb	9.607 ppb	91.803 %	88.819 %	1.292 ppb
Concentration RSD	5.3 %	6.1 %	7.0 %	1.7 %	21.0 %	32.2 %	4.9 %	22.4 %	2.4 %	2.1 %	13.1 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (STD)	66Zn (...	74Ge (STD)	74Ge (KED)	75As (KED)
Concentration average	0.095 ppb	0.246 ppb	1.179 ppb	1.875 ppb	0.116 ppb	1.197 ppb	0.257 ppb	1.242 ppb	90.217 %	94.172 %	0.139 ppb
Concentration per Run 1	0.097 ppb	0.263 ppb	1.184 ppb	1.591 ppb	0.118 ppb	1.194 ppb	0.250 ppb	1.241 ppb	88.182 %	97.324 %	0.128 ppb
Concentration per Run 2	0.092 ppb	0.233 ppb	1.095 ppb	2.037 ppb	0.111 ppb	1.179 ppb	0.258 ppb	1.229 ppb	91.040 %	95.674 %	0.130 ppb
Concentration per Run 3	0.095 ppb	0.243 ppb	1.259 ppb	1.997 ppb	0.120 ppb	1.219 ppb	0.263 ppb	1.256 ppb	91.430 %	89.519 %	0.160 ppb
Concentration RSD	2.8 %	6.3 %	6.9 %	13.2 %	4.3 %	1.7 %	2.5 %	1.1 %	2.0 %	4.4 %	13.1 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	0.194 ppb	0.239 ppb	1.256 ppb	0.124 ppb	91.659 %	0.023 ppb	0.024 ppb	0.616 ppb	0.129 ppb	1.135 ppb	95.106 %
Concentration per Run 1	0.180 ppb	0.250 ppb	1.216 ppb	0.116 ppb	95.914 %	0.023 ppb	0.029 ppb	0.715 ppb	0.123 ppb	1.128 ppb	98.317 %
Concentration per Run 2	0.216 ppb	0.249 ppb	1.239 ppb	0.111 ppb	92.783 %	0.023 ppb	0.023 ppb	0.579 ppb	0.130 ppb	1.127 ppb	95.079 %
Concentration per Run 3	0.186 ppb	0.218 ppb	1.312 ppb	0.144 ppb	86.280 %	0.023 ppb	0.021 ppb	0.556 ppb	0.136 ppb	1.150 ppb	91.923 %
Concentration RSD	10.1 %	7.5 %	4.0 %	14.6 %	5.4 %	1.7 %	17.6 %	13.9 %	5.4 %	1.1 %	3.6 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	96.646 %	0.116 ppb	0.125 ppb	94.736 %	0.109 ppb	0.103 ppb
Concentration per Run 1	100.396 %	0.113 ppb	0.124 ppb	98.141 %	0.107 ppb	0.103 ppb
Concentration per Run 2	95.969 %	0.117 ppb	0.124 ppb	93.167 %	0.110 ppb	0.103 ppb
Concentration per Run 3	93.573 %	0.118 ppb	0.127 ppb	92.901 %	0.110 ppb	0.103 ppb
Concentration RSD	3.6 %	2.3 %	1.5 %	3.1 %	1.8 %	0.2 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
ICAP Q	Undefined

LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

Analysis index: 101 Analysis started at: 4/23/2019 1:30:43 PM Rack: 3
Analysis label: CCV User name: FIBERTEC\chemist Vial: 3

Category	7Li (STD)	9Be (STD)	11B (STD)	23Na (KED)	24Mg (KED)	27Al (KED)	39K (KED)	44Ca (STD)	45Sc (KED)	47Ti (KED)
Concentration average	36.806 ppb	38.536 ppb	35.767 ppb	5,865.710 ppb	1,968.368 ppb	198.604 ppb	2,011.783 ppb	6,034.765 ppb	100.304 %	92.012 %	39.153 ppb
Concentration per Run 1	40.441 ppb	39.203 ppb	36.385 ppb	5,912.236 ppb	1,935.437 ppb	200.817 ppb	2,020.453 ppb	6,130.587 ppb	104.355 %	89.625 %	37.505 ppb
Concentration per Run 2	36.061 ppb	38.649 ppb	34.264 ppb	5,891.438 ppb	1,981.596 ppb	198.259 ppb	2,044.534 ppb	5,996.444 ppb	97.121 %	93.099 %	40.683 ppb
Concentration per Run 3	37.916 ppb	37.757 ppb	36.634 ppb	5,793.455 ppb	1,988.072 ppb	196.736 ppb	1,970.363 ppb	5,977.264 ppb	99.436 %	93.311 %	39.271 ppb
Concentration RSD	3.7 %	1.9 %	3.6 %	1.1 %	1.5 %	1.0 %	1.9 %	1.4 %	3.7 %	2.2 %	4.1 %

Category	51V (KED)	52Cr (KED)	55Mn (KED)	57Fe (KED)	59Co (KED)	60Ni (KED)	63Cu (KED)	66Zn (KED)	71Ga (STD)	74Ge (KED)	75As (KED)
Concentration average	38.895 ppb	76.406 ppb	194.310 ppb	986.042 ppb	35.588 ppb	75.908 ppb	76.949 ppb	189.912 ppb	93.185 %	97.438 %	39.547 ppb
Concentration per Run 1	38.544 ppb	75.461 ppb	195.921 ppb	989.017 ppb	36.358 ppb	75.071 ppb	78.753 ppb	189.798 ppb	91.496 %	101.537 %	39.064 ppb
Concentration per Run 2	39.000 ppb	76.621 ppb	195.368 ppb	994.861 ppb	35.801 ppb	75.706 ppb	76.548 ppb	189.671 ppb	93.783 %	95.355 %	39.823 ppb
Concentration per Run 3	39.140 ppb	77.137 ppb	191.640 ppb	994.256 ppb	34.604 ppb	76.949 ppb	75.546 ppb	190.268 ppb	94.275 %	95.421 %	39.754 ppb
Concentration RSD	0.8 %	1.1 %	1.2 %	1.5 %	2.5 %	1.3 %	2.1 %	0.2 %	1.6 %	3.6 %	1.1 %

Category	78Se (KED)	82Se (STD)	88Sr (KED)	95Mo (KED)	103Rh (KED)	107Ag (KED)	111Cd (KED)	118Sn (KED)	121Sb (KED)	137Ba (KED)	159Tb (KED)
Concentration average	40.242 ppb	39.091 ppb	39.812 ppb	77.603 ppb	92.711 %	39.490 ppb	39.379 ppb	38.225 ppb	35.893 ppb	184.661 ppb	98.711 %
Concentration per Run 1	39.876 ppb	39.109 ppb	39.929 ppb	78.141 ppb	94.336 %	40.022 ppb	40.440 ppb	38.377 ppb	35.641 ppb	185.580 ppb	102.575 %
Concentration per Run 2	40.266 ppb	39.073 ppb	39.414 ppb	76.547 ppb	93.178 %	39.418 ppb	38.669 ppb	38.071 ppb	35.507 ppb	182.780 ppb	96.418 %
Concentration per Run 3	40.563 ppb	39.091 ppb	40.092 ppb	78.120 ppb	90.621 %	39.028 ppb	39.029 ppb	38.226 ppb	36.532 ppb	185.823 ppb	97.139 %
Concentration RSD	0.9 %	0.0 %	0.9 %	1.2 %	2.1 %	1.3 %	2.4 %	0.4 %	1.5 %	0.9 %	3.4 %

Category	175Lu (KED)	205Tl (KED)	208Pb (KED)	209Bi (KED)	232Th (KED)	238U (KED)
Concentration average	100.956 %	40.957 ppb	81.112 ppb	94.993 %	38.473 ppb	39.253 ppb
Concentration per Run 1	105.534 %	40.444 ppb	80.929 ppb	98.242 %	38.955 ppb	39.793 ppb
Concentration per Run 2	98.863 %	41.530 ppb	80.591 ppb	93.276 %	38.923 ppb	38.638 ppb
Concentration per Run 3	98.471 %	40.895 ppb	81.816 ppb	93.462 %	37.541 ppb	39.328 ppb
Concentration RSD	3.9 %	1.3 %	0.8 %	3.0 %	2.1 %	1.5 %

Calibration
8/26/2019 4:43:13 PM

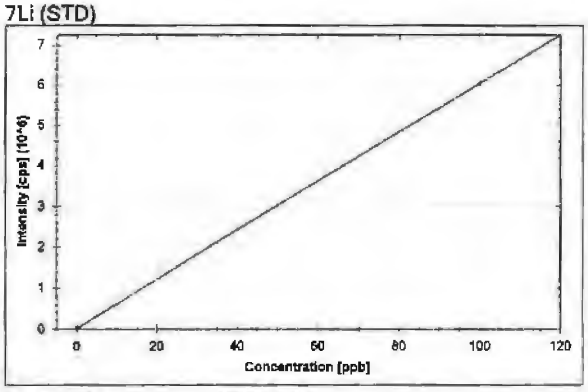
QTEGRA

Calibration Curves:

Instrument Name	Serial Number
iCAP Q	Undefined

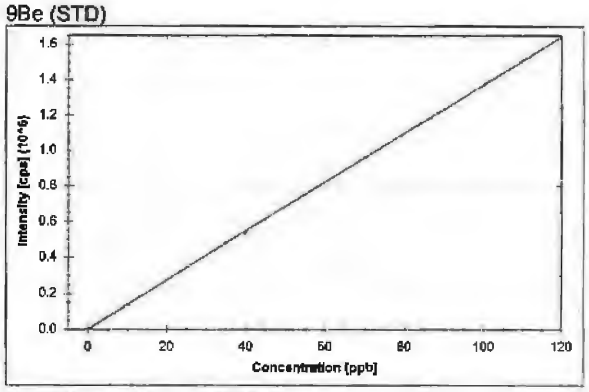
LabBook	LabBook Path
T419d23b.imexp	Application Data\Workspace\LabBooks

7Li (STD)



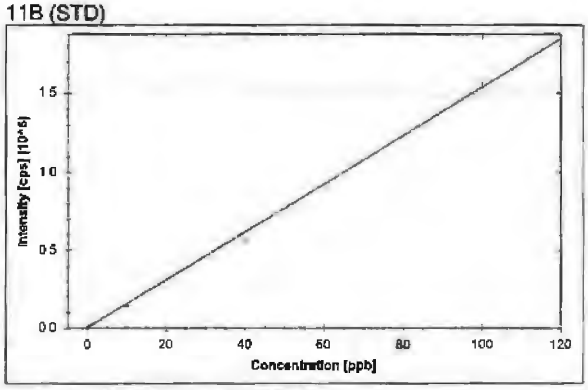
f(x) = 60437.9442*x + 4995.3232
R² = 1.0000
BEC = 0.083 ppb
LoD = 0.0105 ppb

9Be (STD)



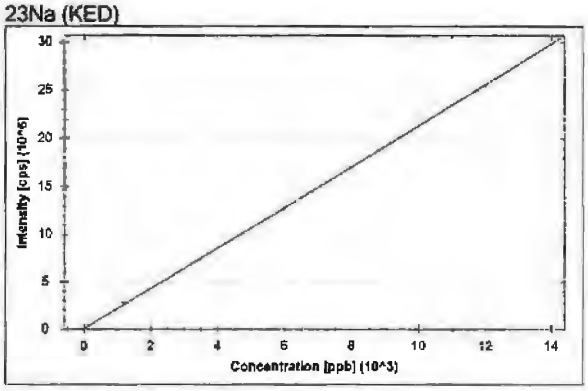
f(x) = 13721.1389*x + 24.6062
R² = 0.9999
BEC = 0.002 ppb
LoD = 0.0018 ppb

11B (STD)



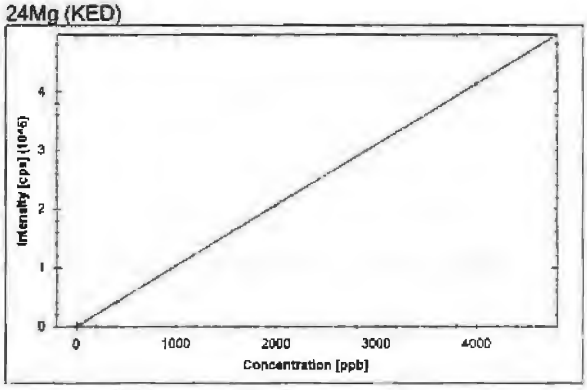
f(x) = 15353.0003*x + 3887.5758
R² = 0.9981
BEC = 0.253 ppb
LoD = 0.0194 ppb

23Na (KED)



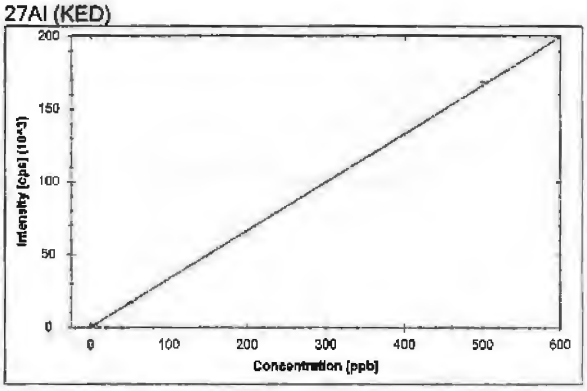
f(x) = 2128.6817*x + 38679.5555
R² = 1.0000
BEC = 18.171 ppb
LoD = 2.1705 ppb

24Mg (KED)



f(x) = 1034.2403*x + 170.9119
R² = 1.0000
BEC = 0.165 ppb

27Al (KED)

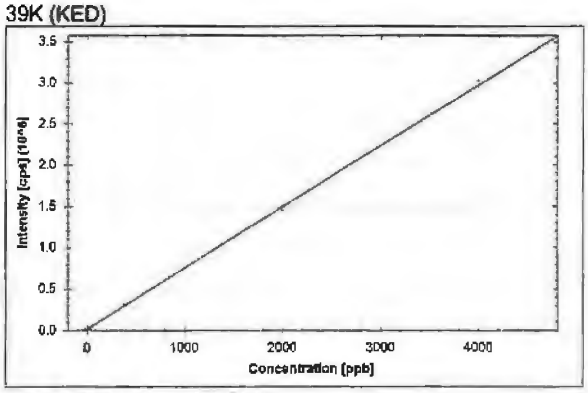


f(x) = 333.0185*x + 73.7357
R² = 0.9998
BEC = 0.221 ppb

Calibration
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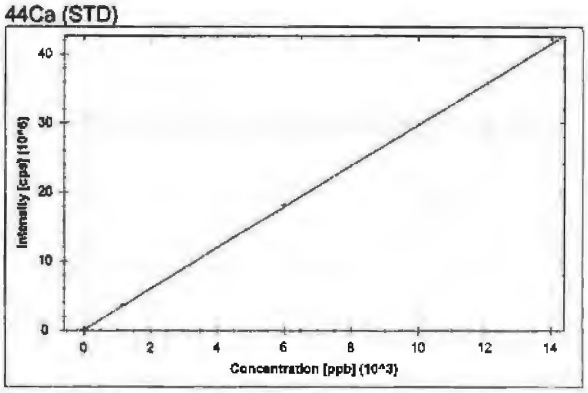
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39K (KED)



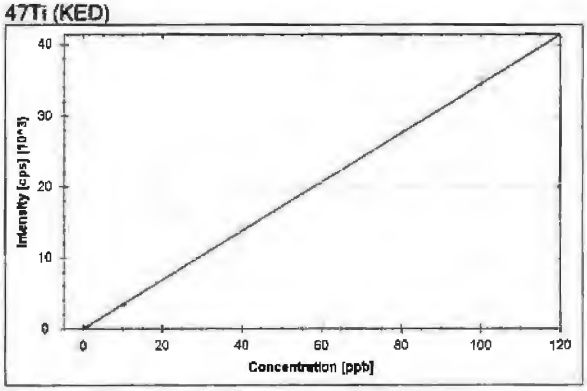
f(x) = 740.2228*x + 15280.6177
R² = 1.0000
BEC = 20.643 ppb
LoD = 3.3311 ppb

44Ca (STD)



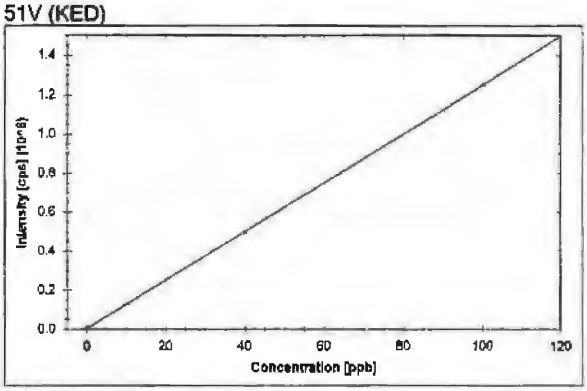
f(x) = 2967.6225*x + 64831.3635
R² = 1.0000
BEC = 21.846 ppb
LoD = 1.0672 ppb

47Ti (KED)



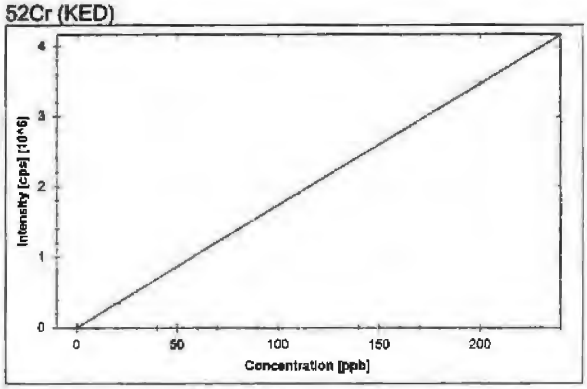
f(x) = 344.9245*x + 6.7177
R² = 1.0000
BEC = 0.019 ppb
LoD = 0.0268 ppb

51V (KED)



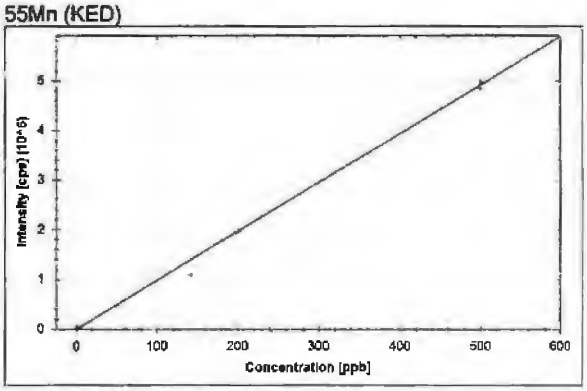
f(x) = 12466.7358*x + 2516.5460
R² = 1.0000
BEC = 0.202 ppb
LoD = 0.0126 ppb

52Cr (KED)



f(x) = 17305.1297*x + 1296.5143
R² = 0.9999
BEC = 0.075 ppb
LoD = 0.0257 ppb

55Mn (KED)

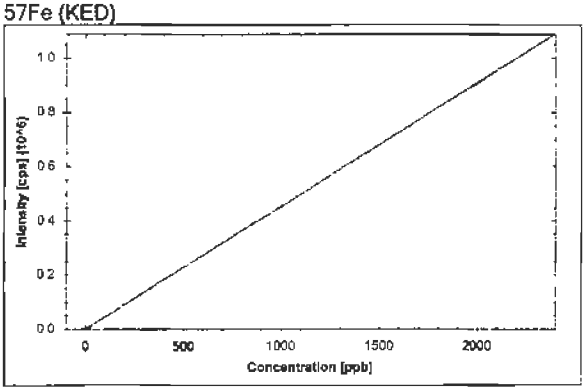


f(x) = 9831.9449*x + 386.8805
R² = 1.0000
BEC = 0.039 ppb
LoD = 0.0250 ppb

Calibration
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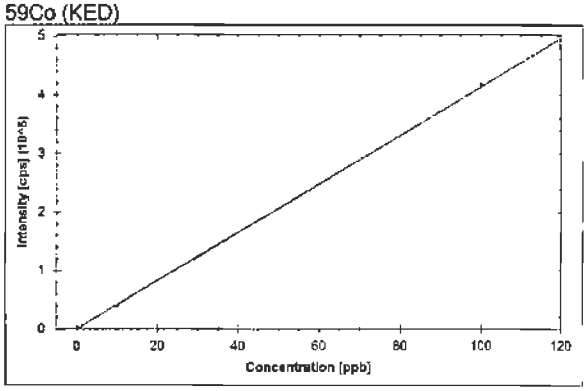
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57Fe (KED)



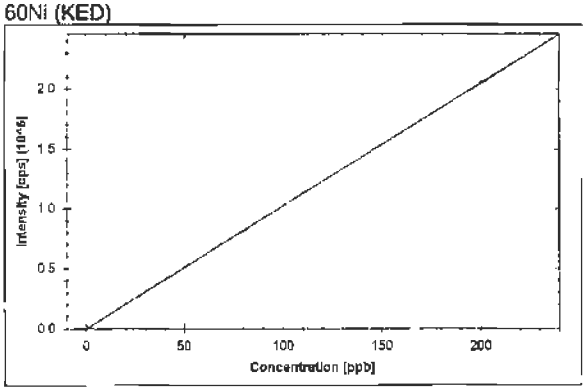
f(x) = 454.0246*x + 109.8732
R² = 1.0000
BEC = 0.242 ppb
LoD = 0.0419 ppb

59Co (KED)



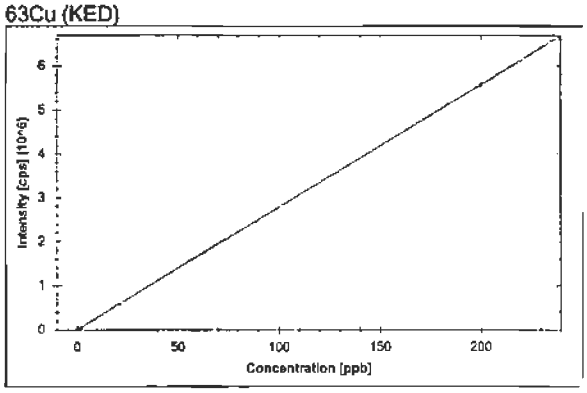
f(x) = 41390.8554*x + 22.9829
R² = 0.9990
BEC = 0.001 ppb
LoD = 0.0010 ppb

60Ni (KED)



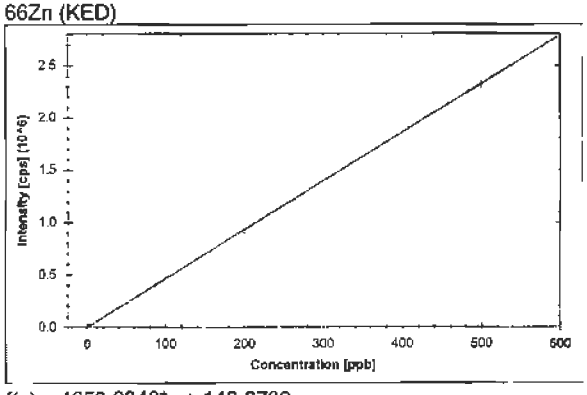
f(x) = 10229.7980*x + 113.0243
R² = 1.0000
BEC = 0.011 ppb
LoD = 0.0133 ppb

63Cu (KED)



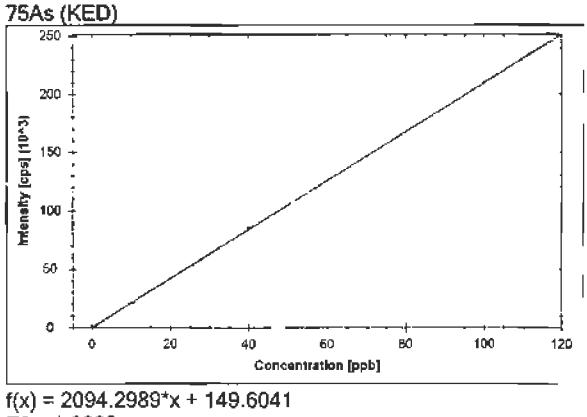
f(x) = 27862.4725*x + 576.4720
R² = 1.0000
BEC = 0.021 ppb
LoD = 0.0055 ppb

66Zn (KED)



f(x) = 4653.0340*x + 146.6789
R² = 0.9998
BEC = 0.032 ppb
LoD = 0.0095 ppb

75As (KED)

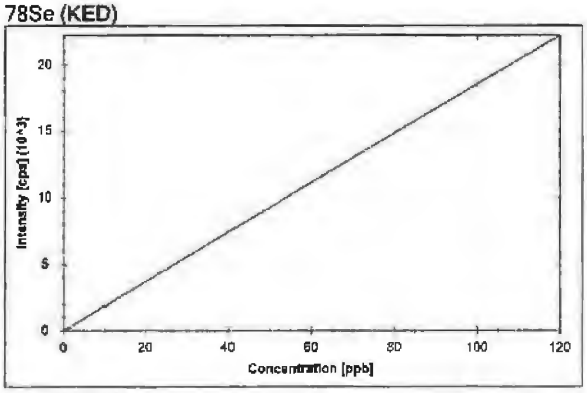


f(x) = 2094.2989*x + 149.6041
R² = 1.0000
BEC = 0.071 ppb
LoD = 0.0158 ppb

Calibration
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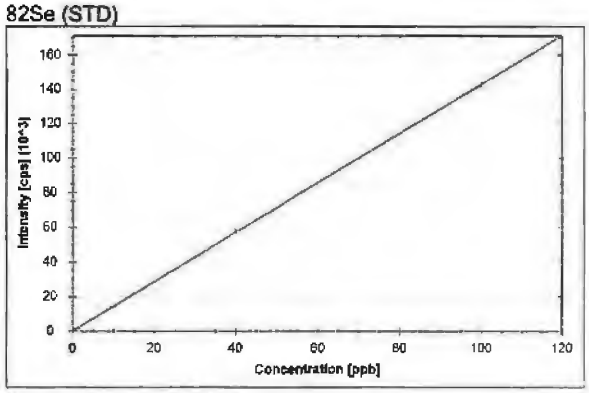
QTEGRA

78Se (KED)



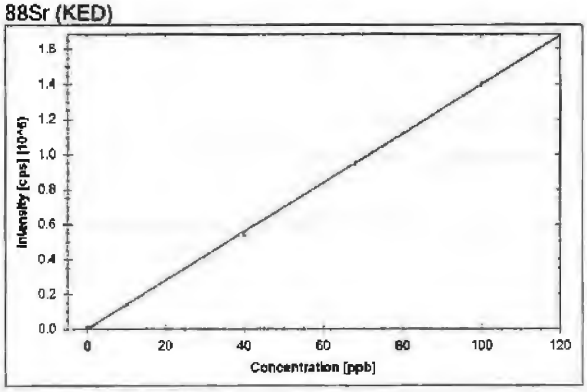
f(x) = 185.5617*x + -8.8948
R² = 1.0000
BEC = -0.048 ppb
LoD = 0.0766 ppb

82Se (STD)



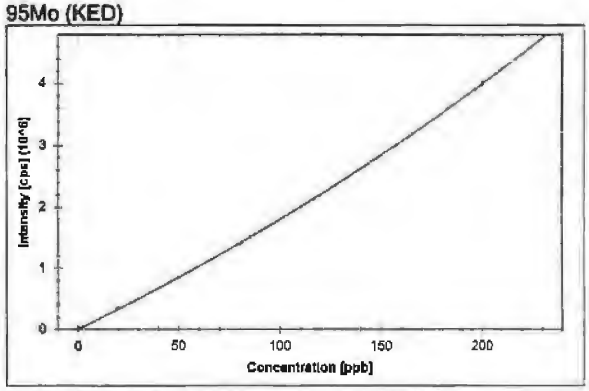
f(x) = 1429.0516*x + 8.4646
R² = 1.0000
BEC = 0.006 ppb
LoD = 0.0135 ppb

88Sr (KED)



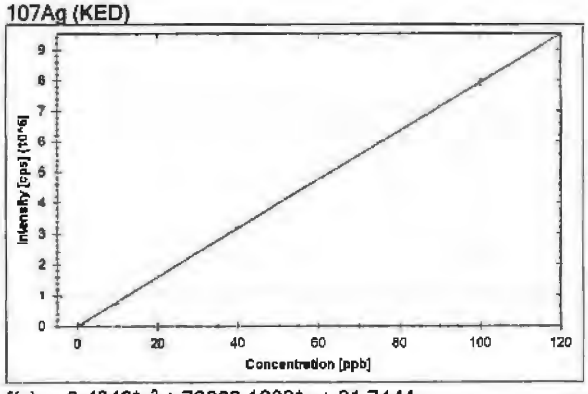
f(x) = 13975.6870*x + 43.2391
R² = 0.9999
BEC = 0.003 ppb
LoD = 0.0045 ppb

95Mo (KED)



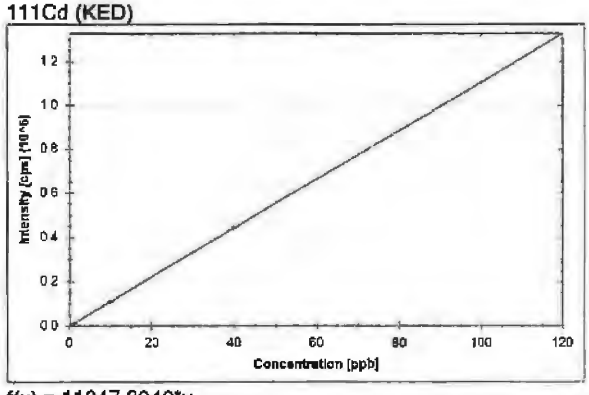
f(x) = 20.5513*x² + 15867.9242*x + 541.8259
R² = 1.0000
BEC = 772.080 ppb
LoD = N/A

107Ag (KED)



f(x) = -0.4946*x² + 79369.1203*x + 31.7444
R² = 1.0000
BEC = 0.000 ppb
LoD = N/A

111Cd (KED)

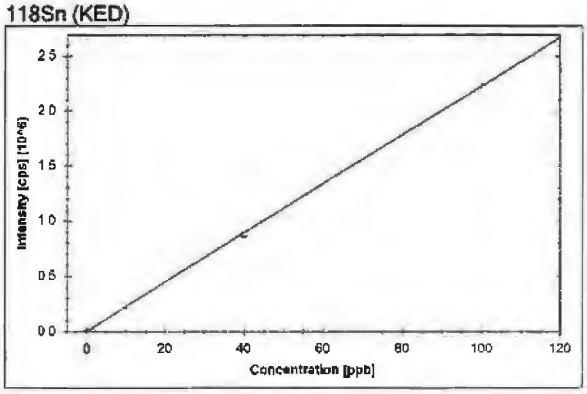


f(x) = 11047.8040*x
R² = 1.0000
BEC = 0.000 ppb
LoD = 0.0000 ppb

Calibration
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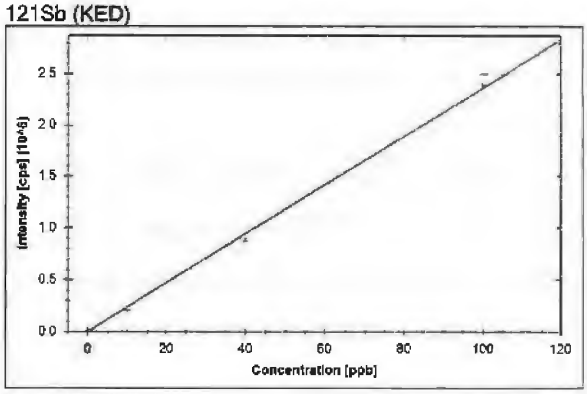
QTEGRA

118Sn (KED)



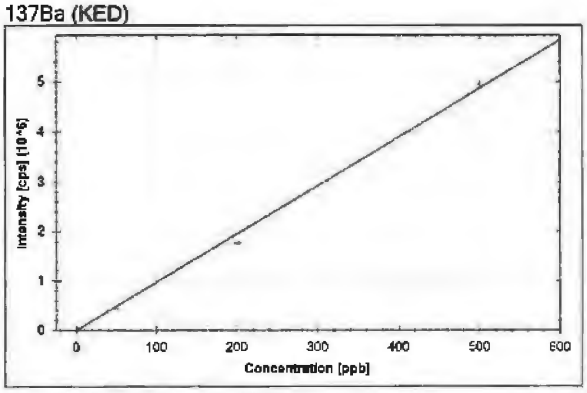
f(x) = 22206.5289*x + 4856.2536
R² = 0.9996
BEC = 0.219 ppb
LoD = 0.1560 ppb

121Sb (KED)



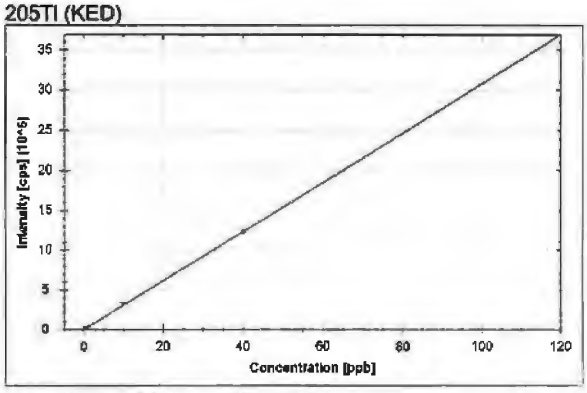
f(x) = 23600.1096*x
R² = 0.9987
BEC = 0.000 ppb
LoD = 0.0207 ppb

137Ba (KED)



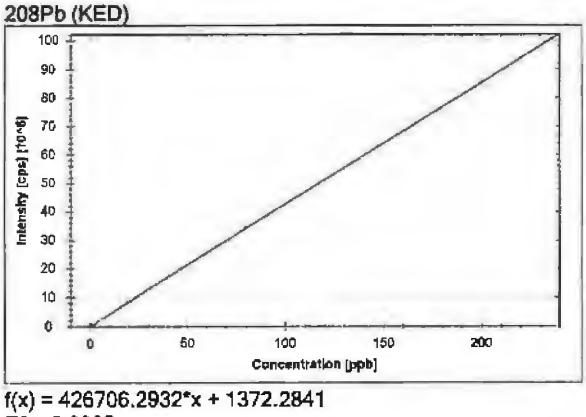
f(x) = 9731.6108*x + 16.3694
R² = 0.9980
BEC = 0.002 ppb
LoD = 0.0033 ppb

205Tl (KED)



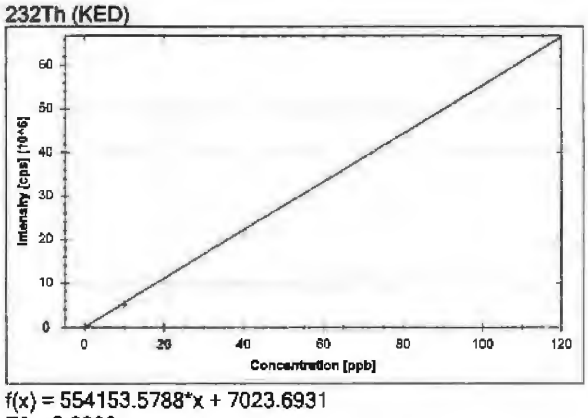
f(x) = 307944.7661*x + 345.2697
R² = 0.9999
BEC = 0.001 ppb
LoD = 0.0005 ppb

208Pb (KED)



f(x) = 426706.2932*x + 1372.2841
R² = 0.9999
BEC = 0.003 ppb
LoD = 0.0008 ppb

232Th (KED)



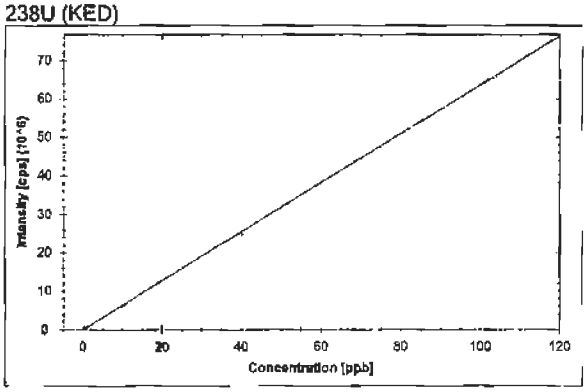
f(x) = 554153.5788*x + 7023.6931
R² = 0.9999
BEC = 0.013 ppb
LoD = 0.0018 ppb

Calibration

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QTEGRA

238U (KED)



f(x) = 636629.4684*x + 60.3000

R^2 = 0.9999

BEC = 0.000 ppb

LoD = 0.0001 ppb

Concentrations

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QTEGRA

reprep

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 18 Analysis started at: 6/21/2019 11:56:10 AM Rack: 0
Analysis label: QCS User name: FIBERTEC\chemist Vial: 10

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	55.681 ppb	54.339 ppb	54.464 ppb	-47.872 ppb	69.914 ppb	110.390 %	105.782 %	49.751 ppb	49.660 ppb		50.449 ppb
Concentration per Run 1	59.083 ppb	56.884 ppb	57.031 ppb	-46.716 ppb	69.705 ppb	110.154 %	105.393 %	50.549 ppb	51.041 ppb	62.203 ppb	51.556 ppb
Concentration per Run 2	54.911 ppb	52.347 ppb	53.812 ppb	-58.642 ppb	70.290 ppb	109.561 %	105.160 %	49.087 ppb	48.960 ppb	58.620 ppb	49.892 ppb
Concentration per Run 3	53.049 ppb	53.785 ppb	52.551 ppb	-38.258 ppb	69.748 ppb	111.457 %	106.793 %	49.618 ppb	48.979 ppb	59.196 ppb	49.899 ppb
Concentration RSD	5.5 %	4.3 %	4.2 %	21.4 %	0.5 %	0.9 %	0.8 %	1.5 %	2.4 %	—	1.9 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	51.201 ppb	53.118 ppb	105.765 %	107.990 %	49.802 ppb	49.505 ppb	49.905 ppb	107.273 %	51.830 ppb	49.193 ppb	46.949 ppb
Concentration per Run 1	52.294 ppb	54.002 ppb	104.640 %	107.960 %	50.401 ppb	50.079 ppb	50.431 ppb	110.071 %	50.987 ppb	49.361 ppb	46.637 ppb
Concentration per Run 2	50.281 ppb	52.244 ppb	106.497 %	108.181 %	49.438 ppb	49.343 ppb	49.478 ppb	104.888 %	52.401 ppb	49.345 ppb	47.245 ppb
Concentration per Run 3	51.029 ppb	53.109 ppb	106.157 %	107.829 %	49.566 ppb	49.092 ppb	49.807 ppb	106.861 %	52.104 ppb	48.872 ppb	46.964 ppb
Concentration RSD	2.0 %	1.7 %	0.9 %	0.2 %	1.1 %	1.0 %	1.0 %	2.4 %	1.4 %	0.6 %	0.6 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	109.144 %	108.857 %	52.603 ppb
Concentration per Run 1	112.026 %	111.114 %	52.591 ppb
Concentration per Run 2	107.138 %	107.280 %	53.436 ppb
Concentration per Run 3	108.267 %	108.177 %	51.782 ppb
Concentration RSD	2.2 %	1.8 %	1.8 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 61 Analysis started at: 6/21/2019 12:54:54 PM Rack: 3
Analysis label: CCB User name: FIBERTEC\chemist Vial: 1

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	-1.170 ppb	2.908 ppb	-0.305 ppb	-99.149 ppb	5.733 ppb	131.771 %	136.796 %	-0.014 ppb	0.087 ppb	3.301 ppb	-0.014 ppb
Concentration per Run 1	-1.433 ppb	2.687 ppb	-1.630 ppb	-145.496 ppb	4.981 ppb	136.277 %	137.818 %	-0.009 ppb	0.088 ppb	3.645 ppb	-0.021 ppb
Concentration per Run 2	-0.586 ppb	3.020 ppb	0.242 ppb	-92.014 ppb	5.613 ppb	131.020 %	138.850 %	-0.013 ppb	0.083 ppb	2.690 ppb	-0.003 ppb
Concentration per Run 3	-1.491 ppb	3.017 ppb	0.474 ppb	-59.937 ppb	6.624 ppb	128.016 %	133.719 %	-0.019 ppb	0.091 ppb	3.566 ppb	-0.018 ppb
Concentration RSD	43.3 %	6.6 %	378.8 %	43.6 %	14.6 %	3.2 %	2.0 %	35.0 %	5.0 %	16.1 %	66.9 %

Category	63Cu (KED)	66Zn (KED)	71Ga (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (STD)	107Ag (KED)	111Cd (KED)	137Ba (STD)
Concentration average	-0.063 ppb	0.059 ppb	128.857 %	125.780 %	0.025 ppb	0.033 ppb	-0.028 ppb	125.873 %	0.000 ppb	0.000 ppb	0.018 ppb
Concentration per Run 1	-0.066 ppb	0.047 ppb	127.356 %	127.956 %	0.012 ppb	0.023 ppb	-0.019 ppb	127.901 %	0.000 ppb	0.000 ppb	0.012 ppb
Concentration per Run 2	-0.064 ppb	0.051 ppb	129.475 %	126.769 %	0.040 ppb	0.052 ppb	-0.039 ppb	125.475 %	0.000 ppb	0.001 ppb	0.022 ppb
Concentration per Run 3	-0.058 ppb	0.078 ppb	129.739 %	122.615 %	0.023 ppb	0.023 ppb	-0.025 ppb	125.920 %	0.001 ppb	0.000 ppb	0.020 ppb
Concentration RSD	7.3 %	28.5 %	1.0 %	2.2 %	55.5 %	51.1 %	36.0 %	1.6 %	156.1 %	173.2 %	28.4 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average			0.050 ppb
Concentration per Run 1		120.153 %	0.047 ppb
Concentration per Run 2		117.744 %	0.053 ppb
Concentration per Run 3		117.191 %	0.051 ppb
Concentration RSD		2.4 %	6.2 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 62 Analysis started at: 6/21/2019 12:56:16 PM Rack: 3
Analysis label: LL QC User name: FIBERTEC\chemist Vial: 2

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	34.637 ppb	12.079 ppb	11.914 ppb	-34.908 ppb	33.941 ppb	132.337 %	133.543 %	0.185 ppb	1.052 ppb	6.841 ppb	1.077 ppb
Concentration per Run 1	35.447 ppb	11.617 ppb	12.318 ppb	-37.793 ppb	33.631 ppb	134.775 %	132.325 %	0.190 ppb	0.999 ppb	6.874 ppb	1.132 ppb
Concentration per Run 2	35.842 ppb	12.778 ppb	11.835 ppb	-39.684 ppb	34.609 ppb	128.767 %	133.486 %	0.197 ppb	1.076 ppb	6.751 ppb	1.096 ppb
Concentration per Run 3	32.622 ppb	11.842 ppb	11.587 ppb	-27.247 ppb	33.593 ppb	133.471 %	134.817 %	0.188 ppb	1.082 ppb	6.899 ppb	1.004 ppb
Concentration RSD	5.1 %	5.1 %	3.1 %	19.2 %	1.7 %	2.4 %	0.9 %	8.2 %	4.4 %	1.2 %	8.1 %

Category	63Cu (KED)	66Zn (KED)	71Ga (STD)	71Ga (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	0.155 ppb	1.087 ppb	126.780 %	126.943 %	0.133 ppb	0.218 ppb	0.186 ppb	129.231 %	0.020 ppb	0.018 ppb	0.980 ppb
Concentration per Run 1	0.153 ppb	1.008 ppb	125.100 %	129.567 %	0.126 ppb	0.144 ppb	0.205 ppb	132.220 %	0.019 ppb	0.016 ppb	0.943 ppb
Concentration per Run 2	0.144 ppb	1.119 ppb	127.505 %	127.010 %	0.138 ppb	0.183 ppb	0.160 ppb	126.313 %	0.019 ppb	0.010 ppb	1.054 ppb
Concentration per Run 3	0.167 ppb	1.135 ppb	128.634 %	124.294 %	0.135 ppb	0.328 ppb	0.193 ppb	129.160 %	0.020 ppb	0.028 ppb	0.943 ppb
Concentration RSD	7.4 %	6.4 %	1.8 %	2.1 %	4.7 %	44.5 %	12.7 %	2.3 %	4.0 %	< 5	6.6 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	122.810 %	[illegible]	0.131 ppb
Concentration per Run 1	126.584 %	122.169 %	0.128 ppb
Concentration per Run 2	[illegible]	118.259 %	0.135 ppb
Concentration per Run 3	[illegible]	118.156 %	0.128 ppb
Concentration RSD	2.7 %	1.8 %	2.9 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 63 Analysis started at: 6/21/2019 12:57:38 PM Rack: 3
Analysis label: CCV User name: FIBERTEC\chemist Vial: 3

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	6,346.152 ppb	2,108.740 ppb	2,130.317 ppb	6,010.998 ppb	6,022.185 ppb	134.182 %	137.406 %	79.103 ppb	191.344 ppb	1,012.746 ppb	81.144 ppb
Concentration per Run 1	6,478.474 ppb	2,118.867 ppb	2,137.542 ppb	5,962.655 ppb	6,171.055 ppb	134.459 %	135.331 %	80.513 ppb	193.464 ppb	1,018.617 ppb	82.936 ppb
Concentration per Run 2	6,237.170 ppb	2,038.164 ppb	2,097.300 ppb	6,049.350 ppb	5,921.519 ppb	135.862 %	138.768 %	80.221 ppb	192.485 ppb	1,029.589 ppb	80.616 ppb
Concentration per Run 3	6,322.811 ppb	2,169.189 ppb	2,156.110 ppb	6,020.989 ppb	5,973.980 ppb	132.206 %	138.119 %	76.576 ppb	188.082 ppb	990.033 ppb	79.880 ppb
Concentration RSD	1.9 %	3.1 %	1.4 %	0.7 %	2.2 %	1.4 %	1.3 %	2.8 %	1.5 %	2.0 %	2.0 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	71Ga (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	82.078 ppb	204.957 ppb	126.344 %	125.843 %	40.135 ppb	39.339 ppb	41.341 ppb	[illegible]	39.609 ppb	40.101 ppb	184.928 ppb
Concentration per Run 1	81.928 ppb	210.025 ppb	125.135 %	125.813 %	40.745 ppb	39.839 ppb	41.204 ppb	[illegible]	39.462 ppb	39.502 ppb	188.868 ppb
Concentration per Run 2	83.341 ppb	204.149 ppb	125.711 %	[illegible]	39.865 ppb	39.168 ppb	41.367 ppb	119.866 %	39.330 ppb	40.418 ppb	184.337 ppb
Concentration per Run 3	80.966 ppb	200.698 ppb	128.186 %	127.794 %	39.796 ppb	39.011 ppb	41.452 ppb	121.610 %	40.034 ppb	40.384 ppb	181.579 ppb
Concentration RSD	1.5 %	2.3 %	1.3 %	1.6 %	1.3 %	1.1 %	0.3 %	[illegible]	0.9 %	1.3 %	2.0 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	122.807 %	[illegible]	82.519 ppb
Concentration per Run 1	126.472 %	[illegible]	81.572 ppb
Concentration per Run 2	[illegible]	118.009 %	82.627 ppb
Concentration per Run 3	[illegible]	118.017 %	83.356 ppb
Concentration RSD	2.3 %		1.1 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
ICAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	_Application Data\Workspace\LabBooks

Analysis index: 65 Analysis started at: 6/21/2019 1:00:20 PM Rack: 1
Analysis label: 89964-001 User name: FIBERTEC\chemist Vial: 31

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Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	530.173 ppb	748.383 ppb	2,733.518 ppb	1,489.343 ppb	1,629.510 ppb	127.318 %	135.969 %	39.199 ppb	171.701 ppb	[illegible] ppb	73.231 ppb
Concentration per Run 1	529.213 ppb	748.348 ppb	2,742.653 ppb	1,518.237 ppb	1,646.288 ppb	130.783 %	131.432 %	39.363 ppb	174.838 ppb	5,449.035 ppb	74.110 ppb
Concentration per Run 2	526.689 ppb	761.742 ppb	2,793.641 ppb	1,438.883 ppb	1,600.142 ppb	[illegible] %	140.244 %	38.725 ppb	168.713 ppb	5,299.858 ppb	71.840 ppb
Concentration per Run 3	534.618 ppb	735.060 ppb	2,664.261 ppb	1,510.910 ppb	1,642.101 ppb	127.385 %	136.231 %	39.508 ppb	171.551 ppb	4,922.587 ppb	73.743 ppb
Concentration RSD	0.8 %	1.8 %	2.4 %	2.9 %	1.6 %	2.7 %	3.2 %	1.1 %	1.8 %	5.2 %	1.7 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	27.867 ppb	117.284 ppb	[illegible]	[illegible]	38.653 ppb	46.503 ppb	48.855 ppb	117.600 %	16.774 ppb	20.643 ppb	93.718 ppb
Concentration per Run 1	28.100 ppb	119.800 ppb	[illegible]	[illegible]	38.885 ppb	46.557 ppb	48.342 ppb	119.391 %	17.042 ppb	20.433 ppb	93.877 ppb
Concentration per Run 2	27.546 ppb	114.935 ppb	[illegible]	[illegible]	38.179 ppb	46.487 ppb	48.950 ppb	115.773 %	16.761 ppb	20.834 ppb	93.768 ppb
Concentration per Run 3	27.956 ppb	117.117 ppb	[illegible]	119.396 %	38.897 ppb	46.464 ppb	49.273 ppb	117.634 %	16.518 ppb	20.661 ppb	93.509 ppb
Concentration RSD	1.0 %	2.1 %	[illegible]	[illegible]	1.1 %	0.1 %	1.0 %	1.5 %	1.8 %	1.0 %	0.2 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	[illegible]	116.205 %	100.571 ppb
Concentration per Run 1	[illegible]	119.918 %	101.361 ppb
Concentration per Run 2	116.565 %	114.295 %	100.359 ppb
Concentration per Run 3	117.611 %	114.401 %	99.994 ppb
Concentration RSD	[illegible]	2.8 %	0.7 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
ICAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 74 Analysis started at: 6/21/2019 1:12:35 PM Rack: 3
Analysis label: CCB User name: FIBERTEC\chemist Vial: 1

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	-4.348 ppb	-0.191 ppb	0.105 ppb	-55.799 ppb	-7.558 ppb	132.733 %	135.411 %	-0.014 ppb	-0.032 ppb	-0.478 ppb	-0.021 ppb
Concentration per Run 1	-4.495 ppb	-0.266 ppb	-1.074 ppb	-43.614 ppb	-7.537 ppb	137.188 %	131.797 %	-0.016 ppb	-0.033 ppb	-0.443 ppb	-0.016 ppb
Concentration per Run 2	-4.294 ppb	-0.015 ppb	0.851 ppb	-90.717 ppb	-8.148 ppb	133.866 %	139.500 %	-0.017 ppb	-0.028 ppb	-0.556 ppb	-0.021 ppb
Concentration per Run 3	-4.255 ppb	-0.291 ppb	0.539 ppb	-33.066 ppb	-6.990 ppb	127.146 %	134.935 %	-0.007 ppb	-0.035 ppb	-0.434 ppb	-0.027 ppb
Concentration RSD	3.0 %	80.2 %	979.9 %	55.0 %	7.7 %	3.9 %	2.9 %	39.9 %	11.4 %	14.2 %	25.8 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	-0.081 ppb	0.016 ppb	127.671 %	128.016 %	0.029 ppb	0.030 ppb	-0.003 ppb	125.817 %	0.000 ppb	0.001 ppb	-0.001 ppb
Concentration per Run 1	-0.088 ppb	0.034 ppb	124.469 %	130.421 %	0.025 ppb	0.008 ppb	0.004 ppb	127.431 %	0.000 ppb	0.000 ppb	-0.008 ppb
Concentration per Run 2	-0.077 ppb	-0.004 ppb	128.785 %	128.509 %	0.026 ppb	0.061 ppb	-0.016 ppb	126.821 %	0.000 ppb	0.003 ppb	0.005 ppb
Concentration per Run 3	-0.077 ppb	0.016 ppb	129.740 %	125.119 %	0.037 ppb	0.030 ppb	0.004 ppb	123.199 %	0.001 ppb	0.001 ppb	0.001 ppb
Concentration RSD	7.6 %	120.5 %	2.2 %	2.1 %	22.5 %	72.5 %	379.6 %	1.8 %	87.9 %	89.1 %	1,157.7 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	121.810 %	[illegible]	0.003 ppb
Concentration per Run 1	126.104 %	[illegible]	0.002 ppb
Concentration per Run 2	121.405 %	119.893 %	0.003 ppb
Concentration per Run 3	118.922 %	114.973 %	0.003 ppb
Concentration RSD	2.6 %	[illegible]	19.0 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 75 Analysis started at: 6/21/2019 1:13:57 PM Rack: 3
Analysis label: LL QC User name: FIBERTEC\chemist Vial: 2

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	28.525 ppb	10.891 ppb	12.125 ppb	-22.357 ppb	25.678 ppb	133.603 %	136.505 %	0.204 ppb	1.058 ppb	5.139 ppb	1.103 ppb
Concentration per Run 1	27.855 ppb	10.311 ppb	10.673 ppb	-28.404 ppb	24.547 ppb	139.005 %	136.420 %	0.214 ppb	1.074 ppb	5.110 ppb	1.127 ppb
Concentration per Run 2	28.929 ppb	11.198 ppb	12.522 ppb	-41.536 ppb	25.483 ppb	130.941 %	137.782 %	0.205 ppb	1.048 ppb	5.196 ppb	1.148 ppb
Concentration per Run 3	28.791 ppb	11.162 ppb	13.180 ppb	2.870 ppb	27.003 ppb	130.862 %	135.313 %	0.193 ppb	1.052 ppb	5.110 ppb	1.034 ppb
Concentration RSD	2.0 %	4.6 %	10.7 %	102.0 %	4.8 %	3.5 %	0.9 %	5.0 %	1.3 %	1.0 %	5.5 %

Category	63Cu (KED)	66Zn (KED)	71Ga (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	0.170 ppb	1.083 ppb	126.181 %	128.630 %	0.135 ppb	0.265 ppb	0.224 ppb	126.459 %	0.022 ppb	0.031 ppb	0.981 ppb
Concentration per Run 1	0.158 ppb	1.096 ppb	134.190 %	133.138 %	0.128 ppb	0.280 ppb	0.213 ppb	130.824 %	0.024 ppb	0.027 ppb	1.015 ppb
Concentration per Run 2	0.184 ppb	1.018 ppb	129.755 %	127.110 %	0.134 ppb	0.256 ppb	0.220 ppb	124.[illegible] %	0.020 ppb	0.029 ppb	0.923 ppb
Concentration per Run 3	0.169 ppb	1.136 ppb	121.598 %	125.642 %	0.141 ppb	0.259 ppb	0.240 ppb	[illegible] %	0.021 ppb	0.036 ppb	1.006 ppb
Concentration RSD	7.7 %	5.5 %	2.5 %	3.1 %	4.8 %	4.8 %	5.1 %	3.0 %	11.0 %	15.1 %	5.2 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	122.159 %	[illegible] %	0.108 ppb
Concentration per Run 1	126.407 %	[illegible] %	0.110 ppb
Concentration per Run 2	119.572 %	118.032 %	0.110 ppb
Concentration per Run 3	120.498 %	116.331 %	0.105 ppb
Concentration RSD	3.0 %	[illegible] %	2.5 %

Concentrations

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QTEGRA

Instrument Name	Serial Number
ICAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	_Application Data\Workspace\LabBooks

Analysis index: 76 Analysis started at: 6/21/2019 1:15:20 PM Rack: 3
Analysis label: CCV User name: FIBERTEC\chemist Vial: 3

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	6,356.414 ppb	2,117.646 ppb	2,107.201 ppb	5,962.498 ppb	5,920.637 ppb	132.773 %	135.351 %	77.796 ppb	186.943 ppb	987.317 ppb	80.531 ppb
Concentration per Run 1	6,294.448 ppb	2,079.273 ppb	2,062.907 ppb	6,121.363 ppb	5,919.666 ppb	136.831 %	133.341 %	78.776 ppb	192.881 ppb	994.575 ppb	81.665 ppb
Concentration per Run 2	6,379.135 ppb	2,112.372 ppb	2,104.192 ppb	5,810.395 ppb	5,818.105 ppb	132.918 %	137.616 %	78.000 ppb	188.048 ppb	994.828 ppb	80.435 ppb
Concentration per Run 3	6,395.659 ppb	2,161.293 ppb	2,154.503 ppb	5,955.737 ppb	6,024.140 ppb	128.569 %	135.096 %	76.612 ppb	185.903 ppb	972.547 ppb	79.493 ppb
Concentration RSD	0.9 %	1.9 %	2.2 %	2.6 %	1.7 %	3.1 %	1.6 %	1.4 %	1.9 %	1.3 %	1.4 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	78.444 ppb	197.652 ppb	123.988 %	125.796 %	39.295 ppb	37.917 ppb	40.631 ppb	119.631 %	37.917 ppb	39.513 ppb	183.836 ppb
Concentration per Run 1	78.388 ppb	199.743 ppb	[illegible]	126.739 %	39.873 ppb	38.992 ppb	41.028 ppb	125.531 %	37.261 ppb	38.670 ppb	182.556 ppb
Concentration per Run 2	79.204 ppb	199.105 ppb	[illegible]	125.380 %	39.226 ppb	38.151 ppb	41.281 ppb	118.137 %	38.056 ppb	39.924 ppb	182.445 ppb
Concentration per Run 3	77.740 ppb	194.108 ppb	126.553 %	125.268 %	38.787 ppb	36.609 ppb	39.584 ppb	115.225 %	38.433 ppb	39.945 ppb	186.808 ppb
Concentration RSD	0.9 %	1.6 %	[illegible]	0.7 %	1.4 %	3.2 %	2.3 %	4.4 %	1.8 %	1.8 %	1.8 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	[illegible]	[illegible]	82.347 ppb
Concentration per Run 1	[illegible]	[illegible]	81.291 ppb
Concentration per Run 2	[illegible]	119.384 %	83.265 ppb
Concentration per Run 3	119.165 %	115.592 %	82.486 ppb
Concentration RSD	[illegible]	[illegible]	1.2 %

Concentrations

8/29/2019 3:53:09 PM

QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 31
Analysis label: PT19F21B.MB*
Analysis started at: 6/21/2019 12:13:04 PM
User name: FIBERTEC\chemist
Rack: 1
Vial: 6

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	[illegible]	2.412 ppb	4.378 ppb	-181.932 ppb	46.681 ppb	139.743 %	139.818 %	-0.024 ppb	0.012 ppb	0.289 ppb	0.003 ppb
Concentration per Run 1	23.224 ppb	2.530 ppb	5.459 ppb	-167.998 ppb	46.080 ppb	142.919 %	137.320 %	-0.024 ppb	0.002 ppb	0.384 ppb	-0.013 ppb
Concentration per Run 2	22.044 ppb	2.535 ppb	3.110 ppb	-186.762 ppb	45.697 ppb	137.740 %	141.402 %	-0.032 ppb	0.006 ppb	0.421 ppb	0.014 ppb
Concentration per Run 3	20.681 ppb	2.171 ppb	4.565 ppb	-191.036 ppb	48.266 ppb	138.570 %	140.733 %	-0.016 ppb	0.027 ppb	0.062 ppb	0.006 ppb
Concentration RSD	[illegible]	8.7 %	27.1 %	5.7 %	3.0 %	2.0 %	1.6 %	32.6 %	116.9 %	68.4 %	533.5 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	-0.030 ppb	3.775 ppb	132.228 %	132.894 %	0.006 ppb	0.015 ppb	-0.033 ppb	131.500 %	0.000 ppb	0.001 ppb	2.397 ppb
Concentration per Run 1	-0.033 ppb	3.983 ppb	131.654 %	136.401 %	0.001 ppb	0.015 ppb	-0.045 ppb	133.605 %	0.000 ppb	0.003 ppb	2.712 ppb
Concentration per Run 2	-0.028 ppb	3.851 ppb	131.244 %	129.334 %	0.010 ppb	0.023 ppb	-0.013 ppb	133.085 %	0.000 ppb	0.000 ppb	2.392 ppb
Concentration per Run 3	-0.029 ppb	3.490 ppb	133.788 %	132.946 %	0.008 ppb	0.008 ppb	-0.041 ppb	127.811 %	0.000 ppb	0.001 ppb	2.088 ppb
Concentration RSD	8.8 %	6.8 %	1.0 %	2.7 %	75.5 %	46.5 %	53.4 %	2.4 %	109.5 %	98.5 %	13.0 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	129.797 %	125.893 %	0.012 ppb
Concentration per Run 1	132.689 %	125.614 %	0.011 ppb
Concentration per Run 2	129.785 %	124.548 %	0.012 ppb
Concentration per Run 3	126.918 %	126.518 %	0.013 ppb
Concentration RSD	2.2 %	2.0 %	7.8 %

Concentrations

8/29/2019 3:53:09 PM

QTEGRA

Instrument Name	Serial Number
iCAP Q	Undefined

LabBook	LabBook Path
T419F21A.imexp	Application Data\Workspace\LabBooks

Analysis index: 32 Analysis started at: 6/21/2019 12:14:24 PM Rack: 1
Analysis label: PT19F21B.LCS User name: FIBERTEC\chemist Vial: 7

Category	23Na (KED)	24Mg (KED)	39K (KED)	42Ca (STD)	44Ca (STD)	45Sc (KED)	45Sc (STD)	52Cr (KED)	55Mn (KED)	57Fe (KED)	60Ni (KED)
Concentration average	20.692 ppb	1.572 ppb	6.036 ppb	-68.123 ppb	[illegible] ppb	127.239 %	127.083 %	20.833 ppb	50.618 ppb	0.837 ppb	21.458 ppb
Concentration per Run 1	20.270 ppb	1.599 ppb	5.585 ppb	-63.821 ppb	31.835 ppb	129.874 %	126.407 %	20.906 ppb	50.311 ppb	0.813 ppb	21.474 ppb
Concentration per Run 2	21.240 ppb	1.773 ppb	5.408 ppb	-49.689 ppb	35.707 ppb	127.423 %	127.208 %	20.262 ppb	50.187 ppb	0.751 ppb	21.191 ppb
Concentration per Run 3	20.564 ppb	1.344 ppb	7.114 ppb	-90.858 ppb	32.611 ppb	124.419 %	127.633 %	21.332 ppb	51.355 ppb	0.947 ppb	21.710 ppb
Concentration RSD	2.4 %	13.7 %	15.5 %	30.7 %	[illegible]	2.1 %	0.5 %	2.6 %	1.3 %	12.0 %	1.2 %

Category	63Cu (KED)	66Zn (KED)	74Ge (STD)	74Ge (KED)	75As (KED)	78Se (KED)	82Se (STD)	103Rh (KED)	107Ag (KED)	111Cd (KED)	137Ba (KED)
Concentration average	21.819 ppb	55.081 ppb	[illegible]	117.828 %	10.257 ppb	10.082 ppb	10.368 ppb	[illegible]	10.200 ppb	10.072 ppb	48.297 ppb
Concentration per Run 1	21.967 ppb	55.067 ppb	[illegible]	119.617 %	10.084 ppb	10.498 ppb	10.276 ppb	[illegible]	10.175 ppb	9.985 ppb	48.769 ppb
Concentration per Run 2	21.189 ppb	54.484 ppb	[illegible]	119.245 %	10.199 ppb	9.809 ppb	10.323 ppb	114.873 %	10.301 ppb	10.221 ppb	48.484 ppb
Concentration per Run 3	22.302 ppb	55.693 ppb	[illegible]	114.621 %	10.487 ppb	9.937 ppb	10.506 ppb	117.446 %	10.124 ppb	10.009 ppb	47.637 ppb
Concentration RSD	2.6 %	1.1 %	[illegible]	2.4 %	2.0 %	3.6 %	1.2 %	2.0 %	0.9 %	1.3 %	1.2 %

Category	159Tb (KED)	175Lu (KED)	208Pb (KED)
Concentration average	116.640 %	113.621 %	20.730 ppb
Concentration per Run 1	118.083 %	115.615 %	20.929 ppb
Concentration per Run 2	115.420 %	112.790 %	20.522 ppb
Concentration per Run 3	116.416 %	112.458 %	20.739 ppb
Concentration RSD	1.2 %	1.5 %	1.0 %

Calibration
8/26/2019 4:45:11 PM

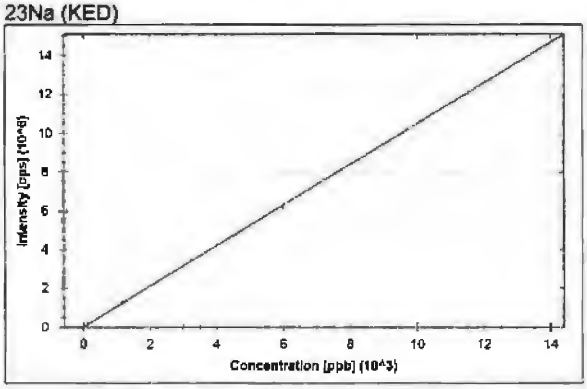
QTEGRA

Calibration Curves:

Instrument Name	Serial Number
iCAP Q	Undefined

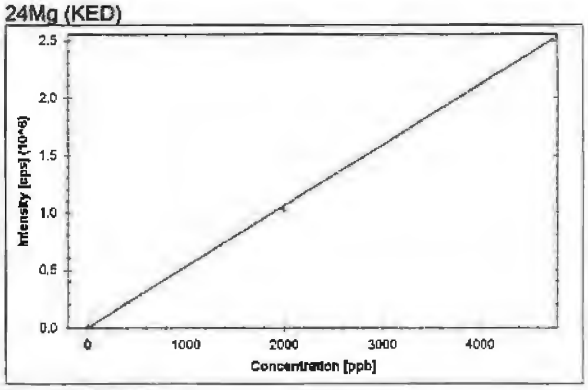
LabBook	LabBook Path
T419F21A.imexp	_Application Data\Workspace\LabBooks

23Na (KED)



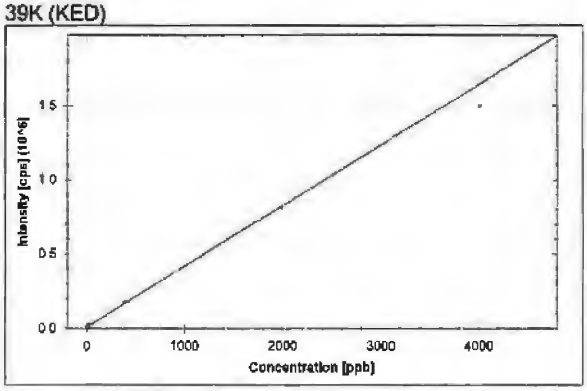
f(x) = 1047.2074*x + 9891.7695
R² = 1.0000
BEC = 9.446 ppb
LoD = 0.5185 ppb

24Mg (KED)



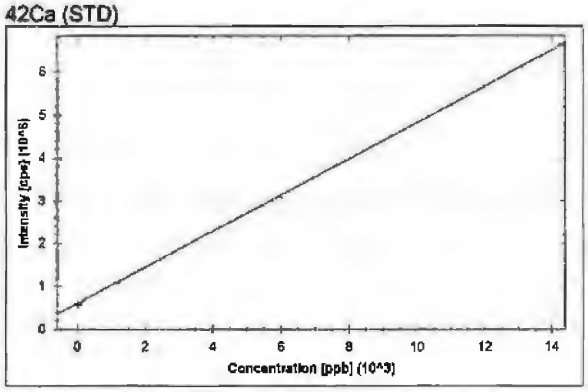
f(x) = 528.0053*x + 672.6411
R² = 0.9997
BEC = 1.274 ppb
LoD = 0.4581 ppb

39K (KED)



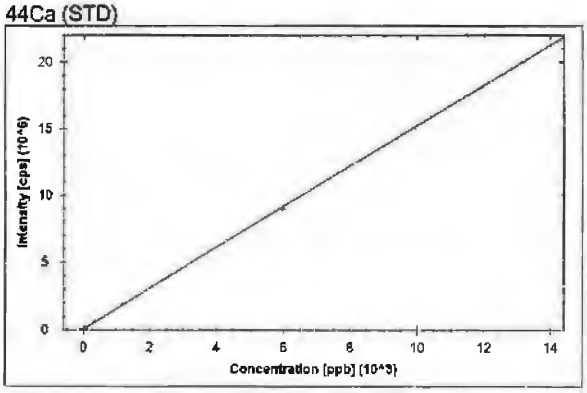
f(x) = 407.6130*x + 8262.5166
R² = 1.0000
BEC = 20.270 ppb
LoD = 1.9541 ppb

42Ca (STD)



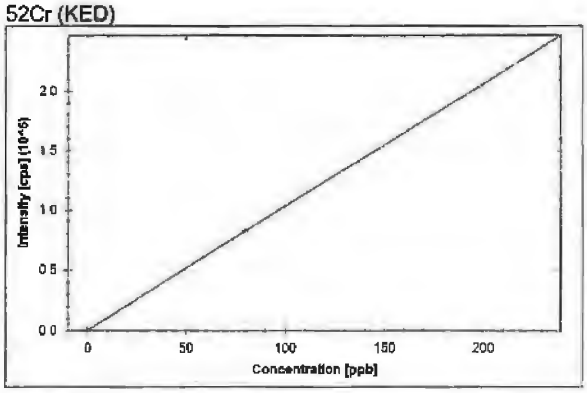
f(x) = 421.6943*x + 602844.5156
R² = 0.9997
BEC = 1429.577 ppb
LoD = 71.7259 ppb

44Ca (STD)



f(x) = 1515.6773*x + 62662.5654
R² = 0.9999
BEC = 41.343 ppb
LoD = 1.4607 ppb

52Cr (KED)

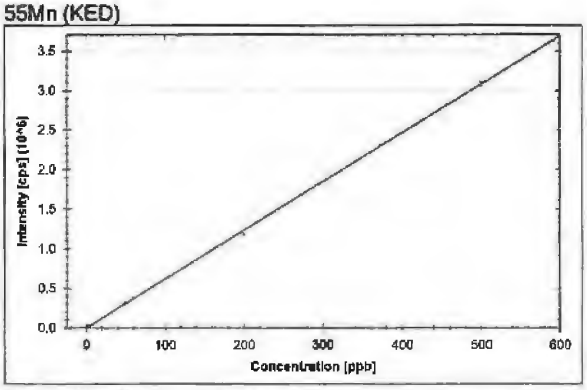


f(x) = 10291.0556*x + 1339.2540
R² = 1.0000
BEC = 0.130 ppb
LoD = 0.0441 ppb

Calibration
8/26/2019 4:45:11 PM

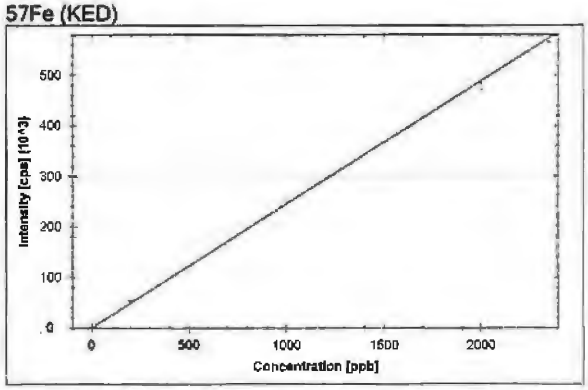
QTEGRA

55Mn (KED)



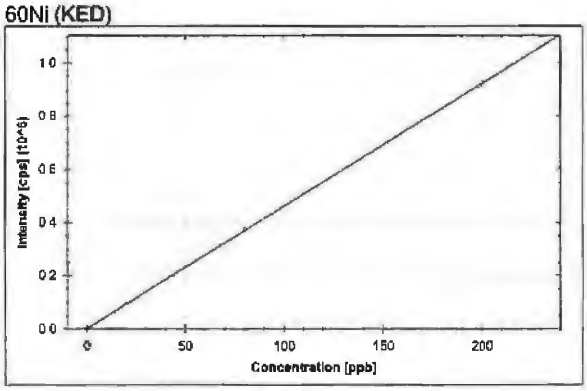
f(x) = 6153.8501*x + 343.8936
R² = 0.9998
BEC = 0.056 ppb
LoD = 0.0190 ppb

57Fe (KED)



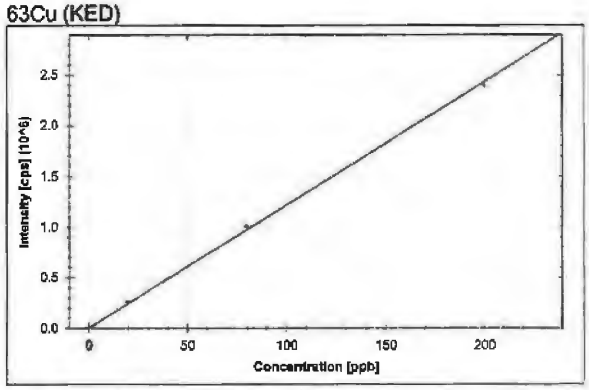
f(x) = 243.9104*x + 353.5341
R² = 0.9995
BEC = 1.449 ppb
LoD = 0.8233 ppb

60Ni (KED)



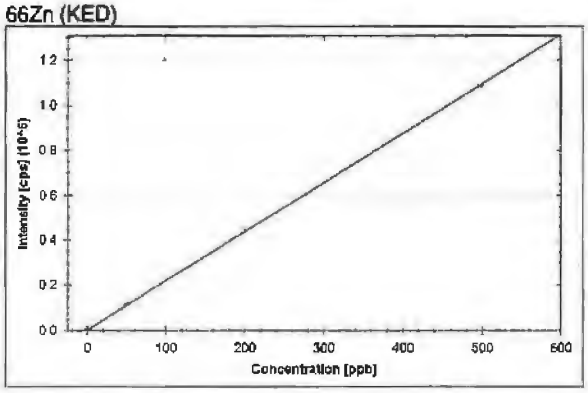
f(x) = 4606.2547*x + 212.3827
R² = 1.0000
BEC = 0.046 ppb
LoD = 0.0357 ppb

63Cu (KED)



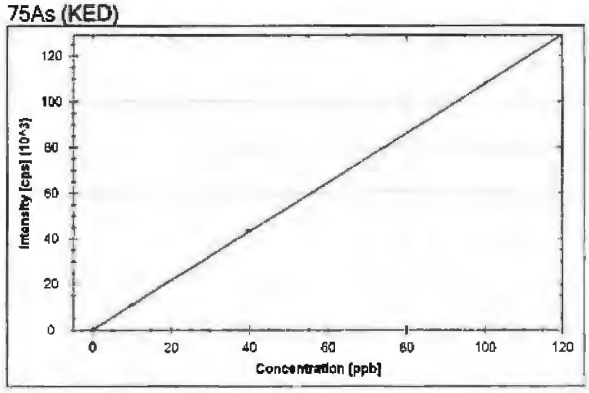
f(x) = 12144.3402*x + 1595.8001
R² = 0.9996
BEC = 0.131 ppb
LoD = 0.0134 ppb

66Zn (KED)



f(x) = 2189.3646*x + 140.0499
R² = 0.9999
BEC = 0.064 ppb
LoD = 0.0558 ppb

75As (KED)

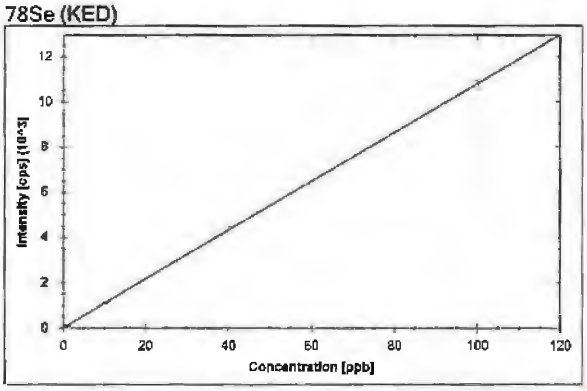


f(x) = 1076.9090*x + 69.4326
R² = 1.0000
BEC = 0.064 ppb
LoD = 0.0183 ppb

Calibration
8/26/2019 4:45:11 PM

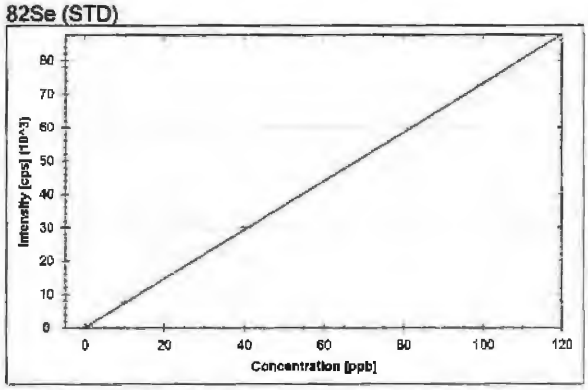
QTEGRA

78Se (KED)



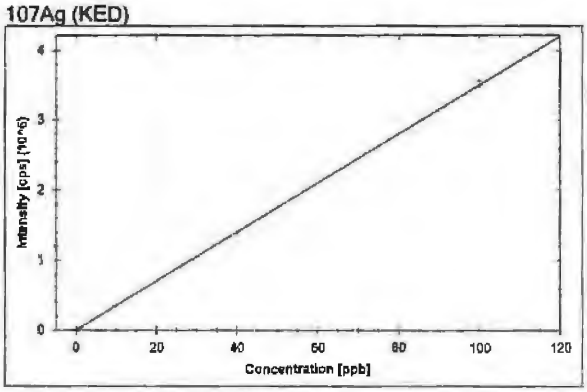
f(x) = 107.9820*x + -1.7136
R² = 1.0000
BEC = -0.016 ppb
LoD = 0.0096 ppb

82Se (STD)



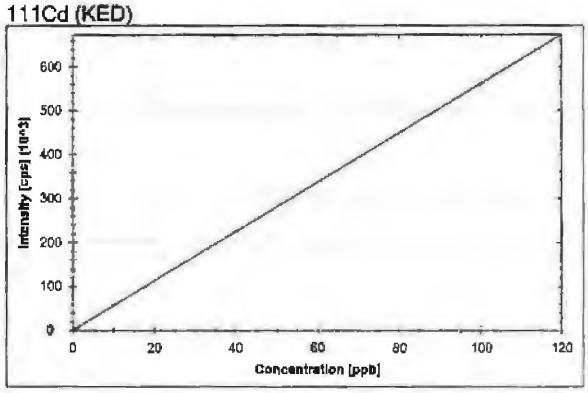
f(x) = 731.4394*x + 41.3444
R² = 1.0000
BEC = 0.057 ppb
LoD = 0.0355 ppb

107Ag (KED)



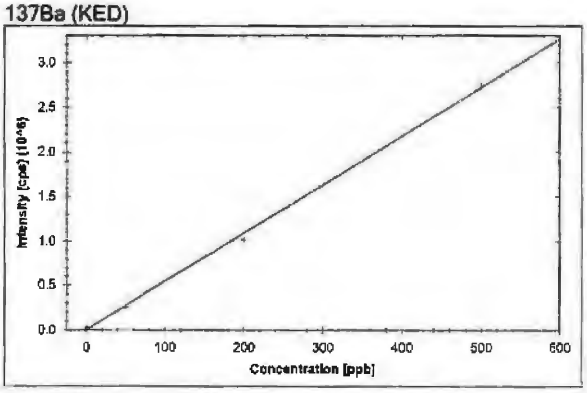
f(x) = 35048.5940*x + 88.5843
R² = 0.9999
BEC = 0.003 ppb
LoD = 0.0023 ppb

111Cd (KED)



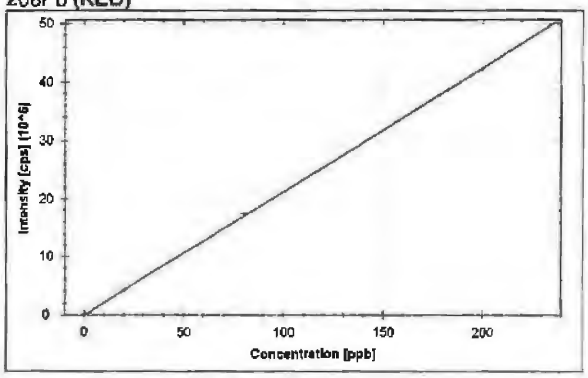
f(x) = 5615.1778*x
R² = 1.0000
BEC = 0.000 ppb
LoD = 0.0000 ppb

137Ba (KED)



f(x) = 5439.4997*x + 60.3186
R² = 0.9988
BEC = 0.011 ppb
LoD = 0.0206 ppb

208Pb (KED)



f(x) = 211873.4787*x + 955.5142
R² = 0.9999
BEC = 0.005 ppb
LoD = 0.0009 ppb

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 10/22/2019 - Closed: 11/01/2019 - Reports Printed On: 11/01/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SQCI-001B Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX616

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	184	185	mg/kg	103 to 238	ACCEPT.	10/25/19	JLH

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Reviewed/Approved By: _____ Date: 11/01/2019

Mark Hammersla, President

This PT report shall only be reproduced in full. This report shall not be used to claim approval, certification or endorsement by NSI Lab Solutions. This report has been released only to entities requested by the participant. This report is held in confidence by NSI Lab Solutions with additional reports available by written request of participant.

Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 711 /PAR)

Client: Fibertec **Project/Document Control Number:** 89964

Sample Number(s): 020 **Date Initiated:** 6/12/19 **Date Due:** 6/28/19

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☐ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☑ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

TCLP Heptachlor failed low on this sample. We reported 0.0315 mg/L. The true value was 0.420, the study mean was 0.0583, and the acceptance range was 0.0420 to 0.460 mg/L. Please investigate this issue and propose a corrective action that will prevent the recurrence of this issue.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

There was an RPD flag on the LCS/D (23%) for Heptachlor, but both the LCS and LCD passed acceptance criteria. The two columns were less than 1% different from each other. The other compound present in the PT was Heptachlor Epoxide. For that compound, we were 97% of the study mean. For Heptachlor we were below the study mean (around 60%). However, for Heptachlor epoxide, the study mean was 46% of the assigned value while Heptachlor was 14% of the assigned value. This soil PT and our last water PT our reported values were 95-101% of the mean for Heptachlor.

Investigator(s): BDA

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

The acceptance limits were based on a calculated value (see attached NELAC page) and not based on participant results. If the normal limits were used (Mean ± 3SD) we would have passed. We were within 1 SD of the mean. A remedial PT study was passed with no changes to our procedure. No corrective action is necessary.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☐ ***No*** ☐

Follow-Up Date:_____ ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☑

VI. Approvals:

Technical : [signature] **Supervisory:** [signature] 10/15/19

Quality Assurance: [signature]

Date Closed: 10/29/19

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.121	0.174	0.360	mg/L	0.0503	0.0360 to 0.400	1.05	ACCEPT.	5/3/19	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.156	0.192	0.380	mg/L	0.0360	0.0800 to 0.420	1.00	ACCEPT.	5/3/19	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	0.0315	0.0583	0.420	mg/L	0.0378	0.0420 to 0.460	0.709	NOT ACCEPT.	4/30/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	0.143	0.148	0.320	mg/L	0.0064	0.0320 to 0.350	0.781	ACCEPT.	5/2/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0005	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	4/27/19	RDK

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	1890	1257	1550	mg/kg	282	336 to 2180	2.24	ACCEPT.	4/24/19	AMW
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-121

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	20.7	10.8	26.0	mg/kg	9.26	3.99 to 38.4	1.07	ACCEPT.	4/23/19	RDK
8885	Arochlor 1242	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	4/23/19	RDK
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

Client Name:
Fibertec, Inc.

DataBridge Sequence Report (Alpha Order)
Entered Parameters for Samples in Sequence (Sorted by Prep Batch/Project ID)
Sequence: SF19D30B

PS19D25E

Sep Funnel, Std. (07/10/15)

89964

89964-020A | Validation: BBF

4/30/2019 8:17:02 PM

Prep ID:	89964-020A 06
Prep Initial (g/mL):	750
Prep Final (mL):	2
Bench/Add'l Dilution:	100
Prep Factor/Overall:	0.266666666666667
Temperature (deg c):	20

	Raw	Final	CRL*
Units =>	ug/L	ug/L	
1 Heptachlor	118.1	31.50	0.100

89964-020A Total Concentration: 31.50 ug/L

*CRL - Client Requested Reporting Limit - SUBJECT TO CHANGE!!

TNI/NELAP PT for Accreditation
Fields of Proficiency Testing with PTRLs
Non-Potable Water (NPW)
Effective: July 24, 2017

Blue = New Analyte Magenta = Changes

Matrix	EPA Analyte Code	NELAC Analyte Code	Analyte [1,2]	Conc Range	Acceptance Criteria [3,4,5,6] a	b	c	d	NELAC PTRL [7]

1) For volatiles, base/neutrals, acids, organochlorine pesticides, herbicides, and low level PAHs, providers must include a minimum number of analytes using the criteria described below:
PT samples that are to be scored for one to ten analytes must include all of these analytes.
PT samples that are to be scored for ten to twenty analytes must include at least ten of these analytes or 80% of the total, whichever number is greater.
PT samples that are to be scored for more than twenty analytes must include at least sixteen of these analytes or 60% of the total, whichever number is greater.
If the calculated percentage of the total number of analytes in the PT sample is a fraction, the fraction shall be rounded up to the next whole number.

2) One sample (minimum) in every study, containing one Aroclor, selected at random from among the Aroclors listed above.

3) Acceptance limits are set at the Mean ± 3 SD
Where the a, b, c and d factors are presented, Mean = a*T + b; SD = c*T + d where T is the assigned value.
Where only the c and d factors are presented, Mean = Robust Study Mean; SD = c*X + d where X is the Robust Study Mean.
Where no factors are presented (Study Mean ±3SD), Mean = Robust Study Mean, SD = Robust Study Standard Deviation.
Robust Study Mean and Standard Deviation are generated using statistical analysis of study data set. (ie. Bi-weight, Grubbs, Dixon, etc.)
Quantitative Microbiology acceptance criteria are based on the robust participant Mean and SD determined from each respective PT study

4) If the lower acceptance limit generated using the criteria contained in this table is less than (<) 10% of the assigned value, the lower acceptance limits are set at 10% of the assigned value with the exception of microbiology analytes.

5) If the lower acceptance limit generated using the criteria contained in this table is greater than 90% of the assigned value, the lower acceptance limits are set at 90% of the assigned value with the exception of microbiology analytes.

6) If the upper acceptance limit generated using the criteria contained in this table is less than 110% of the assigned value, the upper acceptance limits are set at 110% of the assigned value with the exception of microbiology analytes.

7) NELAC Proficiency Testing Reporting Limits (PTRLs) are provided as guidance to laboratories analyzing NELAC PT samples. These levels are the lowest acceptable results that could be obtained from the lowest spike level for each analyte. The laboratory should report any positive result down to the PTRL. It is recognized that in some cases (especially for analytes that typically exhibit low recovery) the PTRL may be below the standard laboratory reporting limit. However, the laboratory should use a method that is sensitive enough to generate results at the PTRL shown. NELAC PTRLs are also provided as guidance to PT Providers. At a minimum for all analytes with an assigned value equal to "0", the PT Provider should verify that the sample does not contain the analyte at a concentration greater than or equal to the PTRL.

8) These limits are for quantitative methods using membrane filtration techniques.

9) These limits are for quantitative methods using most probable number techniques.

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 07/10/2019 - Closed: 07/25/2019 - Reports Printed On: 07/25/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	210	332	ug/kg	33.2 to 538	ACCEPT.	7/19/09	RDK

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Reviewed/Approved By: _____ Date: 07/25/2019

Mark Hammersla, President

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SM-121-Remedial PT Study

SM-PTX593

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 07/10/2019 - Closed: 07/25/2019 - Reports Printed On: 07/25/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

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SPEO-003 - Fibertec, Inc. - NSI Lab Solutions/SM-PTX593

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	210	332	ug/kg	33.2 to 538	ACCEPT.	7/19/09	RDK

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

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SM-121-Remedial PT Study

SM-PTX616

RCRA - Solids/Hazardous Waste
FINAL SUPPLEMENTAL Performance Evaluation Report
NSI Laboratory Supplemental Proficiency Testing Program
Study PT Express - Shipped: 10/22/2019 - Closed: 11/01/2019 - Reports Printed On: 11/01/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
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1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
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SQCI-001B Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-PTX616

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Assigned Value	Units	Acceptance Limits	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	184	185	mg/kg	103 to 238	ACCEPT.	10/25/19	JLH

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

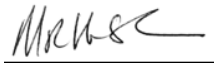
Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

Reviewed/Approved By:  Date: 11/01/2019

Mark Hammersla, President

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UST-096

Spring, 2019

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-096 - Shipped: 04/10/2019 - Closed: 05/24/2019 - Reports Printed On: 06/14/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	MI
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
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SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-096

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	321	387	479	mg/kg	96.4	0.00 to 977	0.685	ACCEPT.	4/26/19	RKP

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-096

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	536	800	992	mg/kg	314	345 to 1640	0.841	ACCEPT.	4/26/19	TKT

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

Reviewed/Approved By:  Date: 06/14/2019

Mark Hammersla, President

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AE 0419

Spring, 2019

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Study: AE0419 Air & Emissions Proficiency Testing Results
Opening Date: 4/15/2019 **Closing Date:** 5/30/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1061-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
Additional State Specific Analytes											
4315	Acetone	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4320	Acetonitrile					<5		ppbv			NR
4323	Acetylene					<5		ppbv			NR
4325	Acrolein (Propenal)					<5		ppbv			NR
4340	Acrylonitrile					<5		ppbv			NR
4375	Benzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	48.0	48.7	ppbv	19.2	76.8	Acceptable
4390	Bromochloromethane					<5		ppbv			NR
4395	Bromodichloromethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4400	Bromoform	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4950	Bromomethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
9318	1,3-Butadiene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4410	2-Butanone (Methyl ethyl ketone, MEK)	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4450	Carbon disulfide	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4455	Carbon tetrachloride	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4475	Chlorobenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	21.0	19.7	ppbv	8.40	33.6	Acceptable
4485	Chloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4505	Chloroform	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	45.0	46.8	ppbv	18.0	72.0	Acceptable
4960	Chloromethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5635	Chloromethylbenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable

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Study: AE0419 Air & Emissions Proficiency Testing Results
Opening Date: 4/15/2019 **Closing Date:** 5/30/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1061-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4525	Chloroprene					<5		ppbv			NR
4555	Cyclohexane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4575	Dibromochloromethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4625	Dichlorodifluoromethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4610	1,2 Dichlorobenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4615	1,3 Dichlorobenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	13.0	12.4	ppbv	5.20	20.8	Acceptable
4620	1,4 Dichlorobenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4630	1,1-Dichloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	40.0	42	ppbv	16.0	64.0	Acceptable
4635	1,2 Dichloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	23.0	24	ppbv	9.20	36.8	Acceptable
4640	1,1-Dichloroethene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4645	cis-1,2-Dichloroethene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	30.0	31.7	ppbv	12.0	48.0	Acceptable
4700	trans-1,2-Dichloroethene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	17.0	17.4	ppbv	6.80	27.2	Acceptable
4655	1,2-Dichloropropane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4680	cis-1,3-Dichloropropene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4685	trans-1,3-Dichloropropene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4695	1,2-Dichloro-1,1,2,2-tetrafluoroethane					<5		ppbv			NR
4755	Ethyl acetate	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4760	Ethyl acrylate					<5		ppbv			NR

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Certified Reference Materials

Study: AE0419 Air & Emissions Proficiency Testing Results
Opening Date: 4/15/2019 **Closing Date:** 5/30/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) Lot #: 1061-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4765	Ethylbenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	36.0	36.4	ppbv	14.4	57.6	Acceptable
4770	Ethyl-t-butylether (ETBE)					<5		ppbv			NR
4542	4-Ethyltoluene					<5		ppbv			NR
4825	n-Heptane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4835	Hexachlorobutadiene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4855	Hexane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4895	Isopropanol	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5000	Methyl tert-butyl ether (MTBE)	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4975	Methylene chloride	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	30.0	30.8	ppbv	12.0	48.0	Acceptable
4995	Methyl isobutyl ketone (Hexone)	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4990	Methyl methacrylate					<5		ppbv			NR
5027	n-Octane					37.0		ppbv	14.8	59.2	NR
4836	Propylene					<5		ppbv			NR
5100	Styrene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
4370	T-amylmethylether (TAME)					<5		ppbv			NR
5115	Tetrachloroethene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	45.0	43.2	ppbv	18.0	72.0	Acceptable
5155	1,2,4-Trichlorobenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5160	1,1,1-Trichloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5165	1,1,2-Trichloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	22.0	20.8	ppbv	8.80	35.2	Acceptable
5110	1,1,2,2-Tetrachloroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable

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Certified Reference Materials

Study: AE0419 Air & Emissions Proficiency Testing Results
Opening Date: 4/15/2019 **Closing Date:** 5/30/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) Lot #: 1061-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
5170	Trichloroethene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	38.0	36.3	ppbv	15.2	60.8	Acceptable
5175	Trichlorofluoromethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5210	1,2,4-Trimethylbenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	38.0	34.8	ppbv	15.2	60.8	Acceptable
5215	1,3,5-Trimethylbenzene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	35.0	31.9	ppbv	14.0	56.0	Acceptable
5140	Toluene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	17.0	17.1	ppbv	6.80	27.2	Acceptable
5230	Vinyl bromide					<5		ppbv			NR
5235	Vinyl chloride	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	<5	< 5.00	ppbv			Acceptable
5240	m+p-Xylene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	15.0	14.9	ppbv	6.00	24.0	Acceptable
5250	o-Xylene	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	21.0	21.1	ppbv	8.40	33.6	Acceptable
5260	Xylenes, total	4/19/2019	MJP	10248803	EPA TO-15 Rev.2 1999	36.0	36.1	ppbv	14.4	57.6	Acceptable

WP-257

Summer, 2019

CWA - Non-Potable Water
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study WP-257 - Shipped: 07/16/2019 - Closed: 08/29/2019 - Reports Printed On: 09/13/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

PEI-026 Demand - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1530	BOD	20135255	GALV	SM 5210 B - 2001	58.7	74.1	76.8	mg/L	14.8	40.8 to 113	1.04	ACCEPT.	8/21/19	SEM
1555	CBOD	20135255	GALV	SM 5210 B - 2001	53.3	72.4	69.6	mg/L	15.7	31.8 to 107	1.22	ACCEPT.	8/21/19	SEM
1565	COD	60003001	UV-VIS	HACH 8000 - 1979	147	123	125	mg/L	19.9	97.5 to 148	1.21	ACCEPT.	7/26/19	CMB
2040	TOC	20137615	TOC-IR	SM 5310 B 22nd ED 2011	47.3	49.3	49.2	mg/L	6.60	41.0 to 57.0	0.303	ACCEPT.	8/6/19	CMB
2040	TOC	10244823	TOC-IR	SW-846 9060A - 2004	47.3	49.3	49.2	mg/L	6.60	41.0 to 57.0	0.303	ACCEPT.	8/6/19	CMB

PEI-029 Oil and Grease - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1803	Oil and Grease	10261617	GRAV	EPA 1664B - 2010	44.3	46.9	50.2	mg/L	6.65	32.3 to 61.2	0.391	ACCEPT.	7/30/19	AMS
1935	Total Recoverable Petroleum Hydrocarbons(TRPH)	-- Not Reported --												

PEI-031 Amenable and Total Cyanide - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Total Cyanide	30032985	AUTO	ASTM D7511-09	0.765	0.949	0.896	mg/L	0.294	0.582 to 1.21	0.626	ACCEPT.	8/14/19	SEM
1510	Amenable Cyanide	30032985	AUTO	ASTM D7511-09	0.307	0.445	0.449	mg/L	0.0677	0.281 to 0.617	2.04	ACCEPT.	8/14/19	SEM

PEI-032 Total Phenolics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1905	Total Phenolics	10079400	UV-VIS	EPA 420.1 - 1978	1.45	1.53	1.63	mg/L	0.219	0.827 to 2.44	0.365	ACCEPT.	7/26/19	AMS
1905	Total Phenolics	10200405	UV-VIS	SW-846 9065 - 1986	1.45	1.53	1.63	mg/L	0.219	0.827 to 2.44	0.365	ACCEPT.	7/26/19	AMS

PEI-033 Total Residual Chlorine - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1940	Total Residual Chlorine	60003807	UV-VIS	HACH 8167 - 5th ed	2.01	1.79	1.90	mg/L	0.298	1.40 to 2.23	0.738	ACCEPT.	8/22/19	AMW

1940	Total Residual Chlorine	60006522	ISE	Orion Research instruction Manual Model 97-70	2.21	1.79	1.90	mg/L	0.298	1.40 to 2.23	1.41	ACCEPT.	8/22/19	AMW
1945	Residual Free Chlorine	-- Not Reported --												

PEI-034-1 Trace Metals - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	611	586	600	ug/L	30.9	481 to 717	0.809	ACCEPT.	8/8/19	SEM
1000	Aluminum	10156419	ICP-MS	SW-846 6020A - 2007	611	586	600	ug/L	30.9	481 to 717	0.809	ACCEPT.	8/8/19	SEM
1005	Antimony	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	432	382	390	ug/L	29.8	310 to 457	1.68	ACCEPT.	8/8/19	SEM
1005	Antimony	10156419	ICP-MS	SW-846 6020A - 2007	432	382	390	ug/L	29.8	310 to 457	1.68	ACCEPT.	8/8/19	SEM
1010	Arsenic	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	147	143	150	ug/L	9.29	115 to 185	0.431	ACCEPT.	8/8/19	SEM
1010	Arsenic	10156419	ICP-MS	SW-846 6020A - 2007	147	143	150	ug/L	9.29	115 to 185	0.431	ACCEPT.	8/8/19	SEM
1015	Barium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1200	1201	1240	ug/L	59.5	1050 to 1420	0.0168	ACCEPT.	8/8/19	SEM
1015	Barium	10156419	ICP-MS	SW-846 6020A - 2007	1200	1201	1240	ug/L	59.5	1050 to 1420	0.0168	ACCEPT.	8/8/19	SEM
1020	Beryllium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	456	468	480	ug/L	24.6	408 to 552	0.488	ACCEPT.	8/8/19	SEM
1020	Beryllium	10156419	ICP-MS	SW-846 6020A - 2007	456	468	480	ug/L	24.6	408 to 552	0.488	ACCEPT.	8/8/19	SEM
1030	Cadmium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	242	250	250	ug/L	19.7	213 to 288	0.406	ACCEPT.	8/8/19	SEM
1030	Cadmium	10156419	ICP-MS	SW-846 6020A - 2007	242	250	250	ug/L	19.7	213 to 288	0.406	ACCEPT.	8/8/19	SEM
1040	Chromium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	293	297	300	ug/L	14.7	255 to 345	0.272	ACCEPT.	8/8/19	SEM
1040	Chromium	10156419	ICP-MS	SW-846 6020A - 2007	293	297	300	ug/L	14.7	255 to 345	0.272	ACCEPT.	8/8/19	SEM
1050	Cobalt	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	277	267	270	ug/L	15.8	230 to 311	0.633	ACCEPT.	8/8/19	SEM
1050	Cobalt	10156419	ICP-MS	SW-846 6020A - 2007	277	267	270	ug/L	15.8	230 to 311	0.633	ACCEPT.	8/8/19	SEM
1055	Copper	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	257	251	250	ug/L	10.2	213 to 288	0.588	ACCEPT.	8/8/19	SEM
1055	Copper	10156419	ICP-MS	SW-846 6020A - 2007	257	251	250	ug/L	10.2	213 to 288	0.588	ACCEPT.	8/8/19	SEM

1070	Iron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	2800	2827	2850	ug/L	167	2420 to 3280	0.162	ACCEPT.	8/8/19	SEM
1070	Iron	10156419	ICP-MS	SW-846 6020A - 2007	2800	2827	2850	ug/L	167	2420 to 3280	0.162	ACCEPT.	8/8/19	SEM
1075	Lead	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	445	462	467	ug/L	27.0	397 to 537	0.630	ACCEPT.	8/8/19	SEM
1075	Lead	10156419	ICP-MS	SW-846 6020A - 2007	445	462	467	ug/L	27.0	397 to 537	0.630	ACCEPT.	8/8/19	SEM
1090	Manganese	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	608	659	667	ug/L	39.3	567 to 767	1.30	ACCEPT.	8/8/19	SEM
1090	Manganese	10156419	ICP-MS	SW-846 6020A - 2007	608	659	667	ug/L	39.3	567 to 767	1.30	ACCEPT.	8/8/19	SEM
1100	Molybdenum	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	398	427	433	ug/L	19.9	375 to 487	1.46	ACCEPT.	8/8/19	SEM
1100	Molybdenum	10156419	ICP-MS	SW-846 6020A - 2007	398	427	433	ug/L	19.9	375 to 487	1.46	ACCEPT.	8/8/19	SEM
1105	Nickel	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1120	1099	1100	ug/L	54.2	970 to 1240	0.387	ACCEPT.	8/8/19	SEM
1105	Nickel	10156419	ICP-MS	SW-846 6020A - 2007	1120	1099	1100	ug/L	54.2	970 to 1240	0.387	ACCEPT.	8/8/19	SEM
1140	Selenium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	726	729	750	ug/L	46.4	638 to 863	0.0647	ACCEPT.	8/8/19	SEM
1140	Selenium	10156419	ICP-MS	SW-846 6020A - 2007	726	729	750	ug/L	46.4	638 to 863	0.0647	ACCEPT.	8/8/19	SEM
1150	Silver	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	352	381	387	ug/L	29.3	329 to 445	0.990	ACCEPT.	8/8/19	SEM
1150	Silver	10156419	ICP-MS	SW-846 6020A - 2007	352	381	387	ug/L	29.3	329 to 445	0.990	ACCEPT.	8/8/19	SEM
1160	Strontium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	333	346	350	ug/L	21.1	298 to 403	0.616	ACCEPT.	8/8/19	SEM
1160	Strontium	10156419	ICP-MS	SW-846 6020A - 2007	333	346	350	ug/L	21.1	298 to 403	0.616	ACCEPT.	8/8/19	SEM
1165	Thallium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	446	446	447	ug/L	23.6	366 to 520	0	ACCEPT.	8/8/19	SEM
1165	Thallium	10156419	ICP-MS	SW-846 6020A - 2007	446	446	447	ug/L	23.6	366 to 520	0	ACCEPT.	8/8/19	SEM
1185	Vanadium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	515	513	520	ug/L	27.2	442 to 598	0.0735	ACCEPT.	8/8/19	SEM
1185	Vanadium	10156419	ICP-MS	SW-846 6020A - 2007	515	513	520	ug/L	27.2	442 to 598	0.0735	ACCEPT.	8/8/19	SEM
1190	Zinc	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	962	968	977	ug/L	46.5	830 to 1120	0.129	ACCEPT.	8/8/19	SEM
1190	Zinc	10156419	ICP-MS	SW-846 6020A - 2007	962	968	977	ug/L	46.5	830 to 1120	0.129	ACCEPT.	8/8/19	SEM

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1175	Tin	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1860	1910	1930	ug/L	103	1350 to 2510	0.485	ACCEPT.	8/8/19	SEM
1175	Tin	10156419	ICP-MS	SW-846 6020A - 2007	1860	1910	1930	ug/L	103	1350 to 2510	0.485	ACCEPT.	8/8/19	SEM
1180	Titanium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	132	139	143	ug/L	6.34	122 to 164	1.10	ACCEPT.	8/8/19	SEM
1180	Titanium	10156419	ICP-MS	SW-846 6020A - 2007	132	139	143	ug/L	6.34	122 to 164	1.10	ACCEPT.	8/8/19	SEM

PEI-035 pH - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1900	pH	20105015	ISE	SM 4500-H+ B 22nd ED 2011	7.60	7.65	7.59	units	0.333	7.39 to 7.79	0.150	ACCEPT.	7/23/19	CMB
1900	pH	10244403	ISE	SW-846 9040C - 2002	7.60	7.65	7.59	units	0.333	7.39 to 7.79	0.150	ACCEPT.	7/23/19	CMB

PEI-079 Residue - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1960	Non-Filterable Residue (TSS)	20051212	GRAV	SM 2540 D-2011 2011	58.4	58.1	61.9	mg/L	5.83	49.3 to 69.9	0.0515	ACCEPT.	7/23/19	AMS
1950	Total Solids	20049416	GRAV	SM 2540 B-2011 2011	582	565	568	mg/L	17.2	511 to 625	0.988	ACCEPT.	8/8/19	AMW

PEI-086 Sulfide - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2005	Sulfide	60003772	UV-VIS	HACH 8131	9.28	7.77	9.13	mg/L	1.62	4.54 to 12.8	0.932	ACCEPT.	8/1/19	AMS

PEI-087 Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Mercury	10036609	CVAAS	EPA 245.1 rev 3 - 1994	15.5	13.5	13.5	ug/L	2.44	9.45 to 17.6	0.820	ACCEPT.	8/6/19	JLH
1095	Mercury	10165807	CVAAS	SW-846 7470A - 1994	15.5	13.5	13.5	ug/L	2.44	9.45 to 17.6	0.820	ACCEPT.	8/6/19	JLH

PEI-092 Turbidity - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
2055	Turbidity	10011800	TURB	EPA 180.1 rev 2 - 1993	17.2	5.46	5.42	NTU	0.534	4.16 to 6.65	22.0	NOT ACCEPT.	8/13/19	SEM

2055	Turbidity	20042619	TURB	SM 2130 B 22nd Ed 2011	17.2	5.46	5.42	NTU	0.534	4.16 to 6.65	22.0	NOT ACCEPT.	8/13/19	SEM

PEI-095 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	20066017	UV-VIS	SM 3500-Cr B 22nd Ed 2011	269	300	305	ug/L	25.0	253 to 354	1.24	ACCEPT.	8/15/19	VO
1045	Hexavalent Chromium	10162400	UV-VIS	SW-846 7196A - 1992	269	300	305	ug/L	25.0	253 to 354	1.24	ACCEPT.	8/15/19	VO

PEI-100 Nitrite as N - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1840	Nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	1.05	1.10	1.10	mg/L	0.0578	0.899 to 1.30	0.865	ACCEPT.	7/25/19	CMB
1840	Nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	1.05	1.10	1.10	mg/L	0.0578	0.899 to 1.30	0.865	ACCEPT.	7/25/19	CMB

PEI-110 Bromide - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	5.21	5.25	5.32	mg/L	0.321	4.41 to 6.23	0.125	ACCEPT.	7/26/19	AMS
1540	Bromide	10199607	IC-COND	SW-846 9056A - 2007	5.21	5.25	5.32	mg/L	0.321	4.41 to 6.23	0.125	ACCEPT.	7/26/19	AMS

PEI-125 Boron - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1025	Boron	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	1300	1412	1440	ug/L	63.7	1220 to 1660	1.76	ACCEPT.	8/8/19	SEM
1025	Boron	10156419	ICP-MS	SW-846 6020A - 2007	1300	1412	1440	ug/L	63.7	1220 to 1660	1.76	ACCEPT.	8/8/19	SEM

PEI-127 Volatile Solids - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1970	Volatile Solids	10010409	GRAV	EPA 160.4 - 1971	257	281	263	mg/L	60.1	190 to 308	0.399	ACCEPT.	8/9/19	AMW
1970	Volatile Solids	20051596	GRAV	SM 2540 E-2011 2011	257	281	263	mg/L	60.1	190 to 308	0.399	ACCEPT.	8/9/19	AMW

PEI-136 Minerals - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

1575	Chloride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	44.1	47.8	47.7	mg/L	2.44	41.3 to 54.3	1.52	ACCEPT.	7/24/19	CMB
1575	Chloride	10199607	IC-COND	SW-846 9056A - 2007	44.1	47.8	47.7	mg/L	2.44	41.3 to 54.3	1.52	ACCEPT.	7/24/19	CMB
1730	Fluoride	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	1.04	1.01	1.01	mg/L	0.111	0.769 to 1.23	0.270	ACCEPT.	7/24/19	CMB
1730	Fluoride	10199607	IC-COND	SW-846 9056A - 2007	1.04	1.01	1.01	mg/L	0.111	0.769 to 1.23	0.270	ACCEPT.	7/24/19	CMB
1125	Potassium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	39.4	37.9	38.1	mg/L	3.97	30.5 to 45.7	0.378	ACCEPT.	8/8/19	SEM
1125	Potassium	10156419	ICP-MS	SW-846 6020A - 2007	39.4	37.9	38.1	mg/L	3.97	30.5 to 45.7	0.378	ACCEPT.	8/8/19	SEM
1155	Sodium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	73.6	70.1	70.3	mg/L	3.37	56.2 to 84.4	1.04	ACCEPT.	8/8/19	SEM
1155	Sodium	10156419	ICP-MS	SW-846 6020A - 2007	73.6	70.1	70.3	mg/L	3.37	56.2 to 84.4	1.04	ACCEPT.	8/8/19	SEM
1610	Specific Conductance (at 25C)	20048413	COND	SM 2510 B 22nd Ed 2011	481	444	444	umhos/cm	13.9	400 to 489	2.66	ACCEPT.	7/25/19	AMS
1610	Specific Conductance (at 25C)	10198808	COND	SW-846 9050A - 1996	481	444	444	umhos/cm	13.9	400 to 489	2.66	ACCEPT.	7/25/19	AMS
2000	Sulfate	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	47.2	47.6	46.8	mg/L	4.59	38.4 to 53.7	0.0871	ACCEPT.	7/24/19	CMB
2000	Sulfate	10199607	IC-COND	SW-846 9056A - 2007	47.2	47.6	46.8	mg/L	4.59	38.4 to 53.7	0.0871	ACCEPT.	7/24/19	CMB
1505	Total Alkalinity (CaCO3)	10055206	AUTO	EPA 310.2 - 1974	79.0	85.4	86.0	mg/L	3.88	73.1 to 98.9	1.65	ACCEPT.	8/16/19	AMW
1505	Total Alkalinity (CaCO3)	20045618	TITR	SM 2320 B-2011 2011	91.0	85.4	86.0	mg/L	3.88	73.1 to 98.9	1.44	ACCEPT.	7/30/19	CMB
1955	Total Dissolved Solids (TDS)	20050424	GRAV	SM 2540 C 22nd Ed 2011	352	328	328	mg/L	39.7	283 to 373	0.605	ACCEPT.	7/24/19	AMS

PEI-137 Hardness - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1035	Calcium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	45.2	43.8	44.9	mg/L	2.79	38.2 to 51.6	0.502	ACCEPT.	8/8/19	SEM
1035	Calcium	10156419	ICP-MS	SW-846 6020A - 2007	45.2	43.8	44.9	mg/L	2.79	38.2 to 51.6	0.502	ACCEPT.	8/8/19	SEM
1550	Calcium Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	115	111	112	mg/L	3.58	95.2 to 129	1.12	ACCEPT.	8/8/19	SEM
1550	Calcium Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	115	111	112	mg/L	3.58	95.2 to 129	1.12	ACCEPT.	8/8/19	SEM
1550	Calcium Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	115	111	112	mg/L	3.58	95.2 to 129	1.12	ACCEPT.	8/8/19	SEM
1085	Magnesium	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	10.3	9.67	10.1	mg/L	0.970	8.59 to 11.6	0.649	ACCEPT.	8/8/19	SEM

1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	10.3	9.67	10.1	mg/L	0.970	8.59 to 11.6	0.649	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	1.94	2.01	1.96	mg/L	0.186	1.38 to 2.62	0.376	ACCEPT.	8/1/19	AMW
1515	Ammonia as N	20111211	AUTO	SM 4500-NH3 G 22nd ED 2011	1.82	2.01	1.96	mg/L	0.186	1.38 to 2.62	1.02	ACCEPT.	7/22/19	VO
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.20	8.40	8.52	mg/L	0.663	7.01 to 9.98	0.302	ACCEPT.	7/25/19	CMB
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	8.20	8.40	8.52	mg/L	0.663	7.01 to 9.98	0.302	ACCEPT.	7/25/19	CMB
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.20	8.31	8.52	mg/L	0.701	7.06 to 9.90	0.157	ACCEPT.	7/25/19	CMB
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	8.20	8.31	8.52	mg/L	0.701	7.06 to 9.90	0.157	ACCEPT.	7/25/19	CMB
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	4.73	4.61	4.57	mg/L	0.304	3.88 to 5.26	0.395	ACCEPT.	7/25/19	CMB
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	4.73	4.61	4.57	mg/L	0.304	3.88 to 5.26	0.395	ACCEPT.	7/25/19	CMB

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	1.74	3.27	3.30	mg/L	0.470	2.71 to 3.86	3.26	NOT ACCEPT.	7/23/19	CMB
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	1.74	3.27	3.30	mg/L	0.470	2.71 to 3.86	3.26	NOT ACCEPT.	7/23/19	CMB
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK

8880	Arochlor 1016	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8885	Arochlor 1221	10296614	GC-ECD	EPA 608.3 GC-ECD	4.46	3.48	4.21	ug/L	0.724	1.58 to 5.83	1.35	ACCEPT.	8/10/19	RDK
8885	Arochlor 1221	10179358	GC-ECD	SW-846 8082A - 2007	4.46	3.48	4.21	ug/L	0.724	1.58 to 5.83	1.35	ACCEPT.	8/10/19	RDK
8890	Arochlor 1232	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8890	Arochlor 1232	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8895	Arochlor 1242	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8895	Arochlor 1242	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8900	Arochlor 1248	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8900	Arochlor 1248	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8905	Arochlor 1254	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8905	Arochlor 1254	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8910	Arochlor 1260	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8910	Arochlor 1260	10179358	GC-ECD	SW-846 8082A - 2007	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8912	Arochlor 1262	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.600	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8912	Arochlor 1262	10179358	GC-ECD	SW-846 8082A - 2007	<0.600	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8913	Arochlor 1268	10296614	GC-ECD	EPA 608.3 GC-ECD	<0.600	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK
8913	Arochlor 1268	10179358	GC-ECD	SW-846 8082A - 2007	<0.600	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK

PEO-022 Acids - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6835	2,4,5-Trichlorophenol	10300024	GC-MS	EPA 625.1 2016	74.9	71.9	86.8	ug/L	4.99	31.8 to 109	0.601	ACCEPT.	8/9/13	GJP
6835	2,4,5-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	74.9	71.9	86.8	ug/L	4.99	31.8 to 109	0.601	ACCEPT.	8/9/13	GJP
6840	2,4,6-Trichlorophenol	10300024	GC-MS	EPA 625.1 2016	147	124	154	ug/L	14.6	57.1 to 187	1.58	ACCEPT.	8/9/13	GJP
6840	2,4,6-Trichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	147	124	154	ug/L	14.6	57.1 to 187	1.58	ACCEPT.	8/9/13	GJP

6000	2,4-Dichlorophenol	10300024	GC-MS	EPA 625.1 2016	135	125	155	ug/L	12.3	50.3 to 184	0.813	ACCEPT.	8/9/13	GJP
6000	2,4-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	135	125	155	ug/L	12.3	50.3 to 184	0.813	ACCEPT.	8/9/13	GJP
6130	2,4-Dimethylphenol	10300024	GC-MS	EPA 625.1 2016	166	139	169	ug/L	24.6	46.7 to 210	1.10	ACCEPT.	8/9/13	GJP
6130	2,4-Dimethylphenol	10185805	GC-MS	SW-846 8270C - 1996	166	139	169	ug/L	24.6	46.7 to 210	1.10	ACCEPT.	8/9/13	GJP
6175	2,4-Dinitrophenol	10300024	GC-MS	EPA 625.1 2016	122	97.2	111	ug/L	23.6	11.1 to 158	1.05	ACCEPT.	8/9/13	GJP
6175	2,4-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	122	97.2	111	ug/L	23.6	11.1 to 158	1.05	ACCEPT.	8/9/13	GJP
6005	2,6-Dichlorophenol	10300024	GC-MS	EPA 625.1 2016	109	101	127	ug/L	10.0	39.5 to 159	0.800	ACCEPT.	8/9/13	GJP
6005	2,6-Dichlorophenol	10185805	GC-MS	SW-846 8270C - 1996	109	101	127	ug/L	10.0	39.5 to 159	0.800	ACCEPT.	8/9/13	GJP
5800	2-Chlorophenol	10300024	GC-MS	EPA 625.1 2016	86.7	86.3	121	ug/L	7.77	34.5 to 145	0.0515	ACCEPT.	8/9/13	GJP
5800	2-Chlorophenol	10185805	GC-MS	SW-846 8270C - 1996	86.7	86.3	121	ug/L	7.77	34.5 to 145	0.0515	ACCEPT.	8/9/13	GJP
6360	2-Methyl-4,6-Dinitrophenol	10300024	GC-MS	EPA 625.1 2016	84.7	78.9	92.7	ug/L	8.77	28.6 to 129	0.661	ACCEPT.	8/9/13	GJP
6360	2-Methyl-4,6-Dinitrophenol	10185805	GC-MS	SW-846 8270C - 1996	84.7	78.9	92.7	ug/L	8.77	28.6 to 129	0.661	ACCEPT.	8/9/13	GJP
6400	2-Methylphenol	10300024	GC-MS	EPA 625.1 2016	115	114	163	ug/L	8.71	37.1 to 190	0.115	ACCEPT.	8/9/13	GJP
6400	2-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	115	114	163	ug/L	8.71	37.1 to 190	0.115	ACCEPT.	8/9/13	GJP
6490	2-Nitrophenol	10300024	GC-MS	EPA 625.1 2016	144	119	150	ug/L	13.3	50.8 to 180	1.88	ACCEPT.	8/9/13	GJP
6490	2-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	144	119	150	ug/L	13.3	50.8 to 180	1.88	ACCEPT.	8/9/13	GJP
5700	4-Chloro-3-methylphenol	10300024	GC-MS	EPA 625.1 2016	126	137	169	ug/L	10.5	63.5 to 208	1.05	ACCEPT.	8/9/13	GJP
5700	4-Chloro-3-methylphenol	10185805	GC-MS	SW-846 8270C - 1996	126	137	169	ug/L	10.5	63.5 to 208	1.05	ACCEPT.	8/9/13	GJP
6410	4-Methylphenol	10300024	GC-MS	EPA 625.1 2016	93.8	107	153	ug/L	12.8	15.3 to 197	1.03	ACCEPT.	8/9/13	GJP
6410	4-Methylphenol	10185805	GC-MS	SW-846 8270C - 1996	93.8	107	153	ug/L	12.8	15.3 to 197	1.03	ACCEPT.	8/9/13	GJP
6500	4-Nitrophenol	10300024	GC-MS	EPA 625.1 2016	56.1	71.8	140	ug/L	22.4	14.0 to 189	0.701	ACCEPT.	8/9/13	GJP
6500	4-Nitrophenol	10185805	GC-MS	SW-846 8270C - 1996	56.1	71.8	140	ug/L	22.4	14.0 to 189	0.701	ACCEPT.	8/9/13	GJP
6605	Pentachlorophenol	10300024	GC-MS	EPA 625.1 2016	38.5	41.7	50.0	ug/L	11.0	13.6 to 69.5	0.291	ACCEPT.	8/9/13	GJP

6605	Pentachlorophenol	10185805	GC-MS	SW-846 8270C - 1996	38.5	41.7	50.0	ug/L	11.0	13.6 to 69.5	0.291	ACCEPT.	8/9/13	GJP
6625	Phenol	10300024	GC-MS	EPA 625.1 2016	41.8	48.4	114	ug/L	18.4	11.4 to 154	0.359	ACCEPT.	8/9/13	GJP
6625	Phenol	10185805	GC-MS	SW-846 8270C - 1996	41.8	48.4	114	ug/L	18.4	11.4 to 154	0.359	ACCEPT.	8/9/13	GJP
5610	Benzoic Acid	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --												
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --												

PEO-024-2 Chlordane - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	9.31	8.99	9.90	ug/L	1.61	4.14 to 13.5	0.199	ACCEPT.	8/5/19	RDK
7250	Chlordane	10178811	GC-ECD	SW-846 8081B - 2007	9.31	8.99	9.90	ug/L	1.61	4.14 to 13.5	0.199	ACCEPT.	8/5/19	RDK

PEO-093 Toxaphene - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	57.0	50.2	52.6	ug/L	6.83	11.5 to 77.4	0.996	ACCEPT.	8/22/19	RDK
8250	Toxaphene	10178811	GC-ECD	SW-846 8081B - 2007	57.0	50.2	52.6	ug/L	6.83	11.5 to 77.4	0.996	ACCEPT.	8/22/19	RDK

PEO-094 Herbicides - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8655	2,4,5-T	10183207	GC-ECD	SW-846 8151A - 1996	5.36	6.31	7.89	ug/L	1.25	1.77 to 11.3	0.760	ACCEPT.	8/15/19	RDK
8545	2,4-D	10183207	GC-ECD	SW-846 8151A - 1996	5.61	6.20	7.24	ug/L	1.11	0.724 to 11.1	0.532	ACCEPT.	8/15/19	RDK
8595	Dicamba	10183207	GC-ECD	SW-846 8151A - 1996	5.31	5.66	6.50	ug/L	1.43	1.52 to 9.24	0.245	ACCEPT.	8/15/19	RDK
8650	Silvex	10183207	GC-ECD	SW-846 8151A - 1996	6.18	8.62	9.84	ug/L	1.81	2.27 to 14.5	1.35	ACCEPT.	8/15/19	RDK
8560	2,4-DB	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/15/19	RDK
8555	Dalapon	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/15/19	RDK
8605	Dichloroprop	10183207	GC-ECD	SW-846 8151A - 1996	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/15/19	RDK

8620	Dinoseb	10183207	GC-ECD	SW-846 8151A - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/15/19	RDK
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												

PEO-101 Diesel Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW-846 8015C - 2007	2470	2679	4420	ug/L	1031	1180 to 5510	0.203	ACCEPT.	7/24/19	BDA

PEO-102 Gasoline Range Organics - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW-846 8015C - 2007	1270	1760	2650	ug/L	478	998 to 4640	1.03	ACCEPT.	8/12/19	RKP

PEO-120 Volatiles - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10298121	GC-MS	EPA 624.1 2016	94.8	91.6	96.9	ug/L	5.23	63.0 to 131	0.612	ACCEPT.	7/29/19	MAK
5105	1,1,1,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	94.8	91.6	96.9	ug/L	5.23	63.0 to 131	0.612	ACCEPT.	7/29/19	MAK
5160	1,1,1-Trichloroethane	10298121	GC-MS	EPA 624.1 2016	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5160	1,1,1-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5110	1,1,2,2-Tetrachloroethane	10298121	GC-MS	EPA 624.1 2016	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5110	1,1,2,2-Tetrachloroethane	10184802	GC-MS	SW-846 8260B - 1996	<9.80	0.00	<9.8	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5165	1,1,2-Trichloroethane	10298121	GC-MS	EPA 624.1 2016	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5165	1,1,2-Trichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<10.5	0.00	<10.5	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5150	1,2,3-Trichlorobenzene	10298121	GC-MS	EPA 624.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5150	1,2,3-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
5180	1,2,3-Trichloropropane	10298121	GC-MS	EPA 624.1 2016	61.1	70.2	76.5	ug/L	13.3	34.7 to 115	0.684	ACCEPT.	7/29/19	MAK
5180	1,2,3-Trichloropropane	10184802	GC-MS	SW-846 8260B - 1996	61.1	70.2	76.5	ug/L	13.3	34.7 to 115	0.684	ACCEPT.	7/29/19	MAK
5155	1,2,4-Trichlorobenzene	10298121	GC-MS	EPA 624.1 2016	33.6	33.0	38.1	ug/L	3.59	15.2 to 52.0	0.167	ACCEPT.	7/29/19	MAK

5155	1,2,4-Trichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	33.6	33.0	38.1	ug/L	3.59	15.2 to 52.0	0.167	ACCEPT.	7/29/19	MAK
5210	1,2,4-Trimethylbenzene	10298121	GC-MS	EPA 624.1 2016	105	104	114	ug/L	14.3	73.8 to 153	0.0699	ACCEPT.	7/29/19	MAK
5210	1,2,4-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	105	104	114	ug/L	14.3	73.8 to 153	0.0699	ACCEPT.	7/29/19	MAK
5215	1,3,5-Trimethylbenzene	10298121	GC-MS	EPA 624.1 2016	56.7	55.1	59.9	ug/L	4.65	38.9 to 80.8	0.344	ACCEPT.	7/29/19	MAK
5215	1,3,5-Trimethylbenzene	10184802	GC-MS	SW-846 8260B - 1996	56.7	55.1	59.9	ug/L	4.65	38.9 to 80.8	0.344	ACCEPT.	7/29/19	MAK
4630	1,1-Dichloroethane	10298121	GC-MS	EPA 624.1 2016	<6.40	0.00	<6.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
4630	1,1-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	<6.40	0.00	<6.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
4640	1,1-Dichloroethene	10298121	GC-MS	EPA 624.1 2016	154	135	136	ug/L	16.2	77.8 to 196	1.17	ACCEPT.	7/29/19	MAK
4640	1,1-Dichloroethene	10184802	GC-MS	SW-846 8260B - 1996	154	135	136	ug/L	16.2	77.8 to 196	1.17	ACCEPT.	7/29/19	MAK
4570	1,2-Dibromo-3-chloropropane	10184904	GC-MS	SW-846 8260B SIM - 1996	54.3	65.9	68.8	ug/L	4.62	41.2 to 96.3	2.51	ACCEPT.	7/29/19	MAK
4610	1,2-Dichlorobenzene	10298121	GC-MS	EPA 624.1 2016	48.7	51.9	54.2	ug/L	4.61	38.0 to 70.5	0.694	ACCEPT.	7/29/19	MAK
4610	1,2-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	48.7	51.9	54.2	ug/L	4.61	38.0 to 70.5	0.694	ACCEPT.	7/29/19	MAK
4635	1,2-Dichloroethane	10298121	GC-MS	EPA 624.1 2016	127	124	126	ug/L	14.1	89.2 to 161	0.213	ACCEPT.	7/29/19	MAK
4635	1,2-Dichloroethane	10184802	GC-MS	SW-846 8260B - 1996	127	124	126	ug/L	14.1	89.2 to 161	0.213	ACCEPT.	7/29/19	MAK
4655	1,2-Dichloropropane	10298121	GC-MS	EPA 624.1 2016	24.4	23.7	25.3	ug/L	1.74	17.7 to 32.9	0.402	ACCEPT.	7/29/19	MAK
4655	1,2-Dichloropropane	10184802	GC-MS	SW-846 8260B - 1996	24.4	23.7	25.3	ug/L	1.74	17.7 to 32.9	0.402	ACCEPT.	7/29/19	MAK
4615	1,3-Dichlorobenzene	10298121	GC-MS	EPA 624.1 2016	67.3	69.1	74.5	ug/L	5.54	52.1 to 96.8	0.325	ACCEPT.	7/29/19	MAK
4615	1,3-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	67.3	69.1	74.5	ug/L	5.54	52.1 to 96.8	0.325	ACCEPT.	7/29/19	MAK
4620	1,4-Dichlorobenzene	10298121	GC-MS	EPA 624.1 2016	82.8	85.3	89.7	ug/L	6.47	62.8 to 117	0.386	ACCEPT.	7/29/19	MAK
4620	1,4-Dichlorobenzene	10184802	GC-MS	SW-846 8260B - 1996	82.8	85.3	89.7	ug/L	6.47	62.8 to 117	0.386	ACCEPT.	7/29/19	MAK
4410	2-Butanone	10298121	GC-MS	EPA 624.1 2016	<25.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
4410	2-Butanone	10184802	GC-MS	SW-846 8260B - 1996	<25.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
4500	2-Chloroethyl vinyl ether	10298121	GC-MS	EPA 624.1	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK

				2016										
4500	2-Chloroethyl vinyl ether	10184802	GC-MS	SW-846	<10.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4860	2-Hexanone	10298121	GC-MS	EPA 624.1	<4.40	0.00	<4.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4860	2-Hexanone	10184802	GC-MS	SW-846	<4.40	0.00	<4.4	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4995	4-Methyl-2-pentanone	10298121	GC-MS	EPA 624.1	<2.00	0.00	<2.00	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4995	4-Methyl-2-pentanone	10184802	GC-MS	SW-846	<2.00	0.00	<2.00	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4315	Acetone	10298121	GC-MS	EPA 624.1	97.9	106	120	ug/L	20.9	31.5 to 188	0.388	ACCEPT.	7/29/19	MAK
				2016										
4315	Acetone	10184802	GC-MS	SW-846	97.9	106	120	ug/L	20.9	31.5 to 188	0.388	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4325	Acrolein	10298121	GC-MS	EPA 624.1	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
				2016										
4325	Acrolein	10184802	GC-MS	SW-846	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
				8260B - 1996										
4340	Acrylonitrile	10298121	GC-MS	EPA 624.1	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4340	Acrylonitrile	10184802	GC-MS	SW-846	<2.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4375	Benzene	10298121	GC-MS	EPA 624.1	39.4	39.9	42.0	ug/L	3.63	29.4 to 54.6	0.138	ACCEPT.	7/29/19	MAK
				2016										
4375	Benzene	10184802	GC-MS	SW-846	39.4	39.9	42.0	ug/L	3.63	29.4 to 54.6	0.138	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4395	Bromodichloromethane	10298121	GC-MS	EPA 624.1	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4395	Bromodichloromethane	10184802	GC-MS	SW-846	<6.00	0.00	<6	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4400	Bromoform	10298121	GC-MS	EPA 624.1	41.5	45.5	46.0	ug/L	4.18	27.6 to 64.4	0.957	ACCEPT.	7/29/19	MAK
				2016										
4400	Bromoform	10184802	GC-MS	SW-846	41.5	45.5	46.0	ug/L	4.18	27.6 to 64.4	0.957	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4950	Bromomethane	10298121	GC-MS	EPA 624.1	41.4	94.9	101	ug/L	27.1	40.3 to 161	1.97	ACCEPT.	7/29/19	MAK
				2016										
4950	Bromomethane	10184802	GC-MS	SW-846	41.4	94.9	101	ug/L	27.1	40.3 to 161	1.97	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4450	Carbon disulfide	10298121	GC-MS	EPA 624.1	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4450	Carbon disulfide	10184802	GC-MS	SW-846	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4455	Carbon tetrachloride	10298121	GC-MS	EPA 624.1	92.2	83.5	89.3	ug/L	10.7	50.5 to 121	0.813	ACCEPT.	7/29/19	MAK
				2016										
4455	Carbon tetrachloride	10184802	GC-MS	SW-846	92.2	83.5	89.3	ug/L	10.7	50.5 to 121	0.813	ACCEPT.	7/29/19	MAK

				8260B - 1996									
4475	Chlorobenzene	10298121	GC-MS	EPA 624.1	51.6	52.8	53.3	ug/L	3.79	37.3 to 69.3	0.317	ACCEPT.	7/29/19	MAK
				2016										
4475	Chlorobenzene	10184802	GC-MS	SW-846	51.6	52.8	53.3	ug/L	3.79	37.3 to 69.3	0.317	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4485	Chloroethane	10298121	GC-MS	EPA 624.1	55.9	52.0	51.9	ug/L	12.3	20.8 to 83.0	0.317	ACCEPT.	7/29/19	MAK
				2016										
4485	Chloroethane	10184802	GC-MS	SW-846	55.9	52.0	51.9	ug/L	12.3	20.8 to 83.0	0.317	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4505	Chloroform	10298121	GC-MS	EPA 624.1	24.4	22.5	23.9	ug/L	2.00	16.7 to 31.1	0.950	ACCEPT.	7/29/19	MAK
				2016										
4505	Chloroform	10184802	GC-MS	SW-846	24.4	22.5	23.9	ug/L	2.00	16.7 to 31.1	0.950	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4960	Chloromethane	10298121	GC-MS	EPA 624.1	67.3	72.2	80.0	ug/L	12.0	32.0 to 128	0.408	ACCEPT.	7/29/19	MAK
				2016										
4960	Chloromethane	10184802	GC-MS	SW-846	67.3	72.2	80.0	ug/L	12.0	32.0 to 128	0.408	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4645	cis-1,2-Dichloroethene	10298121	GC-MS	EPA 624.1	<7.00	0.00	<7.0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4645	cis-1,2-Dichloroethene	10184802	GC-MS	SW-846	<7.00	0.00	<7.0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4680	cis-1,3-Dichloropropene	10298121	GC-MS	EPA 624.1	52.4	48.8	55.3	ug/L	3.51	36.0 to 74.7	1.03	ACCEPT.	7/29/19	MAK
				2016										
4680	cis-1,3-Dichloropropene	10184802	GC-MS	SW-846	52.4	48.8	55.3	ug/L	3.51	36.0 to 74.7	1.03	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4575	Dibromochloromethane	10298121	GC-MS	EPA 624.1	54.3	54.6	61.5	ug/L	5.04	36.9 to 86.1	0.0595	ACCEPT.	7/29/19	MAK
				2016										
4575	Dibromochloromethane	10184802	GC-MS	SW-846	54.3	54.6	61.5	ug/L	5.04	36.9 to 86.1	0.0595	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4595	Dibromomethane	10298121	GC-MS	EPA 624.1	106	119	118	ug/L	14.8	76.9 to 160	0.878	ACCEPT.	7/29/19	MAK
				2016										
4595	Dibromomethane	10184802	GC-MS	SW-846	106	119	118	ug/L	14.8	76.9 to 160	0.878	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4625	Dichlorodifluoromethane	10298121	GC-MS	EPA 624.1	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				2016										
4625	Dichlorodifluoromethane	10184802	GC-MS	SW-846	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4765	Ethylbenzene	10298121	GC-MS	EPA 624.1	22.5	22.6	23.5	ug/L	1.57	16.4 to 30.5	0.0637	ACCEPT.	7/29/19	MAK
				2016										
4765	Ethylbenzene	10184802	GC-MS	SW-846	22.5	22.6	23.5	ug/L	1.57	16.4 to 30.5	0.0637	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4585	Ethylene dibromide	10298121	GC-MS	EPA 624.1	81.1	88.6	91.8	ug/L	6.61	59.7 to 124	1.13	ACCEPT.	7/29/19	MAK
				2016										
4585	Ethylene dibromide	10184802	GC-MS	SW-846	81.1	88.6	91.8	ug/L	6.61	59.7 to 124	1.13	ACCEPT.	7/29/19	MAK
				8260B - 1996										
4975	Methylene chloride	10298121	GC-MS	EPA 624.1	112	104	105	ug/L	12.8	62.8 to 146	0.625	ACCEPT.	7/29/19	MAK

4975	Methylene chloride	10184802	GC-MS	2016 SW-846 8260B - 1996	112	104	105	ug/L	12.8	62.8 to 146	0.625	ACCEPT.	7/29/19	MAK
5000	MTBE	10298121	GC-MS	EPA 624.1	145	140	142	ug/L	22.2	96.7 to 193	0.225	ACCEPT.	7/29/19	MAK
5000	MTBE	10184802	GC-MS	2016 SW-846 8260B - 1996	145	140	142	ug/L	22.2	96.7 to 193	0.225	ACCEPT.	7/29/19	MAK
5005	Naphthalene	10298121	GC-MS	EPA 624.1	46.7	52.4	56.7	ug/L	5.40	26.3 to 76.3	1.06	ACCEPT.	7/29/19	MAK
5005	Naphthalene	10184802	GC-MS	2016 SW-846 8260B - 1996	46.7	52.4	56.7	ug/L	5.40	26.3 to 76.3	1.06	ACCEPT.	7/29/19	MAK
5100	Styrene	10298121	GC-MS	EPA 624.1	<13.0	0.00	<13.0	ug/L	0.00	0.00 to 13.0	n/a	ACCEPT.	7/29/19	MAK
5100	Styrene	10184802	GC-MS	2016 SW-846 8260B - 1996	<13.0	0.00	<13.0	ug/L	0.00	0.00 to 13.0	n/a	ACCEPT.	7/29/19	MAK
5115	Tetrachloroethene	10298121	GC-MS	EPA 624.1	121	110	122	ug/L	16.5	69.6 to 158	0.667	ACCEPT.	7/29/19	MAK
5115	Tetrachloroethene	10184802	GC-MS	2016 SW-846 8260B - 1996	121	110	122	ug/L	16.5	69.6 to 158	0.667	ACCEPT.	7/29/19	MAK
5140	Toluene	10298121	GC-MS	EPA 624.1	97.1	97.4	102	ug/L	10.9	71.4 to 133	0.0275	ACCEPT.	7/29/19	MAK
5140	Toluene	10184802	GC-MS	2016 SW-846 8260B - 1996	97.1	97.4	102	ug/L	10.9	71.4 to 133	0.0275	ACCEPT.	7/29/19	MAK
5240	m+p-Xylene	10298121	GC-MS	EPA 624.1	37.9	37.1	36.7	ug/L	3.32	22.0 to 51.4	0.241	ACCEPT.	7/29/19	MAK
5240	m+p-Xylene	10184802	GC-MS	2016 SW-846 8260B - 1996	37.9	37.1	36.7	ug/L	3.32	22.0 to 51.4	0.241	ACCEPT.	7/29/19	MAK
5250	o-Xylene	10298121	GC-MS	EPA 624.1	135	134	137	ug/L	12.2	82.1 to 192	0.0820	ACCEPT.	7/29/19	MAK
5250	o-Xylene	10184802	GC-MS	2016 SW-846 8260B - 1996	135	134	137	ug/L	12.2	82.1 to 192	0.0820	ACCEPT.	7/29/19	MAK
5260	Total Xylenes	10298121	GC-MS	EPA 624.1	173	171	174	ug/L	13.5	104 to 243	0.148	ACCEPT.	7/29/19	MAK
5260	Total Xylenes	10184802	GC-MS	2016 SW-846 8260B - 1996	173	171	174	ug/L	13.5	104 to 243	0.148	ACCEPT.	7/29/19	MAK
4700	trans-1,2-Dichloroethene	10298121	GC-MS	EPA 624.1	20.6	19.5	20.1	ug/L	2.09	12.1 to 28.1	0.526	ACCEPT.	7/29/19	MAK
4700	trans-1,2-Dichloroethene	10184802	GC-MS	2016 SW-846 8260B - 1996	20.6	19.5	20.1	ug/L	2.09	12.1 to 28.1	0.526	ACCEPT.	7/29/19	MAK
4685	trans-1,3-Dichloropropene	10298121	GC-MS	EPA 624.1	42.6	43.1	44.8	ug/L	4.83	29.1 to 60.5	0.104	ACCEPT.	7/29/19	MAK
4685	trans-1,3-Dichloropropene	10184802	GC-MS	2016 SW-846 8260B - 1996	42.6	43.1	44.8	ug/L	4.83	29.1 to 60.5	0.104	ACCEPT.	7/29/19	MAK
5170	Trichloroethene	10298121	GC-MS	EPA 624.1	22.1	22.0	23.1	ug/L	2.21	14.6 to 31.0	0.0452	ACCEPT.	7/29/19	MAK
5170	Trichloroethene	10184802	GC-MS	2016 SW-846	22.1	22.0	23.1	ug/L	2.21	14.6 to 31.0	0.0452	ACCEPT.	7/29/19	MAK

				8260B - 1996									
5175	Trichlorofluoromethane	10298121	GC-MS	EPA 624.1 2016	61.8	53.9	66.4	ug/L	8.02	26.6 to 106	0.985	ACCEPT.	7/29/19	MAK
5175	Trichlorofluoromethane	10184802	GC-MS	SW-846 8260B - 1996	61.8	53.9	66.4	ug/L	8.02	26.6 to 106	0.985	ACCEPT.	7/29/19	MAK
5225	Vinyl acetate	10298121	GC-MS	EPA 624.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
5225	Vinyl acetate	10184802	GC-MS	SW-846 8260B - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/6/19	JLM
5235	Vinyl chloride	10298121	GC-MS	EPA 624.1 2016	74.1	76.5	69.6	ug/L	8.75	27.9 to 111	0.274	ACCEPT.	7/29/19	MAK
5235	Vinyl chloride	10184802	GC-MS	SW-846 8260B - 1996	74.1	76.5	69.6	ug/L	8.75	27.9 to 111	0.274	ACCEPT.	7/29/19	MAK
4320	Acetonitrile	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4855	n-Hexane	-- Not Reported --												
4940	Methyl acetate	-- Not Reported --												
4965	Methyl cyclohexane	-- Not Reported --												

PEO-121 Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10300024	GC-MS	EPA 625.1 2016	97.3	94.4	134	ug/L	13.0	26.4 to 157	0.223	ACCEPT.	8/9/19	GJP
5155	1,2,4-Trichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	97.3	94.4	134	ug/L	13.0	26.4 to 157	0.223	ACCEPT.	8/9/19	GJP
5795	2-Chloronaphthalene	10300024	GC-MS	EPA 625.1 2016	86.2	79.0	104	ug/L	7.12	28.6 to 123	1.01	ACCEPT.	8/9/19	GJP
5795	2-Chloronaphthalene	10185805	GC-MS	SW-846 8270C - 1996	86.2	79.0	104	ug/L	7.12	28.6 to 123	1.01	ACCEPT.	8/9/19	GJP
4610	1,2-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	77.2	71.3	104	ug/L	7.23	13.0 to 121	0.816	ACCEPT.	8/9/19	GJP
4610	1,2-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	77.2	71.3	104	ug/L	7.23	13.0 to 121	0.816	ACCEPT.	8/9/19	GJP
6220	1,2-Diphenylhydrazine	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6220	1,2-Diphenylhydrazine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
4615	1,3-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	93.4	86.4	134	ug/L	11.3	13.4 to 156	0.619	ACCEPT.	8/9/19	GJP
4615	1,3-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	93.4	86.4	134	ug/L	11.3	13.4 to 156	0.619	ACCEPT.	8/9/19	GJP
4620	1,4-Dichlorobenzene	10300024	GC-MS	EPA 625.1 2016	47.0	44.4	69.1	ug/L	4.73	7.34 to 78.2	0.550	ACCEPT.	8/9/19	GJP
4620	1,4-Dichlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	47.0	44.4	69.1	ug/L	4.73	7.34 to 78.2	0.550	ACCEPT.	8/9/19	GJP

6185	2,4-Dinitrotoluene	10300024	GC-MS	EPA 625.1 2016	50.6	47.8	42.3	ug/L	10.9	14.9 to 55.4	0.257	ACCEPT.	8/9/19	GJP
6185	2,4-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	50.6	47.8	42.3	ug/L	10.9	14.9 to 55.4	0.257	ACCEPT.	8/9/19	GJP
6190	2,6-Dinitrotoluene	10300024	GC-MS	EPA 625.1 2016	63.7	61.4	73.4	ug/L	4.01	29.8 to 88.6	0.574	ACCEPT.	8/9/19	GJP
6190	2,6-Dinitrotoluene	10185805	GC-MS	SW-846 8270C - 1996	63.7	61.4	73.4	ug/L	4.01	29.8 to 88.6	0.574	ACCEPT.	8/9/19	GJP
6385	2-Methylnaphthalene	10300024	GC-MS	EPA 625.1 2016	<2.00	0.00	<2.0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6385	2-Methylnaphthalene	10185805	GC-MS	SW-846 8270C - 1996	<2.00	0.00	<2.0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6460	2-Nitroaniline	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6460	2-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6465	3-Nitroaniline	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6465	3-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5945	3,3'-Dichlorobenzidine	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5945	3,3'-Dichlorobenzidine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5660	4-Bromophenyl phenyl ether	10300024	GC-MS	EPA 625.1 2016	103	88.9	114	ug/L	9.05	47.1 to 143	1.56	ACCEPT.	8/9/19	GJP
5660	4-Bromophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	103	88.9	114	ug/L	9.05	47.1 to 143	1.56	ACCEPT.	8/9/19	GJP
5745	4-Chloroaniline	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5745	4-Chloroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5825	4-Chlorophenyl phenyl ether	10300024	GC-MS	EPA 625.1 2016	156	134	153	ug/L	20.1	55.5 to 187	1.09	ACCEPT.	8/9/19	GJP
5825	4-Chlorophenyl phenyl ether	10185805	GC-MS	SW-846 8270C - 1996	156	134	153	ug/L	20.1	55.5 to 187	1.09	ACCEPT.	8/9/19	GJP
6470	4-Nitroaniline	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6470	4-Nitroaniline	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5500	Acenaphthene	10300024	GC-MS	EPA 625.1 2016	<4.00	0.00	<4.0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5500	Acenaphthene	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0.00	<4.0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5505	Acenaphthylene	10300024	GC-MS	EPA 625.1 2016	<2.90	0.00	<2.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP

5505	Acenaphthylene	10185805	GC-MS	SW-846 8270C - 1996	<2.90	0.00	<2.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5545	Aniline	10300024	GC-MS	EPA 625.1 2016	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5545	Aniline	10185805	GC-MS	SW-846 8270C - 1996	<4.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5555	Anthracene	10300024	GC-MS	EPA 625.1 2016	76.8	70.8	85.5	ug/L	5.24	36.4 to 104	1.15	ACCEPT.	8/9/19	GJP
5555	Anthracene	10185805	GC-MS	SW-846 8270C - 1996	76.8	70.8	85.5	ug/L	5.24	36.4 to 104	1.15	ACCEPT.	8/9/19	GJP
5595	Benzidine	10300024	GC-MS	EPA 625.1 2016	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5595	Benzidine	10185805	GC-MS	SW-846 8270C - 1996	<20.0	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/13/19	GJP
5575	Benzo(a)anthracene	10300024	GC-MS	EPA 625.1 2016	62.8	68.7	74.7	ug/L	4.90	35.3 to 91.0	1.20	ACCEPT.	8/9/19	GJP
5575	Benzo(a)anthracene	10185805	GC-MS	SW-846 8270C - 1996	62.8	68.7	74.7	ug/L	4.90	35.3 to 91.0	1.20	ACCEPT.	8/9/19	GJP
5580	Benzo(a)pyrene	10300024	GC-MS	EPA 625.1 2016	120	128	170	ug/L	27.4	62.3 to 216	0.292	ACCEPT.	8/9/19	GJP
5580	Benzo(a)pyrene	10185805	GC-MS	SW-846 8270C - 1996	120	128	170	ug/L	27.4	62.3 to 216	0.292	ACCEPT.	8/9/19	GJP
5585	Benzo(b)fluoranthene	10300024	GC-MS	EPA 625.1 2016	129	129	139	ug/L	21.1	53.1 to 178	0	ACCEPT.	8/9/19	GJP
5585	Benzo(b)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	129	129	139	ug/L	21.1	53.1 to 178	0	ACCEPT.	8/9/19	GJP
5590	Benzo(g,h,i)perylene	10300024	GC-MS	EPA 625.1 2016	<5.10	0.00	<5.1	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5590	Benzo(g,h,i)perylene	10185805	GC-MS	SW-846 8270C - 1996	<5.10	0.00	<5.1	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5600	Benzo(k)fluoranthene	10300024	GC-MS	EPA 625.1 2016	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5600	Benzo(k)fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<7.70	0.00	<7.7	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5630	Benzyl alcohol	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5630	Benzyl alcohol	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5760	bis(2-Chloroethoxy)methane	10300024	GC-MS	EPA 625.1 2016	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5760	bis(2-Chloroethoxy)methane	10185805	GC-MS	SW-846 8270C - 1996	<3.90	0.00	<3.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5765	bis(2-Chloroethyl)ether	10300024	GC-MS	EPA 625.1 2016	86.0	66.5	97.6	ug/L	23.4	25.3 to 118	0.833	ACCEPT.	8/9/19	GJP
5765	bis(2-Chloroethyl)ether	10185805	GC-MS	SW-846 8270C - 1996	86.0	66.5	97.6	ug/L	23.4	25.3 to 118	0.833	ACCEPT.	8/9/19	GJP

4659	2,2-Oxybis(1-chloropropane)	10300024	GC-MS	EPA 625.1 2016	132	110	134	ug/L	21.1	38.3 to 161	1.04	ACCEPT.	8/9/19	GJP
4659	2,2-Oxybis(1-chloropropane)	10185805	GC-MS	SW-846 8270C - 1996	132	110	134	ug/L	21.1	38.3 to 161	1.04	ACCEPT.	8/9/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10300024	GC-MS	EPA 625.1 2016	57.6	60.3	68.0	ug/L	9.32	22.5 to 92.3	0.290	ACCEPT.	8/9/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10185805	GC-MS	SW-846 8270C - 1996	57.6	60.3	68.0	ug/L	9.32	22.5 to 92.3	0.290	ACCEPT.	8/9/19	GJP
5670	Butyl benzyl phthalate	10300024	GC-MS	EPA 625.1 2016	<13.4	0.00	<13.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5670	Butyl benzyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<13.4	0.00	<13.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5680	Carbazole	10300024	GC-MS	EPA 625.1 2016	197	168	184	ug/L	27.2	18.4 to 202	1.07	ACCEPT.	8/9/19	GJP
5680	Carbazole	10185805	GC-MS	SW-846 8270C - 1996	197	168	184	ug/L	27.2	18.4 to 202	1.07	ACCEPT.	8/9/19	GJP
5855	Chrysene	10300024	GC-MS	EPA 625.1 2016	142	141	156	ug/L	15.2	66.1 to 194	0.0658	ACCEPT.	8/9/19	GJP
5855	Chrysene	10185805	GC-MS	SW-846 8270C - 1996	142	141	156	ug/L	15.2	66.1 to 194	0.0658	ACCEPT.	8/9/19	GJP
5895	Dibenzo(a,h)anthracene	10300024	GC-MS	EPA 625.1 2016	<6.90	0.00	<6.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5895	Dibenzo(a,h)anthracene	10185805	GC-MS	SW-846 8270C - 1996	<6.90	0.00	<6.9	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5905	Dibenzofuran	10300024	GC-MS	EPA 625.1 2016	99.1	85.3	105	ug/L	9.49	40.8 to 120	1.45	ACCEPT.	8/9/19	GJP
5905	Dibenzofuran	10185805	GC-MS	SW-846 8270C - 1996	99.1	85.3	105	ug/L	9.49	40.8 to 120	1.45	ACCEPT.	8/9/19	GJP
6070	Diethyl phthalate	10300024	GC-MS	EPA 625.1 2016	179	145	173	ug/L	37.7	33.2 to 233	0.902	ACCEPT.	8/9/19	GJP
6070	Diethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	179	145	173	ug/L	37.7	33.2 to 233	0.902	ACCEPT.	8/9/19	GJP
6135	Dimethyl phthalate	10300024	GC-MS	EPA 625.1 2016	80.2	69.6	95.1	ug/L	19.6	9.51 to 139	0.541	ACCEPT.	8/9/19	GJP
6135	Dimethyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	80.2	69.6	95.1	ug/L	19.6	9.51 to 139	0.541	ACCEPT.	8/9/19	GJP
5925	Di-n-butyl phthalate	10300024	GC-MS	EPA 625.1 2016	<15.8	0.00	<15.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5925	Di-n-butyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	<15.8	0.00	<15.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6200	Di-n-octyl phthalate	10300024	GC-MS	EPA 625.1 2016	30.8	35.7	40.4	ug/L	6.21	11.3 to 60.5	0.789	ACCEPT.	8/9/19	GJP
6200	Di-n-octyl phthalate	10185805	GC-MS	SW-846 8270C - 1996	30.8	35.7	40.4	ug/L	6.21	11.3 to 60.5	0.789	ACCEPT.	8/9/19	GJP
6265	Fluoranthene	10300024	GC-MS	EPA 625.1 2016	<15.6	0.00	<15.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP

6265	Fluoranthene	10185805	GC-MS	SW-846 8270C - 1996	<15.6	0.00	<15.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6270	Fluorene	10300024	GC-MS	EPA 625.1 2016	<4.80	0.00	<4.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6270	Fluorene	10185805	GC-MS	SW-846 8270C - 1996	<4.80	0.00	<4.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6275	Hexachlorobenzene	10300024	GC-MS	EPA 625.1 2016	<8.80	0.00	<8.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6275	Hexachlorobenzene	10185805	GC-MS	SW-846 8270C - 1996	<8.80	0.00	<8.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
4835	Hexachlorobutadiene	10300024	GC-MS	EPA 625.1 2016	122	119	182	ug/L	22.4	23.1 to 211	0.134	ACCEPT.	8/9/19	GJP
4835	Hexachlorobutadiene	10185805	GC-MS	SW-846 8270C - 1996	122	119	182	ug/L	22.4	23.1 to 211	0.134	ACCEPT.	8/9/19	GJP
6285	Hexachlorocyclopentadiene	10300024	GC-MS	EPA 625.1 2016	35.3	57.7	156	ug/L	27.7	15.6 to 201	0.809	ACCEPT.	8/12/19	GJP
6285	Hexachlorocyclopentadiene	10185805	GC-MS	SW-846 8270C - 1996	35.3	57.7	156	ug/L	27.7	15.6 to 201	0.809	ACCEPT.	8/12/19	GJP
4840	Hexachloroethane	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	<3.3	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
4840	Hexachloroethane	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	<3.3	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10300024	GC-MS	EPA 625.1 2016	192	159	193	ug/L	31.3	55.4 to 230	1.05	ACCEPT.	8/9/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10185805	GC-MS	SW-846 8270C - 1996	192	159	193	ug/L	31.3	55.4 to 230	1.05	ACCEPT.	8/9/19	GJP
6320	Isophorone	10300024	GC-MS	EPA 625.1 2016	164	151	179	ug/L	22.3	65.6 to 222	0.583	ACCEPT.	8/12/19	GJP
6320	Isophorone	10185805	GC-MS	SW-846 8270C - 1996	164	151	179	ug/L	22.3	65.6 to 222	0.583	ACCEPT.	8/12/19	GJP
5005	Naphthalene	10300024	GC-MS	EPA 625.1 2016	65.5	62.9	84.6	ug/L	5.63	20.2 to 101	0.462	ACCEPT.	8/9/19	GJP
5005	Naphthalene	10185805	GC-MS	SW-846 8270C - 1996	65.5	62.9	84.6	ug/L	5.63	20.2 to 101	0.462	ACCEPT.	8/9/19	GJP
5015	Nitrobenzene	10300024	GC-MS	EPA 625.1 2016	143	126	159	ug/L	22.0	52.1 to 188	0.773	ACCEPT.	8/9/19	GJP
5015	Nitrobenzene	10185805	GC-MS	SW-846 8270C - 1996	143	126	159	ug/L	22.0	52.1 to 188	0.773	ACCEPT.	8/9/19	GJP
6530	N-Nitrosodimethylamine	10300024	GC-MS	EPA 625.1 2016	<7.50	0.00	<7.5	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6530	N-Nitrosodimethylamine	10185805	GC-MS	SW-846 8270C - 1996	<7.50	0.00	<7.5	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6545	N-Nitrosodi-n-propylamine	10300024	GC-MS	EPA 625.1 2016	<9.40	0.00	<9.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6545	N-Nitrosodi-n-propylamine	10185805	GC-MS	SW-846 8270C - 1996	<9.40	0.00	<9.4	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP

6535	N-Nitrosodiphenylamine	10300024	GC-MS	EPA 625.1 2016	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6535	N-Nitrosodiphenylamine	10185805	GC-MS	SW-846 8270C - 1996	<5.60	0.00	<5.6	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6615	Phenanthrene	10300024	GC-MS	EPA 625.1 2016	90.6	83.5	96.0	ug/L	7.95	44.9 to 115	0.893	ACCEPT.	8/9/19	GJP
6615	Phenanthrene	10185805	GC-MS	SW-846 8270C - 1996	90.6	83.5	96.0	ug/L	7.95	44.9 to 115	0.893	ACCEPT.	8/9/19	GJP
6665	Pyrene	10300024	GC-MS	EPA 625.1 2016	114	119	130	ug/L	19.3	53.1 to 170	0.259	ACCEPT.	8/9/19	GJP
6665	Pyrene	10185805	GC-MS	SW-846 8270C - 1996	114	119	130	ug/L	19.3	53.1 to 170	0.259	ACCEPT.	8/9/19	GJP
5095	Pyridine	10300024	GC-MS	EPA 625.1 2016	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
5095	Pyridine	10185805	GC-MS	SW-846 8270C - 1996	<5.00	0.00	0	ug/L	0.00	0.00	n/a	ACCEPT.	8/9/19	GJP
6525	N-Nitrosodiethylamine	-- Not Reported --												
6380	1-Methylnaphthalene	-- Not Reported --												
5510	Acetophenone	-- Not Reported --												
6260	Ethyl methanesulfonate	-- Not Reported --												
6375	Methyl methanesulfonate	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5875	n-Decane	-- Not Reported --												
6105	p-Dimethylaminoazobenzene	-- Not Reported --												
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --												
6120	3,3-Dimethylbenzidine	-- Not Reported --												
6125	a,a-Dimethylphenethylamine	-- Not Reported --												
6155	o-Dinitrobenzene	-- Not Reported --												
6160	1,3-Dinitrobenzene	-- Not Reported --												
6160	m-Dinitrobenzene	-- Not Reported --												
6165	p-Dinitrobenzene	-- Not Reported --												
6210	Diphenyl ether	-- Not Reported --												
6290	Hexachlorophene	-- Not Reported --												
6295	Hexachloropropene	-- Not Reported --												
6325	Isosafrole	-- Not Reported --												
6345	Methapyrilene	-- Not Reported --												
6355	3-Methylcholanthrene	-- Not Reported --												

6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6715	1,2,4,5-Tetrachlorobenzene	-- Not Reported --
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
7065	Atrazine	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

PEO-122 Pesticides - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7025	Aldrin	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	8.00	7.42	9.91	ug/L	1.60	3.51 to 13.4	0.363	ACCEPT.	8/10/19	RDK
7025	Aldrin	10178811	GC-ECD	SW-846 8081B - 2007	8.00	7.42	9.91	ug/L	1.60	3.51 to 13.4	0.363	ACCEPT.	8/10/19	RDK

7110	alpha-BHC	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	9.71	8.44	10.6	ug/L	0.997	4.64 to 14.4	1.27	ACCEPT.	8/10/19	RDK
7110	alpha-BHC	10178811	GC-ECD	SW-846 8081B - 2007	9.71	8.44	10.6	ug/L	0.997	4.64 to 14.4	1.27	ACCEPT.	8/10/19	RDK
7115	beta-BHC	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	12.0	8.70	10.1	ug/L	1.50	4.79 to 13.6	2.20	ACCEPT.	8/10/19	RDK
7115	beta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	12.0	8.70	10.1	ug/L	1.50	4.79 to 13.6	2.20	ACCEPT.	8/10/19	RDK
7355	4,4'-DDD	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	4.54	4.31	4.80	ug/L	0.600	2.19 to 6.78	0.383	ACCEPT.	8/5/19	RDK
7355	4,4'-DDD	10178811	GC-ECD	SW-846 8081B - 2007	4.54	4.31	4.80	ug/L	0.600	2.19 to 6.78	0.383	ACCEPT.	8/5/19	RDK
7360	4,4'-DDE	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	1.39	1.44	1.69	ug/L	0.277	0.695 to 2.42	0.181	ACCEPT.	8/5/19	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW-846 8081B - 2007	1.39	1.44	1.69	ug/L	0.277	0.695 to 2.42	0.181	ACCEPT.	8/5/19	RDK
7365	4,4'-DDT	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	8.51	7.30	8.52	ug/L	1.29	3.37 to 12.2	0.938	ACCEPT.	8/10/19	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW-846 8081B - 2007	8.51	7.30	8.52	ug/L	1.29	3.37 to 12.2	0.938	ACCEPT.	8/10/19	RDK
7105	delta-BHC	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	4.61	3.41	4.14	ug/L	0.516	1.75 to 5.94	2.33	ACCEPT.	8/5/19	RDK
7105	delta-BHC	10178811	GC-ECD	SW-846 8081B - 2007	4.61	3.41	4.14	ug/L	0.516	1.75 to 5.94	2.33	ACCEPT.	8/5/19	RDK
7470	Dieldrin	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	4.91	4.99	6.00	ug/L	0.627	3.05 to 7.97	0.128	ACCEPT.	8/5/19	RDK
7470	Dieldrin	10178811	GC-ECD	SW-846 8081B - 2007	4.91	4.99	6.00	ug/L	0.627	3.05 to 7.97	0.128	ACCEPT.	8/5/19	RDK
7510	Endosulfan I	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	10.0	9.82	12.7	ug/L	1.11	4.94 to 17.1	0.162	ACCEPT.	8/10/19	RDK
7510	Endosulfan I	10178811	GC-ECD	SW-846 8081B - 2007	10.0	9.82	12.7	ug/L	1.11	4.94 to 17.1	0.162	ACCEPT.	8/10/19	RDK
7515	Endosulfan II	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	13.9	11.7	14.1	ug/L	1.63	5.90 to 19.1	1.35	ACCEPT.	8/14/19	RDK
7515	Endosulfan II	10178811	GC-ECD	SW-846 8081B - 2007	13.9	11.7	14.1	ug/L	1.63	5.90 to 19.1	1.35	ACCEPT.	8/14/19	RDK
7520	Endosulfan sulfate	10296614	GC-ECD	EPA 608.3	10.8	8.31	9.65	ug/L	1.22	4.45 to 13.5	2.04	ACCEPT.	8/10/19	RDK

				GC-ECD 2016										
7520	Endosulfan sulfate	10178811	GC-ECD	SW-846 8081B - 2007	10.8	8.31	9.65	ug/L	1.22	4.45 to 13.5	2.04	ACCEPT.	8/10/19	RDK
7540	Endrin	10296614	GC-ECD	EPA 608.3	10.6	9.50	11.6	ug/L	1.71	5.07 to 16.3	0.643	ACCEPT.	8/10/19	RDK
				GC-ECD 2016										
7540	Endrin	10178811	GC-ECD	SW-846 8081B - 2007	10.6	9.50	11.6	ug/L	1.71	5.07 to 16.3	0.643	ACCEPT.	8/10/19	RDK
7530	Endrin aldehyde	10296614	GC-ECD	EPA 608.3	10.9	8.57	10.6	ug/L	1.28	3.99 to 15.2	1.82	ACCEPT.	8/14/19	RDK
				GC-ECD 2016										
7530	Endrin aldehyde	10178811	GC-ECD	SW-846 8081B - 2007	10.9	8.57	10.6	ug/L	1.28	3.99 to 15.2	1.82	ACCEPT.	8/14/19	RDK
7120	gamma-BHC	10296614	GC-ECD	EPA 608.3	2.31	2.37	2.84	ug/L	0.397	1.30 to 4.01	0.151	ACCEPT.	8/5/19	RDK
				GC-ECD 2016										
7120	gamma-BHC	10178811	GC-ECD	SW-846 8081B - 2007	2.31	2.37	2.84	ug/L	0.397	1.30 to 4.01	0.151	ACCEPT.	8/5/19	RDK
7685	Heptachlor	10296614	GC-ECD	EPA 608.3	7.94	7.85	9.98	ug/L	1.54	3.60 to 13.4	0.0584	ACCEPT.	8/10/19	RDK
				GC-ECD 2016										
7685	Heptachlor	10178811	GC-ECD	SW-846 8081B - 2007	7.94	7.85	9.98	ug/L	1.54	3.60 to 13.4	0.0584	ACCEPT.	8/10/19	RDK
7690	Heptachlor epoxide	10296614	GC-ECD	EPA 608.3	2.84	3.13	3.92	ug/L	0.364	1.94 to 5.26	0.797	ACCEPT.	8/5/19	RDK
				GC-ECD 2016										
7690	Heptachlor epoxide	10178811	GC-ECD	SW-846 8081B - 2007	2.84	3.13	3.92	ug/L	0.364	1.94 to 5.26	0.797	ACCEPT.	8/5/19	RDK
7810	Methoxychlor	10296614	GC-ECD	EPA 608.3	2.87	3.29	3.71	ug/L	1.00	1.34 to 5.98	0.420	ACCEPT.	8/5/19	RDK
				GC-ECD 2016										
7810	Methoxychlor	10178811	GC-ECD	SW-846 8081B - 2007	2.87	3.29	3.71	ug/L	1.00	1.34 to 5.98	0.420	ACCEPT.	8/5/19	RDK
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
7725	Isodrin	-- Not Reported --												
7740	Kepone	-- Not Reported --												

PEO-137 Trace Level Mercury - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1095	Trace Level Mercury	10237204	CVAFS	EPA 1631E - 2002	67.7	68.6	74.4	ng/L	7.92	56.6 to 91.3	0.114	ACCEPT.	8/19/19	JLH

Assigned Values

All assigned values are established in a manner compliant with the current NELAC FOT for Non-Potable Water. With the exception of TDS and Specific Conductance assigned values are equal to the analytically verified gravimetric true value of the PT sample. For TDS and Specific Conductance, the assigned value is set at the robust study mean.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. A total of 10 randomly chosen samples are taken from the production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <0.50%.

Batch Homogeneity

Each individual PT sample batch is thoroughly mixed in production and guaranteed to be homogeneous. Homogeneity is verified analytically according to in-house SOP.

Stability

Each analyte has been verified stable through the end of the PT study by either long term monitoring or study closing stability testing.

Acceptance Limits

Acceptance limits are set according to current NELAC limits. Where no limits are set by NELAC, limits are set to ±3 standard deviations around the study mean after outlier correction.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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WP-257

Corrective Action Reports

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 714 /PAR)

Client: Fibertec **Project/Document Control Number:** 91646

Sample Number(s): -016 **Date Initiated:** 09/18/2019 **Date Due:** 10/02/2019

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other_____

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Turbidity was missed on the WP-247 PT Study. The value of 17.2 NTU was reported. The Assigned value was 5.42 NTU, the study mean was 5.46 NTU and the acceptance range was 4.16 to 6.65 NTU. Please investigate this error using root cause analysis to determine the cause and propose a corrective action that will prevent it from happening again.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

The initial PT result was significantly higher than the acceptance range. When going to rerun the sample, it was noticed that both the current (91646) and the prior PT (88652) were sitting very closely together. Both PTs were reprepared and analyzed. After analysis the current PT (91646) result was 5.5 NTU, which was in the acceptance range, while the previous PT (88652)was 17.5, which was close to the value that was reported. It seems that the wrong PT was analyzed and reported.

Investigator(s): Alicia Warren & Sierra McKenna

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Once a PT Study is complete, all samples will be boxed up and removed from immediate view/access to avoid accidentally using the wrong PT sample.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: when remedial PT is passed ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:**

Quality Assurance:

Date Closed:_____

Turbidity - Aqueous

Preparation Method:	Not applicable	Analysis Method:	EPA 180.1 / SM 2130 B.
Prep Batch ID:	Not applicable	Batch Number:	WM19J04A-TUR
Prep Date:	Not applicable	Analysis Date:	10/04/19
Preparer:	Not applicable	Analyst:	AW

Calibration Curve Data

Cal Date	Today	
08/13/19	10/04/19	OK

RL: 0.20 NTU

Sample Identification for Matrix Dup: 91646-016

Matrix Quality Control Sample Data

Sample Identification	Result (NTU)		Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
Matrix Duplicate	5.500	---	40.0	40	5.50		13:57	
MB	0.025	---	40.0	40	0.03		13:13	---

Sample Identification	Result (NTU)	2ndary std value (NTU)	Vol.Initial (mL)	Vol.Final (mL)	Final Result (NTU)	QC Eval	Analysis Time	Expiration
CCV 0-2	0.972	0.942	40.0	40.0	0.97		13:09	
CCV 0-20	16.270	16.000	40.0	40.0	16.27		13:10	
CCV 0-200	159.200	159.900	40.0	40.0	159.20		13:11	
CCV 0-2000	1368.000	1375.000	40.0	40.0	1,368.00		13:12	
AW IDOC 1	18.140	18.000	40.0	40.0	18.14		13:33	
AW IDOC 2	18.370	18.000	40.0	40.0	18.37		13:35	
AW IDOC 3	18.300	18.000	40.0	40.0	18.30		13:38	
AW IDOC 4	18.100	18.000	40.0	40.0	18.10		13:46	
91646-016	5.520		40.0	40.0	5.52		13:55	
88652-016	17.550		40.0	40.0	17.55		14:07	
LCD 0-2	1.666	1.632	40.0	40.0	1.67		14:14	
LCD 0-20	16.820	16.470	40.0	40.0	16.82		14:17	
LCD 0-200	167.900	167.400	40.0	40.0	167.90		14:18	
LCD 0-2000	1559.000	1566.000	40.0	40.0	1,559.00		14:20	
CCV 0-2	0.962	0.942	40.0	40.0	0.96		14:21	
CCV 0-20	16.220	16.000	40.0	40.0	16.22		14:22	
CCV 0-200	158.700	159.900	40.0	40.0	158.70		14:24	
CCV 0-2000	1362.000	1375.000	40.0	40.0	1,362.00		14:25	
CCB	0.029		40.0	40.0	0.03		14:27	

Definitions

* Recovery Exceeds control limts

Alicia Warren 10/9/19
Analyst Approval/Date

Review Approval/Date 10/9/19

Turbidity in Aqueous Samples
Method EPA 180.1 / SM 2130 B.
Nephelometric
(RL 0.2 NTU)

Turbidimeter ID# 10000320

Batch Number: WM19J04A-TUR
Analyst: AW
Analysis Date: 10/4/19

Sample I.D.	Std. ID ID #	Standardized Value (NTU)	Result (NTU)	Instrument Range Setting	Time (hh:mm)
18.00 NTU Primary Cal Std				0-20	
180.0 NTU Primary Cal Std				0-200	
180.0 NTU Primary Cal Std				0-2000	
1800 NTU Primary Cal Std				0-2000	
LCS / CCV 0-2 (must be ± 5%)	18104	0.942	0.972	0-2	13:09
LCS / CCV 0-20 (must be ± 5%)	18105	16.00	16.27	0-20	13:10
LCS / CCV 0-200 (must be ± 5%)	18106	159.9	159.2	0-200	13:11
LCS / CCV 0-2000 (must be ± 5%)	18107	1375	1368	0-2000	13:12
Method Blank (must be < 0.2 NTU)	—	—	0.025	0-2	13:13
AW IDOC 1	40458	18	18.14	0-20	13:33
AW IDOC 2 **Dup**	↓	↓	18.37	↓	13:35
AW IDOC 3	↓	↓	18.30	↓	13:38
AW IDOC 4	↓	↓	18.10	↓	13:46
91646-016 PT	—	—	5.52	0-20	13:55
91646-016 DUP PT	—	—	5.50	0-20	13:57
88652-016	—	—	17.55	0-20	14:07
***LCD 0-2 (must be ± 5%)**	18099	1.632	1.6666	0-2	14:14
***LCD 0-20 (must be ± 5%)**	18100	16.47	16.82	0-20	14:17
***LCD 0-200 (must be ± 5%)**	18101	167.4	167.9	0-200	14:18
***LCD 0-2000 (must be ± 5%)**	18102	1566	1559	0-2000	14:20
***CCV 0-2 (must be ± 5%)**	18104	0.942	0.962	0-2	14:21
***CCV 0-20 (must be ± 5%)**	18105	16.00	16.22	0-20	14:22
***CCV 0-200 (must be ± 5%)**	18106	159.9	158.7	0-200	14:24
***CCV 0-2000 (must be ± 5%)**	18107	1375	1362	0-2000	14:25
CCB (must be <0.2 NTH)	—	—	0.029	0-2	14:27

Alicia Warren 10/4/19
Analyst Signature/Date

*LCD and end CCV must be analyzed in any range used to analyze samples.

Fibertec Environmental Services

Corrective and/or Preventive Action Report (CAR 715 /PAR)

Client: Fibertec **Project/Document Control Number:** 91646

Sample Number(s): -005 **Date Initiated:** 09/18/2019 **Date Due:** 10/02/2019

Cause of Investigation: ☐ Internal Observation ☐ Client Feedback ☐ Audit ☑ Failing PT Sample

Root Cause Analysis (RCA) Severity Rating

☐ 3 (RCA Required) ☑ 2 (RCA Recommended) ☐ 1 (RCA Optional)

I. Area of Non-Conformance:

☐ Sample Receiving / Storage ☐ Bottle Prep ☐ Client Services / Reporting ☐ Other

☑ Wet Chemistry ☐ Metals ☐ Digestions ☐ Volatiles ☐ Semi-Volatiles ☐ Extractions

II. Description of Non-Conformance (attach additional information as needed):

Total Phosphorus was missed on the WP-247 PT Study. The value of 1.74 mg/L was reported. The Assigned value was 3.30 mg/L, the study mean was 3.27 mg/L and the acceptance range was 2.71 to 3.86 mg/L. Please investigate this error using root cause analysis to determine the cause and propose a corrective action that will prevent it from happening again. I have also attached the CAR from the WP-247 study which also had a miss on Total Phosphorus for your reference.

Initiated By: Ken Mueller

III. Investigation into Non-Conformance (attach additional information as needed):

Investigations into this PT failure included examination of the calibration data (r2, slope, % recovery of QC samples, response factors of the calibration, comparison of calibration data between batches), age of the reagents used, digestion length, pH endpoint when samples are neutralized (i.e. an endpoint of 7 vs 8). Additionally the preparation of the PT sample from the concentrate was also examined (diluted in a flask vs directly spiking into an appropriate amount of liquid). Most batches that the PT was rerun on had passing QC (including LCS and MS) as well as a passing r2, a slope that wasn't too extreme.
SEE ATTACHED PAGE

Investigator(s): Sierra McKenna

IV. Corrective/Preventive Action Plan and/or Action Taken (attach additional information as needed):

Batches of phosphorus samples will be digested for as long as it takes to reduce the sample volume to approximately 10mLs. This should allow for the samples to most fully digest as well as all of the potassium persulfate to be used (information from a WI state lab suggested that left over potassium persulfate may cause the combined reagent to turn color slowly and not as strongly). Preparation of the PT should be vigorously mixed before the aliquot for analysis is taken. Reagents should be made at smaller volumes and remade often; and the color of the combined reagent should be monitored to make sure that they color isn't darker or lighter than its golden straw color.

Follow-Up Required? (If required, reference this Report) ***Yes*** ☑ ***No*** ☐

Follow-Up Date: When remedial PT is passed ***Follow-Up Complete:*** ***Yes*** ☐ ***No*** ☐

VI. Approvals:

Technical : **Supervisory:**

Quality Assurance: Ken Mueller

Date Closed:

Additionally the absorbances associated with each calibration point were consistent with past results.

When looking at the differences between the reagents that were used, the vast majority were the same between batches with the exception of the ascorbic acid and the calibration standard. After the calibration standard was remade the slope was slightly closer to 1.0 and the top 2 calibration points' absorbances were slightly lower. However, the r2 and QC were still passing in at about the same percent recovery. The response factors for the calibration were looked into (abs/expected concentration) to see if there were any large jumps suggesting that the calibration was not as linear as the r2 implied. With the exception of the lowest calibration point the response factors weren't dramatically different. Looking between batches the responses were also roughly the same.

Removing calibration points from the curve also did not result in any large increases or decreases in the calculated concentrations, suggesting that no point had an overly large influence on the calibration.

Some PTs were done following the diluted and mixed concentrate (ie 2mL of PT concentrate to 200mL water) while a few were done by adding the spiking directly into the digestion tube, maintaiming the ratio (0.5mL PT concentrate to 50mL water). Some of the reruns which were done diluting to a larger volume came out low, suggesting that maybe the it was not mixed well enough before taking an aliquot for analysis.

The reruns that passed were digested for a longer time (3.5-4hr) so that the final volume was closer to 10mLs. Additionally the blocks recently had their temperature setting increased because daily temperature checks showed that the previous setting was not high enough to reach the 90°C±5°C

This investigation leads to the conclusion that it is the sample preparation and digestion that are the main sources of this issue. It appears that the sample wasn't mixed well enough and let digestion long enough. However, the combined reagent may be a potential source of trouble as it is very sensitive to a number of different factors, such as temperature or how well everything was mixed. Old or poorly made ascorbic acid can cause the combined reagent to not work properly. Old potassium tartrate solution can slow down the color development or cause it to start fading quickly after the combined reagent was made.

Filtered

Total Phosphorus-Water

Preparation Method: **SM 4500-P E**
Prep Batch ID: **W219G23A-PST**
Prep. Date: **7/23/19**
Prep Analyst: **CB**

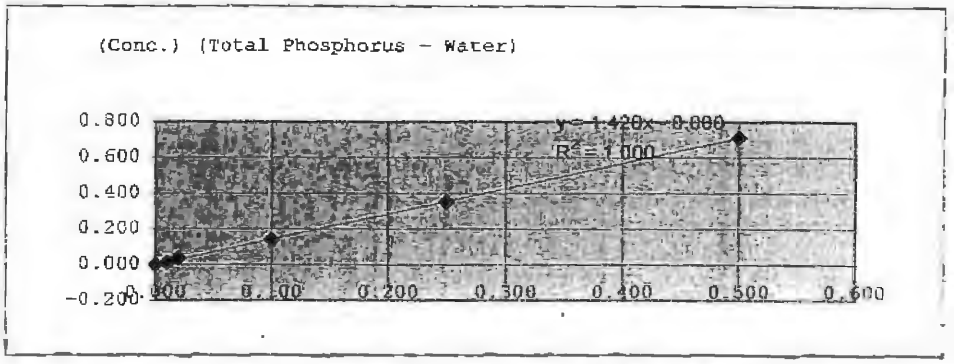
Analysis Method: **SM 4500-P E**
Batch Number: **W219G23A-PST**
Analysis Date: **07/23/19**
Analyst: **CB**

PQL: **0.010** mg/L PQL Test: **0.007** OK

Calibration Curve Data

Cal Level	Conc. (mg P/L)	Abs (880nm)
1	0.000	0.000
2	0.010	0.010
3	0.020	0.035
4	0.100	0.139
5	0.250	0.352
6	0.500	0.711

R^2	Slope	
0.9998	1.4196	-0.0004



Quality Control Sample Data

Sample Identification	Vol.Initial (mL)	Vol.Final (mL)	ABS	Raw Conc. (mg/L)	Final Result (mg/L)	Spike (mg/L)	QC Eval.
MB	50	50	-0.001	0.000	**<0.010**	—	—
LCS	50	50	0.361	0.255	**0.255**	0.250	102%
LCD	50	50	0.352	0.248	**0.248**	0.250	99%

Matrix Quality Control Sample Data — Sample Identification for Matrix QC: 91631-001A

MS	10.0	50	0.498	0.351	1.0	5.00	**1.755**	1.250	80%*
MSD	10.0	50	0.595	0.419	1.0	5.00	**2.097**	1.250	107%

Enter "CCV" or "CCB" for continuing calibration verification and blanks

Sample Identification	Vol.Initial (mL)	Vol.Final (mL)	ABS	Raw Conc. (mg/L)	Bench Dilution	Dilution Factor	Final Result (mg/L)	Spike (mg/L)	QC Eval.
91631-001A	10.0	50.0	0.215	0.152	1.0	5.0	**0.759**	—	—
91636-001	2.0	50.0	0.236	0.167	1.0	25.0	**4.163**	—	—
91636-002	2.0	50.0	0.413	0.291	4.0	100.0	**29.119**	—	—
91644-001C	50.0	50.0	0.049	0.035	1.0	1.0	**0.035**	—	—
91644-002C	50.0	50.0	0.043	0.031	1.0	1.0	**0.031**	—	—
91644-003C	50.0	50.0	0.032	0.023	1.0	1.0	**0.023**	—	—
91645-003A	50.0	50.0	0.000	0.000	1.0	1.0	**<0.010**	—	—
91658-001	2.0	50.0	0.537	0.379	1.0	25.0	**9.464**	—	—
91646-005	10.0	50.0	0.493	0.348	1.0	5.0	**1.738**	—	—
CCV	50.0	50.0	0.369	0.260	1.0	1.0	**0.260**	0.250	104%
CCB	50.0	50.0	0.000	0.000	1.0	1.0	**<0.010**	—	—
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* Recovery Exceeds control limts

DCSID: W-466.4 (11/12/18)

Analyst Approval/Date 7/23/19

Review Approval/Date

1085	Magnesium	10156419	ICP-MS	SW-846 6020A - 2007	10.3	9.67	10.1	mg/L	0.970	8.59 to 11.6	0.649	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	10014605	ICP-MS	EPA 200.8 rev 5.4 - 1994	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	20046417	CALC	SM 2340 B 22nd Ed 2011	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM
1755	Total Hardness (CaCO3)	10156419	ICP-MS	SW-846 6020A - 2007	157	148	154	mg/L	8.03	131 to 177	1.12	ACCEPT.	8/8/19	SEM

PEI-138 Simple Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1515	Ammonia as N	20109211	ISE	SM 4500-NH3 D 22nd ED 2011	1.94	2.01	1.96	mg/L	0.185	1.38 to 2.62	0.378	ACCEPT.	8/1/19	AMW
1515	Ammonia as N	20111211	AUTO	SM 4500-NH3 G 22nd ED 2011	1.62	2.01	1.96	mg/L	0.185	1.38 to 2.62	1.03	ACCEPT.	7/22/19	VO
1810	Nitrate as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.20	8.40	8.52	mg/L	0.663	7.01 to 9.98	0.302	ACCEPT.	7/25/19	CMB
1810	Nitrate as N	10199607	IC-COND	SW-846 9056A - 2007	8.20	8.40	8.52	mg/L	0.663	7.01 to 9.98	0.302	ACCEPT.	7/25/19	CMB
1820	Nitrate-nitrite as N	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	8.20	8.31	8.52	mg/L	0.701	7.06 to 9.90	0.157	ACCEPT.	7/25/19	CMB
1820	Nitrate-nitrite as N	10199607	IC-COND	SW-846 9056A - 2007	8.20	8.31	8.52	mg/L	0.701	7.06 to 9.90	0.157	ACCEPT.	7/25/19	CMB
1870	Orthophosphate as P	10053200	IC-COND	EPA 300.0 rev 2.1 - 1993	4.73	4.61	4.57	mg/L	0.304	3.88 to 5.26	0.395	ACCEPT.	7/25/19	CMB
1870	Orthophosphate as P	10199607	IC-COND	SW-846 9056A - 2007	4.73	4.61	4.57	mg/L	0.304	3.88 to 5.26	0.395	ACCEPT.	7/25/19	CMB

PEI-139 Complex Nutrients - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	10070801	UV-VIS	EPA 365.3 - 1978	1.74	3.27	3.30	mg/L	0.470	2.71 to 3.86	3.26	NOT ACCEPT.	7/23/19	CMB
1910	Total Phosphorus	20124225	UV-VIS	SM 4500-P E-2011 2011	1.74	3.27	3.30	mg/L	0.470	2.71 to 3.86	3.26	NOT ACCEPT.	7/23/19	CMB
1795	Total Kjeldahl Nitrogen	-- Not Reported --												

PEO-020 PCB in Water - Fibertec, Inc. - NSI Lab Solutions/WP-257

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10296614	GC-ECD	EPA 608.3 GC-ECD 2016	<0.800	0.00	<0.8	ug/L	0.00	0.00	n/a	ACCEPT.	8/10/19	RDK

Method SM4500-P B / Method SM4500-P-E
Fibertec SOP W-237

Phosphorus - Aqueous

Batch	W219623A-PST
Digest Date	7/23/19
Analysis Date	7/23/19
Prep Analyst	
Analyst	

Time Added	Start Analysis	# Samples
15:39	15:51	12
16:04	16:16	12

5N Sulfuric Acid	W-018416
Ammony Potassium Tartrate	W-018306
Ascorbic Acid ID	W-018391
Ammonium Molybdate	W-018356
Conc. H_2SO_4 ID	40317
Potassium Persulfate ID	39848
10N NaOH ID	40201
Phenolphthalein ID	W-017932
Dilute H_2SO_4 ID	W-017551
Dilute NaOH ID	W-017550
pH Strip ID	35707
Balance ID	10002085
Spectrophotometer ID	10003012
Cal Std. ID	W-018354
LCS Std. ID	W-018355
LCS/MS Spike Volume	1.25 mL

Cal Curve (mg/L)	10 mg/L Std. Vol. (mL)	Abs @ 880 nm
0.000	-	0.000
0.010	0.05	0.010
0.020	0.10	0.035
0.100	0.50	0.139
0.250	1.25	0.352
0.500	2.50	0.711

Client	Sample Identification	$Volume_I$ (mL)	$Volume_F$ (mL)	pre-Abs @ 880 nm	Abs @ 880 nm	Bench Dilution	Abs w/ Bench Dil. @ 880 nm
----	MB	50	50	----	-0.001	----	----
----	LCS	50	50	----	0.361	----	----
----	LCD	50	50	----	0.352	----	----
Diamond Chrome	91631-001A MS	10	50	—	0.498	—	—
↓	↓ MSD	10	50	—	0.595	—	—
Diamond Chrome	91631-001A	10	50		0.215	↓	↓
Bopp-Busch	91636-001	2.0	50		0.236		
↓	↓ -002	2.0	50		1.403	4X	0.413
Inner City Cont.	91644-001C	50	50		0.049	—	—
↓	↓ -002C	50	50		0.043		
	-003C	50	50		0.032		
Mannick+Smith	91645-003A	50	50		0.000		
Lear Corp	91658-001	2.0	50		0.537		
Fibertec	91646-005	10	50		0.493		
			50				
	CCV	50	50		0.369		
	CCB	50	50		0.000		
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
			50				
	CCV	50	50				
	CCB	50	50				

Analyst Signature/Date 7/23/19

W-018306

Description: **Antimony Potassium Tartrate** Prep. Date: **7/2/2019** Exp. Date: **8/1/2019** Prepared By: **vomerovic**

Solution Stock Sources

Dilution Order: 0

Inventory ID:	Manufacturer:	Catalog No.:	Description:	Lot No.:	Amount:	Expires On:
27260	Fisher Scientific Inc.	A867-250	Antimony Potassium Tartrate Trihydr...	143083	13715 g	5/1/2020

W-018391

Description: **Asc. Acid (T. Phos)** Prep Date: **7/19/2019** Exp Date: **4/1/2011** Prepared By: **awarren**

Parameter:	Conc.	Parameter:	Conc	Parameter:	Conc
1.Benzidine	0.8800 µg/mL				
2.4,4'-DDT	0.8800 µg/mL				
3.Decafluorotriphenylphosphine	0.8800 µg/mL				
4.Pentachlorophenol	0.8800 µg/mL				

Solution Stock Sources

Dilution Order: 0

Inventory ID:	Manufacturer:	Catalog No.:	Description:	Lot No.:	Amount:	Expires On:
390	Supelco Analytical (Sigma Aldrich	47387	EPA 8270 GC-MS Tuning Solution, 50 ...	LB57191	3.52 g	4/1/2011

W-018355

Description:	T.Phos. SPK 10 mg/L	Prep Date: 7/11/2019	Exp Date: 8/10/2019	Prepared By: vomerovic

W-018356

Description:	**Ammonium Molybdate**	Prep. Date: **7/11/2019**	Exp. Date: **8/10/2019**	Prepared By: **vomerovic**

SM-123

Fall, 2019

RCRA - Solids/Hazardous Waste
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study SM-123 - Shipped: 10/22/2019 - Closed: 12/05/2019 - Reports Printed On: 12/23/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPEI-001 Metals in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1000	Aluminum	10156419	ICP-MS	SW 6020A -- 2007	12100	13546	13040	mg/kg	1353	7320 to 19700	1.07	ACCEPT.	11/14/19	JLH
1005	Antimony	10156419	ICP-MS	SW 6020A -- 2007	187	160	214	mg/kg	34.9	16.2 to 399	0.774	ACCEPT.	11/26/19	VO
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	198	186	277	mg/kg	11.3	131 to 305	1.06	ACCEPT.	11/11/19	VO
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	307	324	333	mg/kg	25.9	239 to 398	0.656	ACCEPT.	11/11/19	VO
1020	Beryllium	10156419	ICP-MS	SW 6020A -- 2007	158	146	176	mg/kg	15.9	110 to 184	0.755	ACCEPT.	11/11/19	VO
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	319	321	348	mg/kg	26.3	237 to 396	0.0760	ACCEPT.	11/11/19	VO
1035	Calcium	10156419	ICP-MS	SW 6020A -- 2007	7370	6614	6810	mg/kg	649	4880 to 8280	1.16	ACCEPT.	11/11/19	VO
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	434	429	359	mg/kg	34.3	300 to 557	0.146	ACCEPT.	11/11/19	VO
1050	Cobalt	10156419	ICP-MS	SW 6020A -- 2007	301	283	315	mg/kg	24.1	213 to 355	0.747	ACCEPT.	11/11/19	VO
1055	Copper	10156419	ICP-MS	SW 6020A -- 2007	228	215	230	mg/kg	19.9	159 to 264	0.653	ACCEPT.	11/11/19	VO
1070	Iron	10156419	ICP-MS	SW 6020A -- 2007	10900	10048	9500	mg/kg	999	2280 to 18000	0.853	ACCEPT.	11/12/19	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	134	116	132	mg/kg	12.5	82.2 to 148	1.44	ACCEPT.	11/11/19	VO
1085	Magnesium	10156419	ICP-MS	SW 6020A -- 2007	8390	7433	8630	mg/kg	679	5620 to 9540	1.41	ACCEPT.	11/11/19	VO
1090	Manganese	10156419	ICP-MS	SW 6020A -- 2007	668	661	668	mg/kg	40.8	512 to 802	0.172	ACCEPT.	11/11/19	VO
1095	Mercury	10166457	CVAAS	SW 7471 B -- 2007	30.1	27.0	34.0	mg/kg	6.40	17.1 to 40.0	0.484	ACCEPT.	11/7/19	JLH
1100	Molybdenum	10156419	ICP-MS	SW 6020A -- 2007	71.6	77.6	87.0	mg/kg	6.06	53.4 to 100	0.990	ACCEPT.	11/11/19	VO
1105	Nickel	10156419	ICP-MS	SW 6020A -- 2007	149	139	126	mg/kg	12.9	97.3 to 181	0.775	ACCEPT.	11/11/19	VO
1125	Potassium	10156419	ICP-MS	SW 6020A -- 2007	9520	8454	8540	mg/kg	1143	6100 to 11300	0.933	ACCEPT.	11/11/19	VO
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	270	238	283	mg/kg	68.3	181 to 341	0.469	ACCEPT.	11/11/19	VO
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	62.8	67.6	81.9	mg/kg	16.0	46.6 to 90.0	0.300	ACCEPT.	11/11/19	VO
1155	Sodium	10156419	ICP-MS	SW 6020A -- 2007	4410	3854	4120	mg/kg	287	2620 to 5130	1.94	ACCEPT.	11/11/19	VO

1165	Thallium	10156419	ICP-MS	SW 6020A -- 2007	386	342	388	mg/kg	40.1	252 to 431	1.10	ACCEPT.	11/11/19	VO
1175	Tin	10156419	ICP-MS	SW 6020A -- 2007	85.9	91.1	113	mg/kg	8.01	50.5 to 130	0.649	ACCEPT.	11/11/19	VO
1185	Vanadium	10156419	ICP-MS	SW 6020A -- 2007	161	169	175	mg/kg	10.5	122 to 212	0.762	ACCEPT.	11/11/19	VO
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	420	408	454	mg/kg	25.0	283 to 525	0.480	ACCEPT.	11/11/19	VO
1025	Boron	-- Not Reported --												
1160	Strontium	-- Not Reported --												
1180	Titanium	-- Not Reported --												

SPEI-003 Hexavalent Chromium - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1045	Hexavalent Chromium	10162400	UV-VIS	SW 7196A -- 1992	229	247	272	mg/kg	45.0	108 to 390	0.400	ACCEPT.	11/14/19	CMB

SPEI-005 TCLP Metals - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1010	Arsenic	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	<0.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	11/7/19	JLH
1015	Barium	10156419	ICP-MS	SW 6020A -- 2007	<0.250	0.00	<5.00	mg/L	0.00	0.00 to 5.00	n/a	ACCEPT.	11/7/19	JLH
1030	Cadmium	10156419	ICP-MS	SW 6020A -- 2007	44.0	45.1	47.0	mg/L	3.43	34.8 to 55.4	0.321	ACCEPT.	11/7/19	JLH
1040	Chromium	10156419	ICP-MS	SW 6020A -- 2007	<0.0400	0.00	<0.1	mg/L	0.00	0.00 to 0.100	n/a	ACCEPT.	11/7/19	JLH
1075	Lead	10156419	ICP-MS	SW 6020A -- 2007	<0.0750	0.00	<0.5	mg/L	0.00	0.00 to 0.500	n/a	ACCEPT.	11/7/19	JLH
1095	Mercury	10165807	CVAAS	SW 7470A -- 1994	<0.0050	0.00	<0.1	mg/L	0.00	0.00 to 0.100	n/a	ACCEPT.	11/6/19	CJA
1140	Selenium	10156419	ICP-MS	SW 6020A -- 2007	1.34	1.38	1.50	mg/L	0.163	0.890 to 1.87	0.245	ACCEPT.	11/7/19	JLH
1150	Silver	10156419	ICP-MS	SW 6020A -- 2007	<0.0200	0.00	<0.1	mg/L	0.00	0.00 to 0.100	n/a	ACCEPT.	11/7/19	JLH
1190	Zinc	10156419	ICP-MS	SW 6020A -- 2007	14.2	14.4	15.8	mg/L	0.761	12.1 to 17.4	0.263	ACCEPT.	11/7/19	JLH
1005	Antimony	-- Not Reported --												
1020	Beryllium	-- Not Reported --												

SPEI-012 Corrosivity - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1625	Corrosivity (pH)	10244607	ISE	SW 9045D	6.93	6.80	6.75	pH units	0.203	6.15 to 7.35	0.640	ACCEPT.	11/1/19	AMW

SPEI-014 Flashpoint - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1780	Ignitability (Flash Point)	10234807	PHYS	SW 1010A -- 2002	168	168	168	oF	4.02	151 to 185	0	ACCEPT.	10/30/19	SEM

SPEI-015 Anions in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1540	Bromide	10199607	IC-COND	SW 9056A -- 2007	65.6	72.4	82.9	mg/kg	7.68	52.8 to 92.0	0.885	ACCEPT.	11/6/19	CMB
1575	Chloride	10199607	IC-COND	SW 9056A -- 2007	647	683	753	mg/kg	130	484 to 882	0.277	ACCEPT.	11/6/19	CMB
1730	Fluoride	10199607	IC-COND	SW 9056A -- 2007	67.4	68.7	81.5	mg/kg	18.0	25.9 to 112	0.0722	ACCEPT.	11/8/19	CMB
1810	Nitrate as N	10199607	IC-COND	SW 9056A -- 2007	134	151	44.7	mg/kg	45.6	88.3 to 152	0.373	NO EVAL.	11/8/19	CMB
1870	Orthophosphate as P	10199607	IC-COND	SW 9056A -- 2007	58.7	55.9	69.1	mg/kg	6.62	36.0 to 76.0	0.423	ACCEPT.	11/8/19	CMB
2000	Sulfate	10199607	IC-COND	SW 9056A -- 2007	1500	1198	1390	mg/kg	166	697 to 1700	1.82	ACCEPT.	11/8/19	CMB
1823	Nitrate+Nitrite as N	-- Not Reported --												
1840	Nitrite as N	-- Not Reported --												

SPEI-016 Low Level PAHs - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
6385	2-Methylnaphthalene	10242565	GC-MS	EPA 8270E SIM 2018	380	394	698	ug/kg	25.4	39.4 to 776	0.551	ACCEPT.	10/30/19	TKT
5500	Acenaphthene	10242565	GC-MS	EPA 8270E SIM 2018	140	166	254	ug/kg	26.1	46.3 to 286	0.996	ACCEPT.	10/30/19	TKT
5505	Acenaphthylene	10242565	GC-MS	EPA 8270E SIM 2018	534	626	996	ug/kg	118	56.8 to 1120	0.780	ACCEPT.	10/30/19	TKT
5555	Anthracene	10242565	GC-MS	EPA 8270E SIM 2018	474	561	838	ug/kg	74.8	242 to 922	1.16	ACCEPT.	10/30/19	TKT
5575	Benzo(a)anthracene	10242565	GC-MS	EPA 8270E SIM 2018	188	237	298	ug/kg	62.6	117 to 355	0.783	ACCEPT.	10/30/19	TKT
5580	Benzo(a)pyrene	10242565	GC-MS	EPA 8270E SIM 2018	309	317	462	ug/kg	60.2	137 to 508	0.133	ACCEPT.	10/30/19	TKT
5585	Benzo(b)fluoranthene	10242565	GC-MS	EPA 8270E SIM 2018	281	284	397	ug/kg	42.0	158 to 410	0.0714	ACCEPT.	10/30/19	TKT
5590	Benzo(g,h,i)perylene	10242565	GC-MS	EPA 8270E SIM 2018	111	113	159	ug/kg	23.9	41.5 to 187	0.0837	ACCEPT.	10/30/19	TKT
5600	Benzo(k)fluoranthene	10242565	GC-MS	EPA 8270E SIM 2018	340	327	444	ug/kg	47.0	183 to 488	0.277	ACCEPT.	10/30/19	TKT

5855	Chrysene	10242565	GC-MS	EPA 8270E SIM 2018	214	234	318	ug/kg	44.7	102 to 366	0.447	ACCEPT.	10/30/19	TKT
5895	Dibenz(a,h)anthracene	10242565	GC-MS	EPA 8270E SIM 2018	284	281	398	ug/kg	41.0	138 to 438	0.0732	ACCEPT.	10/30/19	TKT
6265	Fluoranthene	10242565	GC-MS	EPA 8270E SIM 2018	55.8	69.7	94.9	ug/kg	16.8	25.8 to 114	0.827	ACCEPT.	10/30/19	TKT
6270	Fluorene	10242565	GC-MS	EPA 8270E SIM 2018	61.0	69.8	111	ug/kg	14.1	17.7 to 122	0.624	ACCEPT.	10/30/19	TKT
6315	Indeno(1,2,3-c,d)pyrene	10242565	GC-MS	EPA 8270E SIM 2018	232	254	315	ug/kg	58.1	134 to 374	0.379	ACCEPT.	10/30/19	TKT
5005	Naphthalene	10242565	GC-MS	EPA 8270E SIM 2018	386	469	819	ug/kg	89.8	81.9 to 907	0.924	ACCEPT.	10/30/19	TKT
6615	Phenanthrene	10242565	GC-MS	EPA 8270E SIM 2018	116	142	220	ug/kg	28.9	59.6 to 242	0.900	ACCEPT.	10/30/19	TKT
6665	Pyrene	10242565	GC-MS	EPA 8270E SIM 2018	218	249	374	ug/kg	35.9	107 to 411	0.864	ACCEPT.	10/30/19	TKT
6380	1-Methylnaphthalene	-- Not Reported --												

SPEI-017 Cyanide - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1645	Cyanide	30032985	AUTO	ASTM D7511-09	110	131	172	mg/kg	44.5	57.9 to 204	0.472	ACCEPT.	11/21/19	VO

SPEO-003 Pesticides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7355	4,4'-DDD	10178811	GC-ECD	SW 8081 B -- 2007	212	233	266	ug/kg	33.2	89.9 to 376	0.633	ACCEPT.	11/9/19	RDK
7360	4,4'-DDE	10178811	GC-ECD	SW 8081 B -- 2007	126	149	157	ug/kg	38.4	54.4 to 244	0.599	ACCEPT.	11/15/19	RDK
7365	4,4'-DDT	10178811	GC-ECD	SW 8081 B -- 2007	66.8	66.2	79.4	ug/kg	9.67	13.7 to 119	0.0620	ACCEPT.	11/9/19	RDK
7025	Aldrin	10178811	GC-ECD	SW 8081 B -- 2007	100	122	157	ug/kg	13.7	42.3 to 201	1.61	ACCEPT.	11/9/19	RDK
7110	alpha-BHC	10178811	GC-ECD	SW 8081 B -- 2007	277	298	387	ug/kg	22.6	109 to 486	0.929	ACCEPT.	11/9/19	RDK
7115	beta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	467	394	463	ug/kg	34.8	154 to 634	2.10	ACCEPT.	11/9/19	RDK
7105	delta-BHC	10178811	GC-ECD	SW 8081 B -- 2007	365	324	355	ug/kg	29.1	109 to 538	1.41	ACCEPT.	11/9/19	RDK
7470	Dieldrin	10178811	GC-ECD	SW 8081 B -- 2007	312	331	371	ug/kg	47.0	152 to 507	0.404	ACCEPT.	11/9/19	RDK
7510	Endosulfan I	10178811	GC-ECD	SW 8081 B -- 2007	114	133	150	ug/kg	19.4	44.3 to 219	0.979	ACCEPT.	11/15/19	RDK

7515	Endosulfan II	10178811	GC-ECD	SW 8081 B -- 2007	129	128	145	ug/kg	17.5	40.1 to 214	0.0571	ACCEPT.	11/9/19	RDK
7520	Endosulfan sulfate	10178811	GC-ECD	SW 8081 B -- 2007	302	257	289	ug/kg	35.3	67.4 to 447	1.27	ACCEPT.	11/9/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	289	306	340	ug/kg	33.6	153 to 459	0.506	ACCEPT.	11/9/19	RDK
7530	Endrin aldehyde	10178811	GC-ECD	SW 8081 B -- 2007	212	203	267	ug/kg	27.6	32.5 to 376	0.326	ACCEPT.	11/9/19	RDK
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	228	241	292	ug/kg	15.5	81.5 to 400	0.839	ACCEPT.	11/9/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	47.1	45.1	53.7	ug/kg	6.96	11.6 to 78.6	0.287	ACCEPT.	11/9/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	81.5	90.8	109	ug/kg	13.0	34.8 to 147	0.715	ACCEPT.	11/9/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	380	386	427	ug/kg	58.3	55.5 to 716	0.103	ACCEPT.	11/9/19	RDK
6275	Hexachlorobenzene	-- Not Reported --												
6285	Hexachlorocyclopentadiene	-- Not Reported --												
7005	Alachlor	-- Not Reported --												
7240	alpha-Chlordane	-- Not Reported --												
7245	gamma-Chlordane	-- Not Reported --												
7535	Endrin ketone	-- Not Reported --												
8045	Propachlor	-- Not Reported --												
8295	Trifluralin	-- Not Reported --												

SPEO-004 Toxaphene in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	395	344	405	ug/kg	46.3	205 to 483	1.10	ACCEPT.	11/4/19	RDK

SPEO-005 PCB in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8885	Arochlor 1221	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8890	Arochlor 1232	10179201	GC-ECD	SW 8082A	30.4	34.3	41.9	mg/kg	4.00	20.8 to 47.7	0.975	ACCEPT.	11/12/19	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8900	Arochlor 1248	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<5.00	0.00	<0.1	mg/kg	0.00	0.00 to 0.100	n/a	ACCEPT.	11/12/19	RDK
8912	Arochlor 1262	10179201	GC-ECD	SW 8082A	<5.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/12/19	RDK
8913	Arochlor 1268	10179201	GC-ECD	SW 8082A	<5.00	0.00	0	mg/kg	0.00	0.00	n/a	ACCEPT.	11/12/19	RDK

SPEO-006 Acid Herbicides in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name

8655	2,4,5-T	10183207	GC-ECD	SW 8151A -- 1996	473	402	732	ug/kg	99.1	105 to 805	0.716	ACCEPT.	11/1/19	RDK
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	733	582	853	ug/kg	140	162 to 1000	1.08	ACCEPT.	11/1/19	RDK
8560	2,4-DB	10183207	GC-ECD	SW 8151A -- 1996	442	349	625	ug/kg	132	62.5 to 745	0.705	ACCEPT.	11/1/19	RDK
8555	Dalapon	10183207	GC-ECD	SW 8151A -- 1996	<66.7	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
8595	Dicamba	10183207	GC-ECD	SW 8151A -- 1996	232	225	267	ug/kg	55.3	59.1 to 391	0.127	ACCEPT.	11/1/19	RDK
8605	Dichloroprop	10183207	GC-ECD	SW 8151A -- 1996	<50.0	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
8620	Dinoseb	10183207	GC-ECD	SW 8151A -- 1996	206	143	422	ug/kg	57.8	42.2 to 460	1.09	ACCEPT.	11/1/19	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	438	385	653	ug/kg	93.6	104 to 718	0.566	ACCEPT.	11/1/19	RDK
6500	4-Nitrophenol	-- Not Reported --												
6605	Pentachlorophenol	-- Not Reported --												
7775	MCPA	-- Not Reported --												
7780	MCPP	-- Not Reported --												
8505	Acifluorfen	-- Not Reported --												
8530	Bentazon	-- Not Reported --												
8540	Chloramben	-- Not Reported --												
8550	DCPA	-- Not Reported --												
8600	3,5-Dichlorobenzoic Acid	-- Not Reported --												
8645	Picloram	-- Not Reported --												

SPEO-007 Semivolatiles in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5155	1,2,4-Trichlorobenzene	10242543	GC-MS	EPA 8270E 2018	4270	4374	5960	ug/kg	1111	1300 to 7440	0.0936	ACCEPT.	10/30/19	GJP
4610	1,2-Dichlorobenzene	10242543	GC-MS	EPA 8270E 2018	7990	8209	14930	ug/kg	2831	1210 to 16500	0.0774	ACCEPT.	10/30/19	GJP
6220	1,2-Diphenylhydrazine	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
4615	1,3-Dichlorobenzene	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/19	GJP
6160	1,3-Dinitrobenzene	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
4620	1,4-Dichlorobenzene	10242543	GC-MS	EPA 8270E 2018	8110	8259	14620	ug/kg	2594	881 to 17500	0.0574	ACCEPT.	10/30/19	GJP
4659	2,2-Oxybis(1-chloropropane)	10242543	GC-MS	EPA 8270E 2018	2590	2697	4130	ug/kg	605	584 to 4820	0.177	ACCEPT.	10/30/19	GJP
6835	2,4,5-Trichlorophenol	10242543	GC-MS	EPA 8270E 2018	7580	9521	12340	ug/kg	1660	2870 to 16200	1.17	ACCEPT.	10/30/19	GJP

6840	2,4,6-Trichlorophenol	10242543	GC-MS	EPA 8270E 2018	4030	4178	5520	ug/kg	780	1390 to 6850	0.190	ACCEPT.	10/30/19	GJP
6000	2,4-Dichlorophenol	10242543	GC-MS	EPA 8270E 2018	6330	7542	10200	ug/kg	1434	2590 to 12500	0.845	ACCEPT.	10/30/19	GJP
6130	2,4-Dimethylphenol	10242543	GC-MS	EPA 8270E 2018	7420	8051	9940	ug/kg	1546	3410 to 12700	0.408	ACCEPT.	10/30/19	GJP
6175	2,4-Dinitrophenol	10242543	GC-MS	EPA 8270E 2018	<1500	2682	9850	ug/kg	1969	985 to 10800	n/a	ACCEPT.	10/30/19	GJP
6185	2,4-Dinitrotoluene	10242543	GC-MS	EPA 8270E 2018	4610	4467	5550	ug/kg	487	1740 to 7200	0.294	ACCEPT.	10/30/19	GJP
6005	2,6-Dichlorophenol	10242543	GC-MS	EPA 8270E 2018	2650	4350	3870	ug/kg	2647	769 to 4530	0.642	ACCEPT.	10/30/19	GJP
6190	2,6-Dinitrotoluene	10242543	GC-MS	EPA 8270E 2018	5680	6380	8480	ug/kg	761	2880 to 9880	0.920	ACCEPT.	10/30/19	GJP
5795	2-Chloronaphthalene	10242543	GC-MS	EPA 8270E 2018	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP
5800	2-Chlorophenol	10242543	GC-MS	EPA 8270E 2018	6920	8212	12170	ug/kg	2087	2250 to 14500	0.619	ACCEPT.	10/30/19	GJP
6360	2-Methyl-4,6-dinitrophenol	10242543	GC-MS	EPA 8270E 2018	5390	6764	10240	ug/kg	1760	1020 to 15200	0.781	ACCEPT.	10/30/19	GJP
6385	2-Methylnaphthalene	10242543	GC-MS	EPA 8270E 2018	6110	6352	9170	ug/kg	1313	2400 to 10300	0.184	ACCEPT.	10/30/19	GJP
6400	2-Methylphenol	10242543	GC-MS	EPA 8270E 2018	3000	2928	4060	ug/kg	644	463 to 5400	0.112	ACCEPT.	10/30/19	GJP
6460	2-Nitroaniline	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
6490	2-Nitrophenol	10242543	GC-MS	EPA 8270E 2018	5840	6221	10180	ug/kg	1174	1500 to 11100	0.325	ACCEPT.	10/30/19	GJP
6465	3-Nitroaniline	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5660	4-Bromophenyl-phenylether	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/19	GJP
5700	4-Chloro-3-methylphenol	10242543	GC-MS	EPA 8270E 2018	3090	3397	4320	ug/kg	686	1210 to 5570	0.448	ACCEPT.	10/30/19	GJP
5745	4-Chloroaniline	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5825	4-Chlorophenyl-phenylether	10242543	GC-MS	EPA 8270E 2018	5460	5728	7990	ug/kg	797	2140 to 9320	0.336	ACCEPT.	10/30/19	GJP
6410	4-Methylphenol	10242543	GC-MS	EPA 8270E 2018	3110	2922	4820	ug/kg	607	1100 to 5300	0.310	ACCEPT.	10/30/19	GJP
6470	4-Nitroaniline	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
6500	4-Nitrophenol	10242543	GC-MS	EPA 8270E 2018	4880	5907	8050	ug/kg	1090	582 to 12700	0.942	ACCEPT.	10/30/19	GJP
5500	Acenaphthene	10242543	GC-MS	EPA 8270E 2018	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP

5505	Acenaphthylene	10242543	GC-MS	EPA 8270E 2018	4550	4555	6060	ug/kg	786	1690 to 7510	0.0064	ACCEPT.	10/30/19	GJP
5545	Aniline	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5555	Anthracene	10242543	GC-MS	EPA 8270E 2018	6740	7350	9350	ug/kg	1455	3470 to 11300	0.419	ACCEPT.	10/30/19	GJP
5575	Benzo(a)anthracene	10242543	GC-MS	EPA 8270E 2018	2920	3013	3860	ug/kg	536	1110 to 4910	0.174	ACCEPT.	10/30/19	GJP
5580	Benzo(a)pyrene	10242543	GC-MS	EPA 8270E 2018	1270	1352	1690	ug/kg	263	415 to 2260	0.312	ACCEPT.	10/30/19	GJP
5585	Benzo(b)fluoranthene	10242543	GC-MS	EPA 8270E 2018	7400	8235	10080	ug/kg	1568	3400 to 13100	0.533	ACCEPT.	10/30/19	GJP
5590	Benzo(g,h,i)perylene	10242543	GC-MS	EPA 8270E 2018	2590	2307	2770	ug/kg	344	873 to 3750	0.823	ACCEPT.	10/30/19	GJP
5600	Benzo(k)fluoranthene	10242543	GC-MS	EPA 8270E 2018	5960	6514	7950	ug/kg	1141	2670 to 10400	0.486	ACCEPT.	10/30/19	GJP
5630	Benzyl alcohol	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5760	bis(2-Chloroethoxy)methane	10242543	GC-MS	EPA 8270E 2018	7520	8018	11490	ug/kg	1237	3060 to 13000	0.403	ACCEPT.	10/30/19	GJP
5765	bis(2-Chloroethyl)ether	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/19	GJP
6065	bis(2-Ethylhexyl)phthalate	10242543	GC-MS	EPA 8270E 2018	3950	3983	4670	ug/kg	550	1160 to 6800	0.0600	ACCEPT.	10/30/19	GJP
5670	Butyl benzyl phthalate	10242543	GC-MS	EPA 8270E 2018	<155	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP
5680	Carbazole	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5855	Chrysene	10242543	GC-MS	EPA 8270E 2018	5780	6581	8140	ug/kg	1345	3290 to 9910	0.596	ACCEPT.	10/30/19	GJP
5925	Di-n-butyl phthalate	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP
6200	Di-n-octyl phthalate	10242543	GC-MS	EPA 8270E 2018	4030	3672	4270	ug/kg	609	975 to 6360	0.588	ACCEPT.	10/30/19	GJP
5895	Dibenz(a,h)anthracene	10242543	GC-MS	EPA 8270E 2018	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP
5905	Dibenzofuran	10242543	GC-MS	EPA 8270E 2018	10100	11065	14290	ug/kg	1540	5080 to 17000	0.627	ACCEPT.	10/30/19	GJP
6070	Diethyl phthalate	10242543	GC-MS	EPA 8270E 2018	4490	4461	5550	ug/kg	705	1810 to 7110	0.0411	ACCEPT.	10/30/19	GJP
6135	Dimethyl phthalate	10242543	GC-MS	EPA 8270E 2018	2430	2452	3380	ug/kg	636	996 to 4140	0.0346	ACCEPT.	10/30/19	GJP
6265	Fluoranthene	10242543	GC-MS	EPA 8270E 2018	3760	3982	4990	ug/kg	552	1620 to 6340	0.402	ACCEPT.	10/30/19	GJP
6270	Fluorene	10242543	GC-MS	EPA 8270E 2018	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP

6275	Hexachlorobenzene	10242543	GC-MS	EPA 8270E 2018	6040	7125	9060	ug/kg	1239	3450 to 10800	0.876	ACCEPT.	10/30/19	GJP
4835	Hexachlorobutadiene	10242543	GC-MS	EPA 8270E 2018	5520	5862	8040	ug/kg	1375	1700 to 9920	0.249	ACCEPT.	10/30/19	GJP
6285	Hexachlorocyclopentadiene	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
4840	Hexachloroethane	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/19	GJP
6315	Indeno(1,2,3-c,d)pyrene	10242543	GC-MS	EPA 8270E 2018	<100	0.00	<100	ug/kg	0.00	0.00 to 100	n/a	ACCEPT.	10/30/19	GJP
6320	Isophorone	10242543	GC-MS	EPA 8270E 2018	3780	3649	5740	ug/kg	757	1190 to 6300	0.173	ACCEPT.	10/30/19	GJP
6545	N-Nitroso-di-n-propylamine	10242543	GC-MS	EPA 8270E 2018	6110	7937	11200	ug/kg	1709	2060 to 13800	1.07	ACCEPT.	10/30/19	GJP
6530	N-Nitrosodimethylamine	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
6535	N-Nitrosodiphenylamine	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5005	Naphthalene	10242543	GC-MS	EPA 8270E 2018	1470	1623	2330	ug/kg	432	344 to 2900	0.354	ACCEPT.	10/30/19	GJP
5015	Nitrobenzene	10242543	GC-MS	EPA 8270E 2018	<150	0.00	<150	ug/kg	0.00	0.00 to 150	n/a	ACCEPT.	10/30/19	GJP
6605	Pentachlorophenol	10242543	GC-MS	EPA 8270E 2018	3350	3553	4850	ug/kg	718	344 to 7090	0.283	ACCEPT.	10/30/19	GJP
6615	Phenanthrene	10242543	GC-MS	EPA 8270E 2018	6740	7511	9540	ug/kg	1398	3460 to 11700	0.552	ACCEPT.	10/30/19	GJP
6625	Phenol	10242543	GC-MS	EPA 8270E 2018	7330	8542	12480	ug/kg	1863	2340 to 14600	0.651	ACCEPT.	10/30/19	GJP
6665	Pyrene	10242543	GC-MS	EPA 8270E 2018	3710	3829	4560	ug/kg	547	1460 to 6200	0.218	ACCEPT.	10/30/19	GJP
5095	Pyridine	10242543	GC-MS	EPA 8270E 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/30/19	GJP
5510	Acetophenone	-- Not Reported --												
4871	2-Methylcholanthrene	-- Not Reported --												
5145	2-Amino-1-methylbenzene	-- Not Reported --												
5025	N-Nitroso-di-n-butylamine	-- Not Reported --												
5050	2-Picoline	-- Not Reported --												
5145	o-Toluidine	-- Not Reported --												
5150	1,2,3-Trichlorobenzene	-- Not Reported --												
4735	1,4-Dioxane	-- Not Reported --												
5515	2-Acetylaminofluorene	-- Not Reported --												
5540	4-Aminobiphenyl	-- Not Reported --												
5595	Benzidine	-- Not Reported --												
5610	Benzoic acid	-- Not Reported --												
5790	1-Chloronaphthalene	-- Not Reported --												
5865	2-Cyclohexyl-4,6-dinitrophenol	-- Not Reported --												

5875	n-Decane	-- Not Reported --
5945	3,3'-Dichlorobenzidine	-- Not Reported --
6105	p-Dimethylaminoazobenzene	-- Not Reported --
6115	7,12-Dimethylbenz(a)anthracene	-- Not Reported --
6120	3,3-Dimethylbenzidine	-- Not Reported --
6125	a,a-Dimethylphenethylamine	-- Not Reported --
6155	o-Dinitrobenzene	-- Not Reported --
6160	m-Dinitrobenzene	-- Not Reported --
6165	p-Dinitrobenzene	-- Not Reported --
6205	Diphenylamine	-- Not Reported --
6210	Diphenyl ether	-- Not Reported --
6260	Ethyl methane sulfonate	-- Not Reported --
6290	Hexachlorophene	-- Not Reported --
6295	Hexachloropropene	-- Not Reported --
6325	Isosafrole	-- Not Reported --
6335	Maleic anhydride	-- Not Reported --
6345	Methapyrilene	-- Not Reported --
6355	3-Methylcholanthrene	-- Not Reported --
6375	Methyl methane sulfonate	-- Not Reported --
6380	1-Methylnaphthalene	-- Not Reported --
6405	3-Methylphenol	-- Not Reported --
6412	3+4-Methylphenol	-- Not Reported --
6420	1,4-Naphthoquinone	-- Not Reported --
6425	1-Naphthylamine	-- Not Reported --
6430	2-Naphthylamine	-- Not Reported --
6444	Naphthalene-d8	-- Not Reported --
6495	3-Nitrophenol	-- Not Reported --
6510	4-Nitroquinoline-1-oxide	-- Not Reported --
6525	N-Nitrosodiethylamine	-- Not Reported --
6550	N-Nitrosomethylethylamine	-- Not Reported --
6555	N-Nitrosomorpholine	-- Not Reported --
6560	N-Nitrosopiperidine	-- Not Reported --
6565	N-Nitrosopyrrolidine	-- Not Reported --
6570	5-Nitro-o-toluidine	-- Not Reported --
6580	n-Octadecane	-- Not Reported --
6590	Pentachlorobenzene	-- Not Reported --
6595	Pentachlorohexane	-- Not Reported --
6600	Pentachloronitrobenzene	-- Not Reported --
6610	Phenacetin	-- Not Reported --
6650	Pronamide	-- Not Reported --
6685	Safrole	-- Not Reported --
6697	Benzo(b)fluoranthene + Benzo(k)fluoranthene	-- Not Reported --
6715	1,2,4,5-	-- Not Reported --

	Tetrachlorobenzene	
7180	Caprolactam	-- Not Reported --
6703	1,1-Biphenyl	-- Not Reported --
6730	2,3,4,5-Tetrachlorophenol	-- Not Reported --
7065	Atrazine	-- Not Reported --
6735	2,3,4,6-Tetrachlorophenol	-- Not Reported --
6740	2,3,5,6-Tetrachlorophenol	-- Not Reported --
5570	Benzaldehyde	-- Not Reported --
6885	1,3,5-Trinitrobenzene	-- Not Reported --
7260	Chlorobenzilate	-- Not Reported --
7405	Diallate	-- Not Reported --
7475	Dimethoate	-- Not Reported --
7580	Famphur	-- Not Reported --
7725	Isodrin	-- Not Reported --
7740	Kepone	-- Not Reported --
7825	Parathion, methyl	-- Not Reported --
7955	Parathion, ethyl	-- Not Reported --
7985	Phorate	-- Not Reported --
8155	Sulfotepp	-- Not Reported --
8235	Thionazin	-- Not Reported --
8290	o,o,o-Triethyl phoshorothioate	-- Not Reported --
8620	Dinoseb	-- Not Reported --
8625	Disulfoton	-- Not Reported --
9363	2,3-Dichloroaniline	-- Not Reported --
9663	p-Phenylenediamine	-- Not Reported --

SPEO-008H VOCs in Soil Mid Level - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
5105	1,1,1,2-Tetrachloroethane	10307127	GC-MS	EPA 8260D 2018	2680	2403	2550	ug/kg	153	1720 to 3490	1.81	ACCEPT.	10/28/19	JLM
5160	1,1,1-Trichloroethane	10307127	GC-MS	EPA 8260D 2018	5480	4704	5100	ug/kg	764	3060 to 7140	1.02	ACCEPT.	10/28/19	JLM
5110	1,1,2,2-Tetrachloroethane	10307127	GC-MS	EPA 8260D 2018	6570	6195	6200	ug/kg	522	3800 to 8380	0.718	ACCEPT.	10/28/19	JLM
5165	1,1,2-Trichloroethane	10307127	GC-MS	EPA 8260D 2018	<732	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/28/19	JLM
4630	1,1-Dichloroethane	10307127	GC-MS	EPA 8260D 2018	<676	0.00	<650	ug/kg	0.00	0.00 to 650	n/a	ACCEPT.	10/28/19	JLM
4640	1,1-Dichloroethene	10307127	GC-MS	EPA 8260D 2018	6760	5568	5660	ug/kg	1078	2830 to 8490	1.11	ACCEPT.	10/28/19	JLM
5150	1,2,3-Trichlorobenzene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5180	1,2,3-Trichloropropane	10307127	GC-MS	EPA 8260D 2018	<407	0.00	<825	ug/kg	0.00	0.00 to 825	n/a	ACCEPT.	10/28/19	JLM

5155	1,2,4-Trichlorobenzene	10307127	GC-MS	EPA 8260D 2018	8570	8268	8300	ug/kg	446	4980 to 11600	0.677	ACCEPT.	10/28/19	JLM
5210	1,2,4-Trimethylbenzene	10307127	GC-MS	EPA 8260D 2018	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4570	1,2-Dibromo-3-chloropropane	10307138	GC-MS	EPA 8260D SIM 2018	9980	8277	7440	ug/kg	1112	4460 to 10400	1.53	ACCEPT.	10/28/19	JLM
4585	1,2-Dibromoethane	10307127	GC-MS	EPA 8260D 2018	5970	5715	5620	ug/kg	433	3370 to 7870	0.589	ACCEPT.	10/28/19	JLM
4610	1,2-Dichlorobenzene	10307127	GC-MS	EPA 8260D 2018	9900	9634	9990	ug/kg	400	7490 to 12500	0.665	ACCEPT.	10/28/19	JLM
4635	1,2-Dichloroethane	10307127	GC-MS	EPA 8260D 2018	8950	9197	9340	ug/kg	1249	7100 to 11600	0.198	ACCEPT.	10/28/19	JLM
4655	1,2-Dichloropropane	10307127	GC-MS	EPA 8260D 2018	5610	5230	5400	ug/kg	542	3780 to 7020	0.701	ACCEPT.	10/28/19	JLM
5215	1,3,5-Trimethylbenzene	10307127	GC-MS	EPA 8260D 2018	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4615	1,3-Dichlorobenzene	10307127	GC-MS	EPA 8260D 2018	6210	5863	6180	ug/kg	299	4880 to 7580	1.16	ACCEPT.	10/28/19	JLM
4620	1,4-Dichlorobenzene	10307127	GC-MS	EPA 8260D 2018	9390	9184	9250	ug/kg	438	7150 to 11200	0.470	ACCEPT.	10/28/19	JLM
4410	2-Butanone	10307127	GC-MS	EPA 8260D 2018	<808	0.00	<808	ug/kg	0.00	0.00 to 808	n/a	ACCEPT.	10/28/19	JLM
4535	2-Chlorotoluene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4860	2-Hexanone	10307127	GC-MS	EPA 8260D 2018	12500	13370	15470	ug/kg	1755	7740 to 23200	0.496	ACCEPT.	10/28/19	JLM
4995	4-Methyl-2-pentanone	10307127	GC-MS	EPA 8260D 2018	9290	8488	9280	ug/kg	585	4640 to 13900	1.37	ACCEPT.	10/28/19	JLM
4315	Acetone	10307127	GC-MS	EPA 8260D 2018	5670	6941	7460	ug/kg	3089	1980 to 11500	0.411	ACCEPT.	10/28/19	JLM
4375	Benzene	10307127	GC-MS	EPA 8260D 2018	2790	2733	2890	ug/kg	301	2170 to 3610	0.189	ACCEPT.	10/28/19	JLM
4385	Bromobenzene	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4390	Bromochloromethane	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4395	Bromodichloromethane	10307127	GC-MS	EPA 8260D 2018	9420	8485	8140	ug/kg	1074	5290 to 11000	0.871	ACCEPT.	10/28/19	JLM
4400	Bromoform	10307127	GC-MS	EPA 8260D 2018	6450	5362	5440	ug/kg	602	3260 to 7610	1.81	ACCEPT.	10/28/19	JLM
4950	Bromomethane	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4450	Carbon disulfide	10307127	GC-MS	EPA 8260D 2018	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4455	Carbon tetrachloride	10307127	GC-MS	EPA 8260D 2018	6050	5007	4830	ug/kg	810	3010 to 6580	1.29	ACCEPT.	10/28/19	JLM

4475	Chlorobenzene	10307127	GC-MS	EPA 8260D 2018	4790	4645	4570	ug/kg	315	3420 to 5710	0.460	ACCEPT.	10/28/19	JLM
4485	Chloroethane	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4505	Chloroform	10307127	GC-MS	EPA 8260D 2018	10200	9525	9720	ug/kg	1303	6800 to 12600	0.518	ACCEPT.	10/28/19	JLM
4960	Chloromethane	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4645	cis-1,2-Dichloroethene	10307127	GC-MS	EPA 8260D 2018	6590	5840	6040	ug/kg	796	3620 to 8450	0.942	ACCEPT.	10/28/19	JLM
4680	cis-1,3-Dichloropropene	10307127	GC-MS	EPA 8260D 2018	2510	2161	2240	ug/kg	218	1350 to 3140	1.60	ACCEPT.	10/28/19	JLM
4575	Dibromochloromethane	10307127	GC-MS	EPA 8260D 2018	<642	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT.	10/28/19	JLM
4595	Dibromomethane	10307127	GC-MS	EPA 8260D 2018	9420	9062	8440	ug/kg	1135	5060 to 11800	0.315	ACCEPT.	10/28/19	JLM
4625	Dichlorodifluoromethane	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4725	Diethyl ether	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
9375	Di-isopropylether	10307127	GC-MS	EPA 8260D 2018	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4765	Ethylbenzene	10307127	GC-MS	EPA 8260D 2018	<697	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT.	10/28/19	JLM
4840	Hexachloroethane	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4900	Isopropylbenzene	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5000	Methyl-tert-butyl ether (MTBE)	10307127	GC-MS	EPA 8260D 2018	8660	8267	8240	ug/kg	742	5770 to 10700	0.530	ACCEPT.	10/28/19	JLM
4975	Methylene chloride	10307127	GC-MS	EPA 8260D 2018	2000	1941	1910	ug/kg	256	1140 to 2670	0.230	ACCEPT.	10/28/19	JLM
5005	Naphthalene	10307127	GC-MS	EPA 8260D 2018	9290	8313	8400	ug/kg	806	5460 to 11200	1.21	ACCEPT.	10/28/19	JLM
4435	n-Butylbenzene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5090	n-Propylbenzene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4910	p-Isopropyltoluene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4440	sec-Butylbenzene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5100	Styrene	10307127	GC-MS	EPA 8260D 2018	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/28/19	JLM
4370	T-amylmethylether (TAME)	10307127	GC-MS	EPA 8260D 2018	<500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM

4420	t-Butyl alcohol	10307127	GC-MS	EPA 8260D 2018	<2500	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4445	tert-Butylbenzene	10307127	GC-MS	EPA 8260D 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5115	Tetrachloroethene	10307127	GC-MS	EPA 8260D 2018	3410	3166	3170	ug/kg	343	2190 to 4360	0.711	ACCEPT.	10/28/19	JLM
5140	Toluene	10307127	GC-MS	EPA 8260D 2018	<665	0.00	<750	ug/kg	0.00	0.00 to 750	n/a	ACCEPT.	10/28/19	JLM
5260	Total Xylenes	10307127	GC-MS	EPA 8260D 2018	<931	0.00	<700	ug/kg	0.00	0.00 to 700	n/a	ACCEPT.	10/28/19	JLM
4700	trans-1,2-Dichloroethene	10307127	GC-MS	EPA 8260D 2018	<1200	0.00	<1200	ug/kg	0.00	0.00 to 1200	n/a	ACCEPT.	10/28/19	JLM
4685	trans-1,3-Dichloropropene	10307127	GC-MS	EPA 8260D 2018	9610	8870	9390	ug/kg	750	5630 to 13200	0.987	ACCEPT.	10/28/19	JLM
4605	trans-1,4-Dichloro-2-butene	10307138	GC-MS	EPA 8260D SIM 2018	<750	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
5170	Trichloroethene	10307127	GC-MS	EPA 8260D 2018	7690	7154	6960	ug/kg	975	5080 to 8930	0.550	ACCEPT.	10/28/19	JLM
5175	Trichlorofluoromethane	10307127	GC-MS	EPA 8260D 2018	10800	6557	7140	ug/kg	2377	652 to 20400	1.79	ACCEPT.	10/28/19	JLM
5235	Vinyl chloride	10307127	GC-MS	EPA 8260D 2018	<1000	0.00	0	ug/kg	0.00	0.00	n/a	ACCEPT.	10/28/19	JLM
4670	1,1-Dichloropropene	-- Not Reported --												
4660	1,3-Dichloropropane	-- Not Reported --												
4665	2,2-Dichloropropane	-- Not Reported --												
4540	4-Chlorotoluene	-- Not Reported --												
4340	Acrylonitrile	-- Not Reported --												
4368	t-Amyl alcohol	-- Not Reported --												
4750	Ethanol	-- Not Reported --												
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	-- Not Reported --												
4355	Allyl chloride	-- Not Reported --												
4870	Iodomethane	-- Not Reported --												
4525	Chloroprene	-- Not Reported --												
4810	Ethyl methacrylate	-- Not Reported --												
4875	Isobutyl alcohol	-- Not Reported --												
4925	Methacrylonitrile	-- Not Reported --												
4990	Methyl methacrylate	-- Not Reported --												
5035	Pentachloroethane	-- Not Reported --												
5080	Propionitrile	-- Not Reported --												
4600	cis-1,4-Dichloro-2-butene	-- Not Reported --												
4320	Acetonitrile	-- Not Reported --												
4325	Acrolein	-- Not Reported --												
4500	2-Chloroethyl vinyl ether	-- Not Reported --												
4510	1-Chlorohexane	-- Not Reported --												
4555	Cyclohexane	-- Not Reported --												
4770	Ethyl-tert-butylether (ETBE)	-- Not Reported --												

4835	Hexachlorobutadiene	-- Not Reported --
4855	n-Hexane	-- Not Reported --
5120	Tetrahydrofuran	-- Not Reported --
4940	Methyl acetate	-- Not Reported --
4965	Methyl cyclohexane	-- Not Reported --
5225	Vinyl acetate	-- Not Reported --
4735	1,4-Dioxane	-- Not Reported --
6103	3,3-Dimethyl-1-butanol	-- Not Reported --
6800	1,3,5-Trichlorobenzene	-- Not Reported --

SPEO-009 Chlordane in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	270	251	271	ug/kg	21.1	70.5 to 435	0.900	ACCEPT.	11/4/19	RDK

SPEO-015-BN TCLP Base/Neutrals - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
4620	1,4-Dichlorobenzene	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
4835	Hexachlorobutadiene	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
4840	Hexachloroethane	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
5015	Nitrobenzene	10242543	GC-MS	EPA 8270E 2018	9.71	8.29	10.2	mg/L	2.02	2.03 to 14.5	0.703	ACCEPT.	10/31/19	GJP
5095	Pyridine	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
6185	2,4-Dinitrotoluene	10242543	GC-MS	EPA 8270E 2018	2.21	1.97	2.69	mg/L	0.339	0.917 to 3.02	0.708	ACCEPT.	10/31/19	GJP
6275	Hexachlorobenzene	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
6400	2-Methylphenol	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
6410	4-Methylphenol	10242543	GC-MS	EPA 8270E 2018	<0.100	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	10/31/19	GJP
6605	Pentachlorophenol	10242543	GC-MS	EPA 8270E 2018	13.0	11.1	13.7	mg/L	2.68	2.79 to 19.4	0.709	ACCEPT.	10/31/19	GJP
6835	2,4,5-Trichlorophenol	10242543	GC-MS	EPA 8270E 2018	3.56	3.59	3.98	mg/L	0.0424	3.23 to 4.38	0.708	ACCEPT.	10/31/19	GJP
6840	2,4,6-Trichlorophenol	10242543	GC-MS	EPA 8270E 2018	8.11	6.67	9.47	mg/L	2.04	0.667 to 13.0	0.706	ACCEPT.	10/31/19	GJP
6412	3+4-Methylphenol	-- Not Reported --												
5862	Total Cresol	-- Not Reported --												

SPEO-015-HERB TCLP Herbicides - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8545	2,4-D	10183207	GC-ECD	SW 8151A -- 1996	0.498	1.12	0.640	mg/L	0.989	0.0498 to 1.06	0.629	ACCEPT.	11/6/19	RDK
8650	Silvex (2,4,5-TP)	10183207	GC-ECD	SW 8151A -- 1996	0.503	1.25	0.610	mg/L	1.26	0.0600 to 5.03	0.593	ACCEPT.	11/6/19	RDK

SPEO-015-PEST TCLP Pesticides - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
7120	gamma-BHC	10178811	GC-ECD	SW 8081 B -- 2007	0.0511	0.0661	0.0900	mg/L	0.0211	0.0090 to 0.132	0.711	ACCEPT.	11/9/19	RDK
7250	Chlordane	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
7540	Endrin	10178811	GC-ECD	SW 8081 B -- 2007	0.0031	0.0027	0.0100	mg/L	0.0006	0.0010 to 0.0110	0.700	ACCEPT.	11/9/19	RDK
7685	Heptachlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
7690	Heptachlor epoxide	10178811	GC-ECD	SW 8081 B -- 2007	<0.0001	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
7810	Methoxychlor	10178811	GC-ECD	SW 8081 B -- 2007	<0.0005	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK
8250	Toxaphene	10178811	GC-ECD	SW 8081 B -- 2007	<0.0010	0.00	0	mg/L	0.00	0.00	n/a	ACCEPT.	11/1/19	RDK

SPEO-019 Nutrients in Soil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
1910	Total Phosphorus	20124214	UV-VIS	SM 4500-P E -- 1999	1940	1299	1690	mg/kg	265	505 to 2100	2.42	ACCEPT.	11/12/19	SEM
1515	Ammonia as N	-- Not Reported --												
1795	Kjeldahl nitrogen (TKN)	-- Not Reported --												
2040	Total Organic Carbon (TOC)	-- Not Reported --												

SPEO-072 PCBs in Transformer Oil - Fibertec, Inc. - NSI Lab Solutions/SM-123

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
8880	Arochlor 1016	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	10/30/19	RDK
8895	Arochlor 1242	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	10/30/19	RDK
8905	Arochlor 1254	10179201	GC-ECD	SW 8082A	13.1	16.0	25.7	mg/kg	3.80	3.92 to 37.8	0.763	ACCEPT.	10/30/19	RDK
8910	Arochlor 1260	10179201	GC-ECD	SW 8082A	<1.00	0.00	<0.86	mg/kg	0.00	0.00 to 0.860	n/a	ACCEPT.	10/30/19	RDK
8885	Arochlor 1221	-- Not Reported --												
8890	Arochlor 1232	-- Not Reported --												
8900	Arochlor 1248	-- Not Reported --												

Assigned Values

All assigned values are set to the gravimetric formulated values as per NELAC.

Accuracy/Traceability/Uncertainty

All assigned values are analytically verified for formulation accuracy prior to shipment. Randomly chosen samples are taken from each production run and analyzed against NIST SRMs or CRMs. Traceability to SI is established through microbalance calibration with NIST traceable test masses. The expanded uncertainty at 95% CI with K=2 of each assigned value is available upon request and is typically <1.0%.

Acceptance Limits

Acceptance limits are set as per current NELAC standards published for January 3, 2012.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

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Should you disagree with any element of this PT report, please submit your complaint to nsi@nsilabsolutions.com. Include the study number, your contact information, NSI Labcode, and the nature of your disagreement. An NSI Lab Solutions representative will contact you within 48 hours.

AE 1019

Fall, 2019

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Study: AE1019 Air & Emissions Proficiency Testing Results
Opening Date: 10/21/2019 **Closing Date:** 12/5/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1063-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
Additional State Specific Analytes											
4315	Acetone	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4320	Acetonitrile					<5		ppbv			NR
4323	Acetylene					<5		ppbv			NR
4325	Acrolein (Propenal)					<5		ppbv			NR
4340	Acrylonitrile					<5		ppbv			NR
4375	Benzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4390	Bromochloromethane					<5		ppbv			NR
4395	Bromodichloromethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4400	Bromoform	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4950	Bromomethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
9318	1,3-Butadiene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4410	2-Butanone (Methyl ethyl ketone, MEK)	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4450	Carbon disulfide	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4455	Carbon tetrachloride	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4475	Chlorobenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4485	Chloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4505	Chloroform	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4960	Chloromethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5635	Chloromethylbenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable

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Study: AE1019 Air & Emissions Proficiency Testing Results
Opening Date: 10/21/2019 **Closing Date:** 12/5/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR)											Lot #: 1063-23
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4525	Chloroprene					<5		ppbv			NR
4555	Cyclohexane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4585	1,2-Dibromoethane (EDB, Ethylene dibromide)	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4575	Dibromochloromethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4625	Dichlorodifluoromethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4610	1,2 Dichlorobenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	31.0	27.9	ppbv	12.4	49.6	Acceptable
4615	1,3 Dichlorobenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4620	1,4 Dichlorobenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	21.0	15.9	ppbv	8.40	33.6	Acceptable
4630	1,1-Dichloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	52.0	39	ppbv	20.8	83.2	Acceptable
4635	1,2 Dichloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	16.0	17.2	ppbv	6.40	25.6	Acceptable
4640	1,1-Dichloroethene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4645	cis-1,2-Dichloroethene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	52.0	41.8	ppbv	20.8	83.2	Acceptable
4700	trans-1,2-Dichloroethene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4655	1,2-Dichloropropane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	51.0	40.2	ppbv	20.4	81.6	Acceptable
4680	cis-1,3-Dichloropropene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4685	trans-1,3-Dichloropropene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4695	1,2-Dichloro-1,1,2,2-tetrafluoroethane					<5		ppbv			NR
4755	Ethyl acetate	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4760	Ethyl acrylate					<5		ppbv			NR

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Study: AE1019 Air & Emissions Proficiency Testing Results
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Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) — Lot #: 1063-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
4765	Ethylbenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	52.0	46.4	ppbv	20.8	83.2	Acceptable
4770	Ethyl-t-butylether (ETBE)					<5		ppbv			NR
4542	4-Ethyltoluene					<5		ppbv			NR
4825	n-Heptane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	29.0	36	ppbv	11.6	46.4	Acceptable
4835	Hexachlorobutadiene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4855	Hexane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4895	Isopropanol	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5000	Methyl tert-butyl ether (MTBE)	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4975	Methylene chloride	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	37.0	41.5	ppbv	14.8	59.2	Acceptable
4995	Methyl isobutyl ketone (Hexone)	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4990	Methyl methacrylate					<5		ppbv			NR
5027	n-Octane					<5		ppbv			NR
4836	Propylene					<5		ppbv			NR
5100	Styrene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
4370	T-amylmethylether (TAME)					<5		ppbv			NR
5115	Tetrachloroethene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	15.0	16.5	ppbv	6.00	24.0	Acceptable
5155	1,2,4-Trichlorobenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5160	1,1,1-Trichloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	35.0	38.6	ppbv	14.0	56.0	Acceptable
5165	1,1,2-Trichloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5110	1,1,2,2-Tetrachloroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	16.0	14.4	ppbv	6.40	25.6	Acceptable

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Study: AE1019 Air & Emissions Proficiency Testing Results
Opening Date: 10/21/2019 **Closing Date:** 12/5/2019 **EPA Lab ID:** MI00129
Fibertec, Inc. **PT Account # :** FBR-100
1914 Holloway Drive, Holt, MI, 48842, USA

VOCs in Summa Canister (PT-VOAS-AIR) — Lot #: 1063-23

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Units	Low Accept. Limit	High Accept. Limit	Evaluation
5170	Trichloroethene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	17.0	17.2	ppbv	6.80	27.2	Acceptable
5175	Trichlorofluoromethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5185	1,1,2-Trichloro-1,2,2-trifluoroethane	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5210	1,2,4-Trimethylbenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	39.0	35.6	ppbv	15.6	62.4	Acceptable
5215	1,3,5-Trimethylbenzene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	35.0	33.3	ppbv	14.0	56.0	Acceptable
5140	Toluene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	16.0	17.5	ppbv	6.40	25.6	Acceptable
5230	Vinyl bromide					<5		ppbv			NR
5235	Vinyl chloride	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	<5	< 5.00	ppbv			Acceptable
5240	m+p-Xylene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	24.0	24.9	ppbv	9.60	38.4	Acceptable
5250	o-Xylene	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	47.0	50.6	ppbv	18.8	75.2	Acceptable
5260	Xylenes, total	10/24/2019	KAK	10248803	EPA TO-15 Rev. 2 1999	71.0	75.5	ppbv	28.4	114	Acceptable

UST-098

Fall, 2019

UST
FINAL Performance Evaluation Report
NSI Laboratory Proficiency Testing Program
Study UST-098 - Shipped: 10/22/2019 - Closed: 12/05/2019 - Reports Printed On: 12/26/2019
Participant USEPA Labcode: MI00129

Study Designed and Coordinated by:
NSI Lab Solutions
7212 ACC Blvd., Raleigh, NC 27617
ANAB Certificate#: AP-1693-1
1-800-234-7837

This evaluation report is being submitted to:
Fibertec, Inc.
Attention: Kenneth Mueller
1914 Holloway Drive
Holt, MI, 48842

LabCode and Accreditation Information:

Send Results to:	State Only
EPA Lab Code:	MI00129
State Lab Code:	NC
Primary Agency:	TX -- Texas CEQFrank Jamison 12100 Park 35 Circle Bldg. A, MC-176 Austin, TX 78753
Reports to:	TX

Participant Information
NSI Lab Code: N40310

This report was submitted by Ken Mueller, Quality Assurance Officer
Fibertec, Inc.
1914 Holloway Drive
Holt, MI, 48842
517-699-0345
Please contact Mark Hammersla at NSI Lab Solutions if you have any questions about this report.
(800) 234-7837 - mark.hammersla@nsilabsolutions.com
This PT report may contain data not covered under ANAB Accreditation. Such data is noted by an asterisk.

SPE-114 Gasoline in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-098

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9408	Gasoline Range Organics	10173816	GC-FID	SW 8015C -- 2007	261	366	331	mg/kg	68.8	0.00 to 745	1.53	ACCEPT.	10/31/19	RKP

SPE-115 Diesel in Soil - Fibertec, Inc. - NSI Lab Solutions/UST-098

NELAC Analyte	Analyte	NELAC Method Code	NELAC Tech. Code	Method Description	Reported Value	Study Mean	Assigned Value	Units	Standard Deviation	Acceptance Limits	Z-Score	Evaluation	Analysis Date	Analyst's Name
9369	Diesel Range Organics	10173816	GC-FID	SW 8015C -- 2007	699	655	761	mg/kg	152	260 to 1260	0.289	ACCEPT.	10/31/19	BDA

About the Samples

PT samples are provided as solvent based concentrates or ready to use fortified soils. For GRO, DRO, VPH, EPH and TX 1005 PT samples, analyte source materials are composite fuels.

Assigned Values

PT sample analyte assigned values are established according to current NELAC standards as applicable. Where no NELAC standard has been developed, the assigned value has been set to the outlier adjusted study mean.

Batch Homogeneity

All PT samples have been analytically verified as homogeneous by analyses of at least 10 randomly chosen samples of each production run.

Acceptance Limits

Acceptance limits are set to current NELAC standards where such criteria exist. Where such NELAC criteria does not exist, the acceptance limits are set at ï¿½3 standard deviations around the outlier adjusted mean.

Stability

The stability of each analyte is verified through the study close by either long term monitoring or study closing stability testing.

Accredited Analytes

All analytes are included under our ISO 17043/TNI scope of accreditation (Certificate #: AP-1693-1) unless otherwise noted with an asterisk (*).

Z-Scores

Z-Scores have been added to our reports for informational purposes. The z-score is an internationally recognized PT grading criterion where any z-score <3 is considered an acceptable evaluation. $z = (X - \mu)/\sigma$ after outlier rejection where X is the reported value, μ is the study mean and σ is the study standard deviation. It should be noted that the overall evaluations continue to be determined in a manner conforming with the current NELAC/TNI criteria.

PT Study Summary

To view a summary of the PT study results, please see Study Summary Report available in our PT Datalink at www.nsilabsolutions.com.

* The study mean and standard deviation are presented after outlier correction and are based upon pooled reported results without consideration for analytical technology.

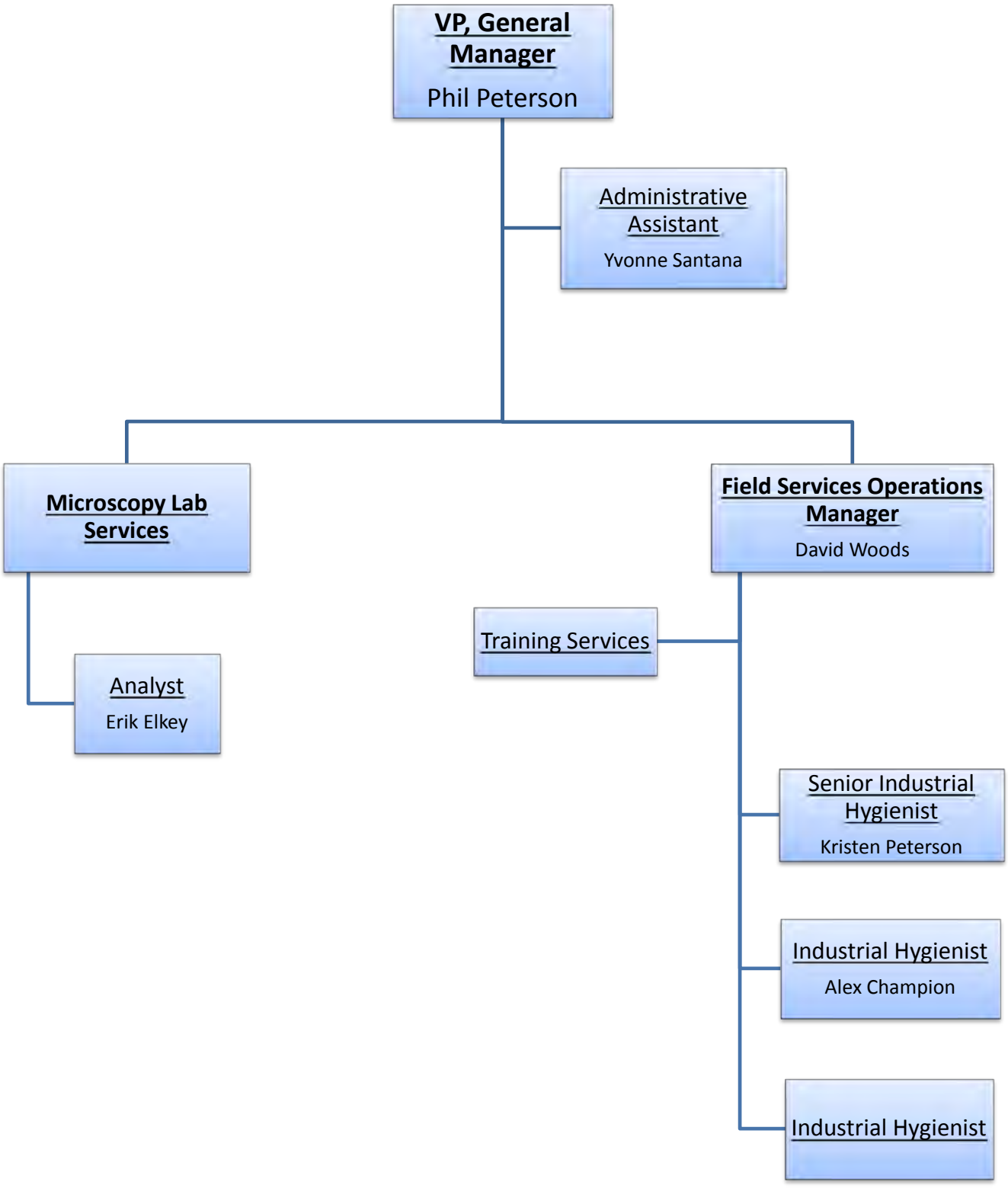
Reviewed/Approved By:  Date: 12/26/2019

Mark Hammersla, President

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Fibertec, Industrial Hygiene Services
Organizational Chart



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Additional Information for Questionnaire 3 – All Services Except PFAS and ISM

At minimum, three examples, with references, of successful projects performed in the last five years for each service, as requested in Section I General Information, I-4 Contract Award of the Request for Proposal.

1. Little Caesars Arena, Detroit, Michigan. Project was conducted from 2006 through 2018. Project providing laboratory services to NTH Consultants. Soil and water samples were analyzed for VOC, SVOC, MI Metals, PCB, VOC's in Air utilizing TO-15, TCLP Full Waste Characterization, pH, Total Phosphorus, FOG, Available Cyanide, TTO, and TSS. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: Cliff Andrews, 41780 6 Mile Rd., Northville, MI 48168. Candrews@nthconsultants.com, (248) 630-0466.

2. Wayne County Jail Project, Detroit, Michigan. Ongoing project providing laboratory services to Soil and Materials Engineers, Inc. Analysis of soil, water for the Wayne County Jail Project for BOD, Available Cyanide, Dioxin Screen, FOG, Mercury, Metals, PCBs, Pesticides, total Phenolics, Total Phosphorus, pH, TSS, TTO Volatiles and TTO Semivolatiles, VOCs, PNAs, TMBs, Alkalinity, TCLP and SPLP Volatiles, TCLP and SPLP Semivolatiles, TCLP and SPLP Metals, GRO, BTEX, Hydrocarbon Fingerprint, Specific Gravity, Reactivity, Corrosivity, Ignitability, TCLP and SPLP Pesticides, and TCLP and SPLP Herbicides. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: Paul Roberts, 43980 Plymouth Oaks Blvd., Plymouth, MI 48170-2584. Roberts@sme-usa.com, (734) 454-9900.

3. Michigan State Fairground Project, Detroit, Michigan. Project was conducted from October through November of 2018. Project providing laboratory services to DLZ. Analysis of soil for VOC, SVOC, MI Metals, TCLP Full Waste Characterization. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: Dor'Mario Brown, 4041 Martel St., Melvindale, MI 48122. Dbrown@dlz.com, (248) 727-7083.

4. Kalamazoo Valley Community College, Kalamazoo, Michigan. Project was conducted in December of 2017. Project providing laboratory services to Envirologic Technologies. Analysis of subslab air samples for TO-15 VOCs, Mercury, and PNAs. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: David Warwick, 2960 Interstate Pkwy., Kalamazoo, MI 49001. Dwarwick@envirologic.com, (269) 342-1100.

1914 Holloway Dr., Holt, MI 48842 Tel: (517) 699-0345 Fax: (517) 699-0388
11766 E. Grand River, Brighton, MI 48116 Tel: (810) 220-3300 Fax: (810) 220-3311

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5. DCP Quarterly VIAP, Howell, Michigan. Ongoing project providing laboratory services to BB&E. Analysis of subslab air samples for TO-15 VOCs. All Analyses conducted in accordance with EGLE Op. Memo 2. Contact: Celeste Holtz, 235 East Main Street Suite 107, Northville, MI 48167. Choltz@bbande.com, (248) 489-9636.

6. Sanicem Environmental Investigation, Auburn Hills, Michigan. Project was conducted in August of 2018. Project providing laboratory services to EGLE. Analysis of soil samples for TCLP Waste Characterization parameters including TCLP VOC, TCLP SVOC, TCLP RCRA 8, PCBs, Reactive Sulfide and Reactive Cyanide, Corrosivity, Ignitability, Sulfate, Sulfide, and Sulfur. All analyses conducted in accordance with EGLE Op. Memo 2. Contact: Mr. Greg Barrows, 27700 Donald Court, Warren, MI 48092. Barrowsg@michigan.gov, (586) 753-3807.

7. Gordie Howe International Bridge Project, Detroit Michigan. Ongoing project providing laboratory services to Mannik and Smith Group. Analysis included Rush TCLP /Full Waste Characterization, Total VOCs, SVOCs, and Michigan 10 metals and PFAS in various matrices. All analyses are conducted in accordance with EGLE Op. Memo 2. Contact: Walter Bolt, 2365 Haggerty Road South, Canton, MI 48188. Wbolt@manniksmithgroup.com, (734) 790-5177.

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APPENDIX

Submitted Resumes

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Alexandra N. Bergeon
Volatiles Group Leader

Mrs. Bergeon has two and a half years of analytical laboratory experience. She has conducted procedures for analysis of air, soil and water for environmental applications.

Education
Lyman Briggs College at Michigan State University, B.S. in Chemical Physics (2017)

Professional History
Volatiles Group Leader –Fibertec Environmental Services
Mrs. Bergeon is responsible for overseeing the Volatiles staff. Her responsibilities include addressing complex issues with client samples, organizing work flow throughout the lab, and helping maintain instruments and growth.

Chemist, Volatiles Analyst –Fihertec Environmental Services
Mrs. Bergeon was responsible for volatile analysis by GC/MS instrumentation using EPA methods 8260, 624 and TO-15. Her responsibilities also include instrument maintenance, repair, troubleshooting, as well as the management and distribution of TO-15 supplies.

Undergraduate Learning Assistant –Michigan State University
Mrs. Bergeon worked closely with the Physics staff of Lyman Briggs College for two years to develop new laboratory, classroom and study procedures for students. She led physics laboratories for 20 students twice a week. She also helped develop new labs to link chemistry and physics.

President of Science Theatre –Michigan State University
Mrs. Bergeon was the president of Michigan State's Science Theatre program. This program was a science outreach program that traveled all over the state of Michigan performing free science demonstration to schools, daycares, and public audiences. She scheduled all the shows for the state and taught safety procedures to other members. She also helped organize events such as Physics and Astronomy Day at Impression 5 Science Theatre and Michigan State University's Science Festival.

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Anthony T. Donnelly
IT Officer, Analytical Laboratory

Mr. Donnelly has over 26 years of analytical laboratory experience, and currently serves as the Information Technology Officer. Mr. Donnelly has also conducted extensive analyses of water, soil, oil, and air for environmental applications using EPA and NIOSH methods, and developed methods for specific applications. His principle expertise is inorganics analyses.

Education
Bachelor of Science, Physiology (Pre-medical), Michigan State University (1995)

Professional History
Information Technology Officer – Fibertec
Mr. Donnelly is responsible for all aspects of the laboratory's information management system (LIMS). Mr. Donnelly also manages the data-related aspects of auxiliary laboratory operations and serves as a technical resource for laboratory management and staff.

Quality Assurance Officer – Fibertec
Mr. Donnelly responsibilities included the development, management, and enforcement of laboratory quality assurance policies and procedures. In addition to overseeing daily laboratory quality control, Mr. Donnelly also maintained the overall laboratory requirements for certifications and accreditations.

Chemist, Analytical Services – Fibertec
Mr. Donnelly's duties included inorganics analyses, as well as the management of inorganics laboratory staff. He was also responsible for maintaining analytical instrumentation and documentation. His analytical experience includes ICP/MS, ICP/AES, GF-AA, UV-VIS, IC, and CVAA.

Laboratory Technician – Fibertec
Mr. Donnelly's served as a laboratory technician performing sample preparation and analyses for a variety of parameters. Mr. Donnelly's duties included sample digestions, and extractions for metals, semi- volatiles, and volatile analytes.

Example Project Experience
Major Utility – Analyzed samples for heavy metals on multiple site projects.
Landfills – Conducted analytical testing for metals and classical chemistries for routine monitoring.

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Bethany D. Annett
Group Leader, Semivolatiles

Ms. Annett has over 20 years of analytical laboratory experience. She has conducted analyses of water, soil, oil, and air for environmental applications using EPA and NIOSH methods.

Education
Wheaton College, BS Chemistry (1996)
Michigan State University, MS Forensic Science (2003)

Professional History
Group Leader, Semi-Volatiles-Fibertec
Ms. Annett is responsible for the oversight and operations of the semi-volatiles department, including quality assurance, training and scheduling. Her analytical duties include: GC-ECD for PCBs, pesticides and herbicides; GC-FID for methane, alcohols, glycols, GRO, DRO and ORO; GC-MS for BNAs; and LC-MS/MS for PFAS.

Lab Technician-Sparrow Hospital
Ms. Annett was responsible for prepping biological samples for drug testing. She ran several screening instrument for stat tests for the ER department. She was also responsible for daily maintenance and running both GC-MS and HPLC.

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Daryl P. Strandbergh
Director, Analytical Laboratory

Mr. Strandbergh has over 30 years analytical laboratory experience in the field of environmental chemistry and industrial hygiene. He has conducted extensive analyses using EPA, OSHA, and NIOSH methods as well as developed methods for specific applications. He has over 20 years experience managing laboratories and possesses a thorough knowledge of state and federal regulations. He is skilled in serving as liaison between client, government agency, and laboratory.

Education
University of Michigan Dearborn, MBA (1987)
University of Michigan Dearborn, BS Chemistry and Biology (1978)

Professional Organizations
Michigan Association of Environmental Professionals
Michigan Environmental Laboratory Association

Professional History
Director, Analytical Laboratory Services - Fibertec
Mr. Strandbergh is responsible for overall management of laboratory staff, including quality assurance, staffing and scheduling, financial budgeting, capital expenditures, profit/loss, and business development.

Director, Analytical Laboratory - TMI
At TMI, Mr. Strandbergh was responsible for overall laboratory management of environmental laboratories in Michigan and Illinois.

Operations Manager - National Environmental Testing
Responsible for daily operation of the laboratory, including quality assurance, staffing, and scheduling.

Manager, Laboratory Services - Clayton Environmental Consultants
Responsible for overall management of Midwestern operation's laboratory with staff of over 90 employees. Prior to managing the laboratory, Mr. Strandbergh was responsible for supervising the organic sections. He was instrumental in initiating the organization's participation in the USEPA Contract Laboratory Program (CLP), and subsequently managed the contract at the laboratory. He has managed major projects under RCRA and Superfund. His initial duties as a chemist included performing extensive analyses using techniques which include gas chromatography/mass spectrometry, gas chromatography, high pressure liquid chromatography, X-ray diffraction, wet chemistry, and various sample preparation techniques.

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Example Project Experience

Brownfield Redevelopment – managed laboratory analyses conducted in support of brownfield redevelopment activities.

USEPA Contract Laboratory Program - managed the laboratory contract with the EPA to conduct analyses for remedial investigation/ feasibility (RI/FS) studies and cleanup under Superfund.

Petroleum Companies - Developed method for collection and analysis of air samples for polynuclear hydrocarbons.

Emergency Response - Analyzed air samples from a large tire fire using multi-stage sorbent tubes.

CERCLA site - Developed methodology and quality assurance project plan (QAPP), then conducted analyses for RI/FS, remediation, and closure for Superfund site in Michigan.

Vapor Intrusion – Developed sampling plans, assisted samplers, and managed laboratory testing associated with soil vapor testing for both commercial and residential sites.

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Daniel A. Robey
Analytical Chemist, Semivolatiles

Mr. Robey has over 7 years of analytical laboratory experience. He has conducted analyses of water, soil, oil, and air for environmental applications using EPA and NIOSH methods.

Education
Jackson Community College, Associates Applied Science (2007)
Alma College, BS Biology (2009)

Professional History
Analytical Chemist, Semi-Volatiles-Fibertec
Mr. Robey is responsible for LC-MS/MS analysis of PFAS tests ASTM D7979 and EPA 537.1 modified. ASTM sample preparation using a 0.2um filter, and 537.1 modified sample preparation using SPE.

Analytical Chemist, Volatiles-Fibertec
Mr. Robey was responsible for the EPA 8260 analysis of soil and water samples. EPA 5035 bulk soil analysis, TCLP soil analysis, and EPA TO-15 air sample analysis. All tests required GC-MS instrumentation.

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Donna Williams
Group Leader, Semivolatiles Prep and Incremental Sampling

Ms. Williams has over 10 years of analytical laboratory experience. She has been the primarily prep technician for Incremental Sampling and has prepared samples of water, soil, oil, and air for environmental applications using EPA and NIOSH methods.

Education
High School Diploma

Professional History
Group Leader, Semi-Volatiles Prep Lab-Fibertec
Ms. Williams is responsible for the oversight and operations of the semi-volatile preparatory department, including assigning work, training, making surrogate and spike standards, and entering data into LIMS. She is also responsible for the management of Incremental Sampling projects for prep, including disaggregation, sieving, subsampling, and drying of samples. She has conferred with the State of Michigan TAPS team for ISM to discuss methodology and troubleshooting and has consistently sought out additional education opportunities via webinars and seminars related to ISM.

Lab Technician-Fibertec
Ms. Williams continues to fill the duties of lab technician, including prepping samples for analysis utilizing EPA and NIOSH methods for Semivolatile analysis, ISM, TCLP prep, PCBs in oil, PCB wipes, alcohols, and glycols.

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Heather L. Smith
Operations Manager

Ms. Smith has over 16 years of laboratory experience. She has conducted analyses of water, soil and air for environmental applications using EPA methods. She has also conducted product testing analyses of pharmaceutical products using FDA methods. Additionally, Ms. Smith has 3 years experience working on a variety of biotechnology research and development projects.

Education
Bachelor of Science, major in Microbiology, Concentration in Microbial Biotechnology at Michigan State University (2003). Also fluency in Mandarin Chinese.

Continued chemistry education at the University of Toledo (2018-2019).

Professional History
Operations Manager – Fibertec
Ms. Smith is responsible for overall laboratory operations including quality, turnaround time, resources management, staffing, and meeting the TNI requirements. She also serves as a technical resource for clients.

Project Manager and Group Leader, Analytical Services – Fibertec
Ms. Smith was responsible for managing client projects with special handling requirements as well as serving as a technical resource for clients. She was also responsible for the oversight and operations of the Volatiles Department, including quality assurance and training. Her analytical duties included organic analyses, maintaining analytical instrumentation and documentation. Her analytical experience includes GC/MS and FID.

Biotechnology Research Associate-MBI International
Ms. Smith contributed to research and development of biomass fermentations to maximize yield of succinic acid and to perfect downstream recovery of this product. She also worked to develop two-dimensional bio-based polymers and assisted in writing final project reports to various government agencies.

Pharmaceutical Analyst-AvTech Laboratories
At AvTech, Ms. Smith conducted a variety of analytical procedures following GLP/GMP guidelines to certify the identity and integrity of pharmaceutical products utilizing HPLC and other instrumentation. She was also responsible for preparing certificates of analysis and other record-keeping.

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Plant Pathology Laboratory Staff-Michigan Department of Agriculture
Ms. Smith conducted ELISA to screen for the plum pox virus in orchard trees and also screened seed corn for microbial infections.

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Kenneth R Mueller
Quality Assurance Officer

Mr. Mueller has over 42 years of environmental and industrial hygiene laboratory experience. He has extensive experience conducting analyses using EPA, NIOSH and OSHA methods. His experience includes more than 30 years of project management, supervision and management of numerous aspects of laboratory operations.

Education
AS, Environmental Chemistry, University of Cincinnati, Cincinnati OH, 1977
BBA, Cleary University, Ann Arbor MI, 2005

Professional History
Quality Assurance Officer - Fibertec, Inc.
Mr. Mueller is responsible for oversight of the quality management system for all laboratory operations and ensuring compliance to the TNI (NELAC) Standard.

Supervisor, Inorganics Laboratories-Fibertec, Inc.
Mr. Mueller was responsible for the oversight and operations of the wet chemistry and metals laboratories, including quality assurance, training and scheduling. He was responsible for data review as well as departmental compliance with laboratory SOPs and regulatory methodology.

Laboratory Director, Bureau Veritas North America Inc. Novi , MI
Mr. Mueller was responsible for the overall technical and financial operations of an environmental and industrial hygiene analytical laboratory with a staff of more than 70 employees. Prior to being lab director he held positions of associate lab director, LIMS administrator, and manager of the metals and XRD departments.

Quality Assurance Manager, National Environmental Testing, Auburn Hills, MI
He was responsible for the overall quality program of a full service environmental laboratory. He conducted internal audits, reviewed SOPs for method compliance and administered the laboratory's participation in PT studies.

Project Manager and Group Leader, Quanterra, Inc., Knoxville, TN and Cincinnati, OH
Mr. Mueller served as the primary liaison and technical contact between the client and the laboratory. As project manager, he coordinated analytical, scheduling and budgetary requirements as well as making sure all data met quality and client specifications. He also managed a group of chemists that specialized in the analysis of ambient air and source emission samples. Many of these were in support of EPA Superfund projects.

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Lori E. Tucker
Lab Technician, Semivolatiles

Ms. Tucker has over 5 years of analytical laboratory experience. She has prepared water, soil, and oil samples for environmental applications using EPA methods.

Education
High School Diploma

Professional History
Prep Lab Technician, Semi-Volatiles-Fibertec
Ms. Tucker is responsible for the preparation of soil, water, and oil samples for a variety of analytes in the Semivolatiles prep lab. She has also had some experience with analyzing samples in the metals laboratory. She follows multiple EPA methods for the extraction of soil and water samples. Her duties may also include preparing samples for Incremental Sampling, entering data into LIMS, cleaning samples up for PCB and pesticide analysis, measuring pH, and preparing samples for TCLP

Pharmacy Technician
Ms. Tucker provided customer service and was responsible for filling prescriptions.

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Matthew Frisch
President

Education
Eastern Michigan University, BS Geology (1983)

Professional History
Mr. Frisch has been the chief executive of Fibertec since its inception in 1987. His role within the company is to oversee and manage the technical department heads, the marketing department, and the accounting department. He directs overall business operations including, corporate strategy, and decision making for major capital expenditures. Mr. Frisch is also responsible for contract negotiations with clients, and vendors. Mr. Frisch has led the development of Fibertec into a broad based environmental service company, providing Asbestos and Environmental Hygiene services, a broad spectrum of Environmental Analytical Laboratory services, as well as Geoprobe, auger drilling, Air Vacuum Excavation Services, and Utility Locating.

Mr. Frisch has an extensive history in the Environmental service field with over 30 years of experience. Prior to Fibertec's incorporation, Mr. Frisch worked for Environmental Consulting Firms and as a Geologist for the Michigan Department of Natural Resources Groundwater Quality Division (the forerunner of the Michigan Department of Environmental Quality). The knowledge Mr. Frisch gained from his diverse experiences, gave him the ability to direct one of the Midwest's dominant environmental service companies.

Memberships/ Professional Affiliations
Michigan Association of Environmental Professionals
National Water Well Association
National Groundwater Association
Past Board Member - Michigan Association of Environmental Professionals
Past Board Member - Environmental Management Association

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Nikki M. Skiffington
Lab Technician, Semivolatiles

Ms. Skifffington has 18 months of analytical laboratory experience. She has prepared water, soil, and oil samples for environmental applications using EPA methods.

Education
High School Diploma

Professional History
Prep Lab Technician, Semi-Volatiles-Fibertec
Ms. Skiffinton is responsible for the preparation of soil, water, and oil samples for a variety of different analytes in the Semivolatiles prep lab. She follows multiple EPA methods for extraction of both soil and water samples. Her duties may also include preparing surrogate and spike standards, entering data into LIMS, addition clean up of samples for PCB or pesticide analysis, measuring pH, preparing samples for TCLP, and preparing samples for Incremental Sampling.

Veterinarian Assistant
Ms. Skiffington was a veterinarian assistant for 13 years. She assisted in surgeries, took x-rays, and drew blood from animals.

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Phillip A. Peterson
Vice President – Fibertec Industrial Hygiene Services, Inc. (Fibertec IHS)

Mr. Peterson has over 30 years experience in the Environmental/Industrial Hygiene field, including all aspects of asbestos testing, project design, and management. He has also performed many Indoor Air Quality Investigations, and has had numerous industrial hygiene project management assignments including investigations, testing, and hazard assessments. Mr. Peterson often provides asbestos and other hazard awareness training and makes presentations around the State of Michigan.

Education
Bachelor of Science, Geology, Michigan State University (1987)

Accreditations/ Certifications/Training
Advanced Polarized Light Microscopy – McCrone Institute
Phase Contrast Microscopy – McCrone Institute (NIOSH 582)
Accredited Asbestos Management Planner
Accredited Asbestos Building Inspector
Accredited Asbestos Project Designer
IAQ Microscopy – McCrone Institute
CPR/First Aid
Radiation Worker Training
Confined Space Training
AIHA Member
Michigan Industrial Hygiene Society Member
7-Hour Technical Workshop on the ANSI/IICRC S-520
Lead Inspector (formerly)
Lead Risk Assessor (formerly)
Legionella Training
40 Hour Hazardous Waste Operations Training
RRP Certified Renovator Training
Methamphetamine Evaluator
Bloodborne Infectious Disease Prevention Training
Mercury Spill Response Workshop
Facilities Readiness Seminar- Catastrophe Preparation

Professional History
Vice President – Fibertec IHS (2003-Present)
Mr. Peterson's duties include management of a staff of 12 to 16 employees; scheduling; business development; proposal writing; and asbestos, lead, mold and industrial hygiene testing, consulting and reporting. Mr. Peterson also oversees the PCM, PLM and IAQ laboratory, ensuring that strict QA/QC procedures are followed in each laboratory and that NVLAP accreditation requirements are maintained in the PLM Laboratory, among other responsibilities.

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Manager, Asbestos and Environmental Hygiene Services – Fibertec (1998-2003)
Mr. Peterson's duties include asbestos and lead air monitoring, project management, inspection, specification development, and management plan development. He also performs sample analysis via phase contrast and polarized light microscopy, and is involved in laboratory method development. Mr. Peterson enforces a strict QA/QC program for the PLM and IAQ laboratories. Mr. Peterson executes indoor air quality investigations, conducts report composition and review; performs client development, and general industrial hygiene sampling and reporting.

Manager, Environmental Services Division – Wonder Makers, Inc. (1993-1998)
Mr. Peterson was responsible for asbestos and lead air monitoring project management, inspection and specifications development. He conducted sample analysis via phase contrast and polarized light microscopy. Mr. Peterson implemented a QA/QC program for laboratory services. He was engaged in Phase I and II hydro geological investigations, report management, industrial hygiene sampling and reporting, as well as IAQ microscopy analysis method development (The Standardized Method).

Manager, Environmental and Mobile Services Department – Fibertec (1992-1993)
Mr. Peterson was in charge of client development, payroll, billing and employee performance review. He directed indoor air quality and lead exposure monitoring. He operated GC instrumentation, and developed standard operating procedures for the mobile laboratory.

Operations Director – Fibertec (1990-1992)
Mr. Peterson supervised daily operations including project management, and initiating new client contact. Mr. Peterson developed AHERA management plans, conducted Phase I Environmental Site Assessments and established QA/QC program for the PLM laboratory.

Industrial Hygiene Technician – Fibertec (1988-1990)
Mr. Peterson monitored asbestos abatement project sites, scheduled and supervised air-monitoring technicians. He designed and taught a MIOSHA Asbestos Program recognized NIOSH 582 equivalent training course, as well as beginning a QA/QC program for the asbestos fiber counting laboratory.

Presentations
"Managing Multiple Hazard Abatement - A Summary of a Lead-Based Paint and Asbestos Abatement Project". The Border Expo, Cobo Hall, Detroit, Michigan, December 1995.

"Understanding Your Compliance Options - A Synthesis of the New Construction Industry Standard for Asbestos, 29 CFR 1926.1101". The Michigan Safety Conference, Industrial Division, The Lansing Center, Lansing, Michigan, April 1996.

"Biological Contaminants as a Component of Indoor Air," The Michigan Industrial Hygiene Society, Frankenmuth, Michigan, September 1997.

"Indoor Air Quality – A Round Table Discussion," The Michigan Safety Conference, Lansing, Michigan, April 1998.

"Indoor Air Quality", Cristo Rey Church, Lansing, Michigan, March 2000.

"Indoor Air Quality Investigations and Remediation", Farm Bureau Insurance, Frankenmuth, Michigan, March 2001.

"Indoor Air Quality – Mold 101", Saginaw Branch of the American Institute of Architects, Midland, Michigan, November 2002.

"Indoor Air Quality – Mold 101", Associated General Contractors, UP Michigan Construction Safety Days, February 2005

Construction Health Hazard Awareness Training – Associated General Contractors (2008)

Lead Renovation, Repair and Painting Rules, Facilities Readiness Conference, East Lansing, Michigan (September 2011)

MIOSHA Asbestos Program- AHERA Clearance Requirements (June 2012)

MIOSHA Asbestos Program Presentation- Asbestos in Settled Dust – Current State of Understanding (December 2017)

Conference Attendance
The Border Expo, Detroit, Michigan (1995) – also Conference Presenter
Michigan Safety Conference, Lansing and Grand Rapids, Michigan (1998-2017)
AIHA Conference, Chicago, Illinois (2006)
Facilities Readiness Conference, East Lansing, MI (2011) - also Conference Presenter

Publications
Environmental Choices, "Standardized Method for the Analysis of Bioaerosols" Fall 1997, Vol. 6, No. 3.

Select Project Experience

1996 – 1998 – DC Cook Nuclear Plant, Bridgman, Michigan – Oversaw asbestos abatement operations in radialogically and non-radiologically controlled/restricted areas of the Plant. Oversaw Polarized Light Microscopy Laboratory operations in labs in both radiologically and non-radiologically controlled areas and prepared and analyzed air and bulk asbestos samples. Conducted indoor air quality investigations.

1998 – Legislative Office Building, Lansing, Michigan – Oversaw pre-renovation asbestos inspection, drafted specifications, conducted contractor walkthrough, reviewed bids with Owner, conducted air monitoring and oversight of two asbestos abatement contractors during the renovation of the former Board of Water and Light Office Building and the

demolition of the former Davenport Building to make way for the new Legislative Office Building.

2000 – Cornell Elementary School, Okemos, Michigan – Attended public meeting to discuss indoor air quality with concerned parents, staff and district officials, was immediately retained to conduct comprehensive indoor air quality inspection throughout the building. Drafted mold and asbestos abatement specifications, conducted the contractor walkthrough, reviewed bids with the Owner, conducted oversight of the contractor and conducted visual inspections and mold clearance testing. Attended additional public meetings to discuss findings, conclusions and outcomes.

2003-2007 – Farm Bureau Life Insurance Company of Michigan – Oversaw asbestos inspection activities, drafted detailed technical specifications, conducted contractor walkthrough, reviewed bids with the Owner and made a formal recommendation of award. Conducted meetings with the entire building population to inform them of the strategy, plan and schedule for abatement/construction and assisted with on-site air monitoring/contractor oversight.

2006-present – Various Sites – Methamphetamine evaluations, specification development, contractor oversight and clearance testing at various residential and commercial sites throughout mid-Michigan and in Southwest, Michigan. Projects required frequent contact with law enforcement, Environmental Protection Agency staff and County Health officials.

2010 – Central Michigan University – Rose Ryan Arena – Investigated the presence of mercury catalyzed floors. Educated the building owner and drafted specifications for the removal of said flooring. Oversaw the project and interfaced with State Regulators during all phases of the project.

2015 – Central Michigan University- North Art Studio – Investigated the presence of heavy metals contamination. Educated users and the owner, developed abatement specifications and oversaw clean-up operations of the contractor.

2017 – Lansing School District- Lansing Pathway Promise Bond Project – Project Director for a comprehensive asbestos removal project necessary to allow renovation and technology upgrades throughout the Lansing School District. Bond Projects totaled 120 million dollars.

Volunteer Service

Kalamazoo County Methamphetamine Regulations Committee – in 2000 Mr. Peterson was part of an ad/hoc committee assembled to assist the county in the development of county wide methamphetamine regulations and evaluate issues related to methamphetamine clean up and decontamination including those of asbestos containing material (ACM) and lead based paint (LBP).

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MIOSHA 601/301 Committee –2010-2012 Mr. Peterson served on the committee charged with revising 36 Permissible Exposure Limits for both Construction and General Industry Standards.

Michigan Bluebird Society – Since 2009 Mr. Peterson has served as the Society's Vice President. The Society is charged with educating the public about the Eastern Bluebird (Sialia sialis) and improving Michigan's habitat and breeding population of bluebirds.

International Academy Lansing – From 2013-2016 Mr. Peterson has served on the Board of Education of this charter school. The school anticipated teaching children in grades K-4 using the world renowned SABIS model.

2017 Continuing Education-

Asbestos Contractor Designer Refresher Course
Asbestos Building Inspector Refresher Course
Renovation, Repair and Painting Certified Renovator Refresher Course
Vermiculite Webinar
Michigan Safety Conference attendance

2017 Training-

Asbestos in Dust Seminar to MIOSHA Asbestos Program IH Staff and Staff from CET.

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Robert D. Kuhajda
Chemist, Semivolatiles

Mr. Kuhajda has over 25 years of analytical laboratory experience. He has conducted analysis of air, soil, water, oil, waste and products for environmental and other applications. Environmental applications include EPA, NIOSH and AFCEE.

Education
Eastern Illinois University, BS in Biology (1986)
Eastern Illinois University, MS in Biology (1988)

Professional History
Chemist, Semivolatiles-Fibertec
Mr. Kuhajda is responsible for semivolatile analysis by GC/MS for BNAs and PNAs. He is also responsible for semivolatile analysis by GL for PCBs, pesticides, GRO, methane, and alcohols.

Chemist, Volatiles-Fibertec
Mr. Kuhajda was responsible for air volatiles analysis by GC/MS and ZHE-TCLP extractions.

Chemist, Volatiles-Gabriel Laboratories
Mr. Kuhajda was responsible for the analysis of water, soil and oil for volatile compounds by GC/MS.

Organic Laboratory Manager/Chemist-Suburban Laboratories
Mr. Kuhajda was responsible for management of the extractions GC, GC/MS volatiles and semi-volatiles departments. This included quality assurance, training, scheduling and instrument repair and troubleshooting. As a chemist he worked primarily in GC/MS for semi-volatiles and volatiles. He also worked in metals, extractions and wet chemistry.

Other work experience includes Severn Trent Laboratories, Lockheed-Martin corporations, Chemical Waste Management and Quality Analytical Laboratories.

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Sierra McKenna
Supervisor, Inorganic Chemistry Department

Ms. McKenna has over 3 years of analytical laboratory and field experience. She has conducted procedures for the analysis of air, soil, water, and oil for environmental applications. Environmental applications include EPA and NIOSH.

Education
Iowa State University, BS in Biology and Environmental Studies (2011)
Queen's University Belfast, MS Conservation Biology and Ecological Management (2012)

Professional History
Supervisor, Inorganics Department, Fibertec
Ms. McKenna is responsible for day to day operations with the Wet Chemistry Lab and the Trace Metals Lab. Some responsibilities include data quality assurance, training, instrument maintenance, and troubleshooting as well as the development and implementation of analytical methods.

Chemist, Wet Chemistry, Fibertec
Ms. McKenna was responsible for conducting a variety of wet chemistry analyses, including sample preparation, digestion and distillation.. She was also responsible for running and maintaining several different types of instruments and analysis including flow injection and segmented flow analysis, ion chromatography, spectrophotometric analyses, among others.

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Stacy L. Kotecki
Supervisor, Client Services and Login

Ms. Kotecki has over 15 years of office experience including 5 years in the environmental laboratory field. She supervises the client services and login departments of the laboratory and also works closely with clients providing project management on routine and complex projects.

Education
Western Michigan University, BS Printing/Marketing (1988)

Professional History
Supervisor, Client Services and Login
Ms. Kotecki supervises the Login and Client Services departments of the laboratory working with the group leaders of those departments to provide resources, guidance and oversight as needed. She also provides project management on routine and complex projects by working closely with the client to understand their needs and track the projects as they move through the lab from start to finish.

Client Services Coordinator-Fibertec
Ms. Kotecki was responsible for the supervision of the client service representatives as well as report review. She handled client requests for sample containers, scheduled client sample pick-ups and drop-offs, and worked with clients to ensure their projects ran smoothly.

Office Manager-Community Papers of Michigan
At Community Papers of Michigan, Ms. Kotecki was responsible for processing sales orders, communicating with members and customers, assisting with meetings and conferences.

Account Representative, Project Coordinator-John Henry Company
Ms. Kotecki was responsible for the development and production of customized printed products from concept to final product.

Office Manager-Taussig's Graphic Arts Supply
At Taussig's, Ms. Kotecki was responsible for the internal operation of the branch location. Her primary responsibilities included managing staff and communicating with customers.

Technical Sales Representative-AGFA Graphic Division
Ms. Kotecki was responsible for making consumable sales, supporting/training the dealer networks and generating new business.

Account Executive-Eastman Kodak Company
At Eastman Kodak Company, Ms. Kotecki was reponsibile for marketing and selling to the Kodak dealer network and selling consumable products to end-users.

Fibertec
environmental
services

Terisa Talamantez
Analyst, Semivolatiles

Mrs. Talamantez has over 15 years of analytical laboratory experience. She has conducted analyses of water, soil, oil, and air for environmental applications using EPA and NIOSH methods.

Education
Delta College, Associates Degree in Natural Science (2001)

Professional History
Analyst, Semi-Volatiles-Fibertec
Mrs. Talamantez is responsible for assisting in the operations of the semi-volatiles department, including quality assurance, and training. Her analytical duties include: GC-ECD for PCBs, pesticides and herbicides; GC-FID for methane, alcohols, glycols, GRO, DRO and ORO; GC-MS for BNAs; and LC-MS/MS for PFAS. Terisa is also responsible for LC-MS/MS analysis of PFAS tests ASTM D7979 and EPA 537.1 modified using SPE.

QA/QC Laboratory Technician-Carbon Green Bioenergy
Mrs. Talamantez was responsible for required maintenance and daily calibration of all laboratory equipment. Daily sample tests including Moisture/Dry Matter via Oven, NIR and IR, dry sieve, pH, digital and manual brix, dextrose equivalence, yeast cell count, HPLC, GC, total suspended solids, bulk density, vomitoxin. Mrs. Talamantez was also testing final product and completing CoA's using pHe, Karl Fischer, Shimadzu GC, IC, acidity titration, and Chloride probe. She was also responsible for creating and revising standard operating procedures, updating preventative maintenance and calibration requirements as well as updating and revising plant wide MSDS's and master list.

Task Cost Table - Per- and Polyfluoroalkyl Substances

Instructions:

All costs presented shall include extraction and disposal costs.

Costs are to be presented on a per sample basis for the method, matrix, preparation, and target compound list (TCL) specified.

Per- and Polyfluoroalkyl Substances (PFAS) TCLs for Method 537.1, 537 Revision 1.1 are specified in each method.

The TCL for MPART 28 and 12 compound lists are attached.

When a method is not specified, the Contracted Laboratory shall indicate the method(s), as appropriate.

Task #	Task Description	Matrix	Method	Laboratory Technique	Cost Per Sample
450	PFAS 537.1 – 18 Compounds List	Aqueous: Drinking Water	537.1	Solid phase extraction with LC MS/MS	N/A
451	PFAS 537 Revision 1.1 – 14 Compound List	Aqueous: Drinking Water	537 Revision 1.1	Solid phase extraction with LC MS/MS	N/A
452	PFAS ASTM D7979 – 21 Compound List	Aqueous: water/sludge /influent/effluent/ wastewater	ASTM D7979	Methanol extraction with LC MS/MS	$250
453	PFAS MPART 28 Compound List	Aqueous: Groundwater/ Surface Water/ Wastewater/ Other		LC MS/MS with Isotope Dilution	$250
454	PFAS ASTM D7979 – 21 Compound List	Soil/ Sediment	ASTM D7968	Methanol extraction with LC MS/MS	$250.00
455	PFAS MPART 12 Compound List	Fish		LC MS/MS with Isotope Dilution	N/A
456	PFAS MPART 28 Compound List	Foam		LC MS/MS with Isotope Dilution	N/A
457	PFAS MPART 28 Compound List	Solid Plant Material		LC MS/MS with Isotope Dilution	N/A
458	Sample Preparation (grinding, sieving, homogenizing, etc.)	Solid Plant Material/ Fish			N/A
459	SPLP – Bottle Shake	Soil/ Sediment/ Biosolids/ Fish	1312	Preparation only	$35

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
500	Premium, 24 hour	x 5
501	Premium, 2-3 day	x 3
502	Premium, 4-7 day	x 1.5
503	Premium, 8-13 day	x 1

Task Cost Table - Incremental Sampling Method

Instructions:
All costs presented shall include disposal costs.
Costs are to be presented on a per sample basis.

Task #	Task Description	Matrix	Cost Per Sample
400	ISM Processing-1Kg (Dry, Disaggregate, #4 or #10 Sieve)	Soil/ Sediment	$75.00
401	ISM Processing - each additional Kg	Soil/ Sediment	$50.00
402	2-Dimensional Slabcake subsampling-each additional analyte fraction	Soil/ Sediment	$25.00
403	Sectorial (Rotary Riffle) Splitting – each additional analyte fraction	Soil/ Sediment	N/A
404	Particle size determination (additional sieving or wet sieving)	Soil/ Sediment	N/A
405	Dish and Puck Mill - each Kg	Soil/ Sediment	N/A
406	Ball Mill - each Kg	Soil/ Sediment	N/A
407	Mortar and Pestle - each Kg	Soil/ Sediment	N/A
408	3-gram Mercury prep	Soil/ Sediment	$30.00
409	10-gram Metals prep	Soil/ Sediment	$50.00
410	1L narrow mouth bottle with 300 mLs MeOH for 30 increments	Soil/ Sediment	$60.00
411	1L narrow mouth bottle with 500 mLs MeOH for 50 increments	Soil/ Sediment	$65.00
412	2 L narrow mouth bottle with 1000 mLs MeOH for 100 increments	Soil/ Sediment	$100.00
413	1 L narrow mouth bottle with 300 mLs MeOH for 30 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$120.00
414	1 L narrow mouth bottle with 500 mLs MeOH for 50 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$130.00
415	2 L narrow mouth bottle with 1000 mLs MeOH for 100 increments (MS/MSD) 2 bottles needed	Soil/ Sediment	$200.00
416	40ml vial with 10 mLs MeOH (1 vial per increment)	Soil/ Sediment	$10.00
417	40 mL vial with 10 mL MeOH (MS/MSD) (1 vial per increment)	Soil/ Sediment	$20.00

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
420	Premium, 24 hour	x 2.00
421	Premium, 2-3 day	x 1.75
422	Premium, 4-7 day	x 1.50
423	Premium, 8-13 day	x 1.00

Task Cost Table - All Except PFAS and ISM

Instructions:

All costs presented shall include digestion or extraction and disposal costs.
Costs are to be presented on a per sample basis for the method, matrix, preparation, and target compound list (TCL) specified.
When a method is not specified, the Contracted Laboratory shall indicate the method(s), as appropriate.
When the target compound list is specified as Contracted Laboratory TCL, the Contracted Laboratory shall include its target compound list as an attachment to the proposal.
Per- and Polyfluoroalkyl Substances (PFAS) TCLs are not provided. Costs for PFAS analytical tasks shall include up to the number of listed of PFAS compounds, not a specific set of PFAS compounds. This specific TCL will be determined by the Project Manager.
The reporting limit for 1,4-dioxane has not been provided. The specific reporting limit will be determined by the Project Manager.

Costs Applicable to Cleanup Procedures

Costs are applicable only when additional cleanup is required beyond that routinely conducted on samples.
The costs for cleanups routinely conducted for an analysis are included into the analytical costs.

Task #	Task Description	Matrix	Method	Cost Per Sample
1	Alumina Cleanup	Extract	3610	N/A
2	Alumina Cleanup	Extract	3611B	N/A
3	Florisil Cleanup	Extract	3620	$25.00
4	Silica Gel Cleanup	Extract	3630	N/A
5	Gel Permeation Cleanup	Extract	3640	N/A
6	Sulfur Cleanup	Extract	3660	$25.00
7	Sulfuric Acid Perm. Cleanup	Extract	3665	$25.00
8	Mercury Cleanup	Extract		N/A

Costs for Leaching Procedures to Evaluate the Mobility of Contaminants in Soil/Sediments

The following costs apply to leaching procedures required when the mobility of contaminants in Soil/Sediments are being evaluated.

Task #	Task Description	Matrix	Method	Cost Per Sample
10	SPLP Bottle Shake Leach	Soil/Sediment	1312	$35.00
11	SPLP ZHE Leach	Soil/Sediment	1312	$50.00
12	SPLP Bottle Shake Leach	Oil/Product	1312	$50.00
13	Neutral ASTM Leach	Soil/Sediment	D 3987-04	$35.00
14	Single ASTM Batch Leach	Soil/Sediment	D 5233-92	N/A
15	TCLP Bottle Shake Leach	Soil/Sediment	1311	$35.00
16	TCLP ZHE Leach	Soil/Sediment	1311	$50.00
17	TCLP Bottle Shake Leach	Oil/Product	1311	$50.00

Cost Per Sample for a Suite of Metals

Task #	Task Description	TCL	Matrix	Cost Per Sample
20	Michigan 10 Metals	Michigan 10 Metals	Aqueous	$81
21	Michigan 10 Metals	Michigan 10 Metals	Soil/Sediment	$81
22	Michigan 10 Metals	Michigan 10 Metals	Oil/Product	$81
23	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Aqueous	$144
24	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Soil/Sediment	$144.00
25	Former OPMEMO 2 Metals	Former OPMEMO 2 Metals	Oil/Product	$144

Cost Per Sample for Individual Metals by ICPAES or ICPMS

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample per metal
30	Individual Metals (Total or dissolved)	NA	Aqueous	200.8/6020	$7.00
31	Individual Metals (Total or dissolved)	NA	Aqueous	200.7/6010	N/A
32	Individual Metals	NA	Soil/Sediment	200.8/6020	$7.00
33	Individual Metals	NA	Soil/Sediment	200.7/6010	N/A
34	Individual Metals	NA	Oil/Product	200.8/6020	$7.00
35	Individual Metals	NA	Oil/Product	200.7/6010	N/A

Costs for Chromium VI and Mercury Analyses

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
40	Chromium VI - Color	Aqueous	Filter 0.45 microns	7196A; 218.6; 3500-CRB	$18.00
41	Chromium VI - Color	Soil/Sediment	3060A	7196A	$45.00
42	Mercury - Total or dissolved	Aqueous		7470A 245.1	$18.00 $18.00
43	Mercury - Total	Soil/Sediment		7471A	$18.00

44	Mercury - Total	Oil/Product			$18.00
45	Mercury - Low Level	Aqueous		1631E	$65.00
46	Mercury - Total	Wastewater		245.1	$18.00
47	Mercury - Low Level	Soil/Sediment	1631 Appendix B	1631E	N/A
48	Mercury - Total	Air		NIOSH 0600	$60.00

Costs to Establish Soil/Sediment Fractions

The following cost applies when fine and coarse soil/sediment fractions must be established for metal analyses.

Task #	Task Description	Matrix	Method	Cost Per Sample
50	Soil/Sediment Fraction Preparation	Soil/Sediment		$50.00

Costs for Gasoline/Diesel Range Organics

For the below analyses, EGLE Lab TCL for carbon ranges must be used.

Task #	Task Description	Matrix	Method	Cost Per Sample
60	Gasoline Range Organics (C6-C10)	Aqueous	8015B	$35.00
61	Gasoline Range Organics (C6-C10)	Soil/Sediment	8015B	$40.00
62	Gasoline Range Organics (C6-C10)	Oil/Product	8015B	$40.00
63	Gasoline Range Organics (C6-C10)	Aqueous	GC/MS	N/A
64	Gasoline Range Organics (C6-C10)	Soil/Sediment	GC/MS	N/A
65	Gasoline Range Organics (C6-C10)	Oil/Product	GC/MS	N/A
66	Diesel and Oil Range Diesel (C10-C20) and Oil Range Organics(C20-C34)	Aqueous	8015B	$50.00
67	Diesel (C10-C20) and Oil Range Organics(C20-C34)	Soil/Sediment	8015B	$50.00
68	Diesel (C10-C20) and Oil Range Organics(C20-C34)	Oil/Product	8015B	$50.00

Organics with Contracted Laboratory TCLs

Costs for the below tasks require analyses using the Contracted Laboratory's TCL.

The Contracted Laboratory must provide a TCL for the analyses immediately after signing a contract.

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample
70	Herbicides	Contracted Laboratory TCL	Aqueous	8151A	$150.00
71	Herbicides	Contracted Laboratory TCL	Soil/Sediment	8151A	$150.00
72	Herbicides	Contracted Laboratory TCL	Oil/Product	8151A	$150.00
73	Carbonyls	Contracted Laboratory TCL	Aqueous	8315A	N/A
74	Carbonyls	Contracted Laboratory TCL	Soil/Sediment	8315A	N/A
75	Carbonyls	Contracted Laboratory TCL	Oil/Product	8315A	N/A
76	N-Methylcarbamates	Contracted Laboratory TCL	Aqueous	8318	N/A
77	N-Methylcarbamates	Contracted Laboratory TCL	Soil/Sediment	8318	N/A
78	N-Methylcarbamates	Contracted Laboratory TCL	Oil/Product	8318	N/A
79	Organophosphorus Compounds	Contracted Laboratory TCL	Aqueous	8141A	N/A
80	Organophosphorus Compounds	Contracted Laboratory TCL	Soil/Sediment	8141A	N/A
81	Organophosphorus Compounds	Contracted Laboratory TCL	Oil/Product	8141A	N/A

Cost for Sampling Kit to Collect Soil/Sediments Using Methanol Preservation

The cost for a methanol sampling kit applies only when not used to return a sample to the Contracted Laboratory.

Task #	Task Description	Matrix	Method	Cost Per Sample
90	Methanol Sampling Kit	Soil/Sediment	5035A	$5.00

Organics with EGLE Laboratory TCLs

The costs below apply for analyses conducted for the target compound lists indicated, and included into this document.

Note: These TCLs can change. Contracted laboratory(s) will be notified of any changes.

Task #	Task Description	EGLE Lab TCL	Matrix	Method	Cost Per Sample
100	Chlorinated Pesticides	Pesticides	Aqueous	8081A	$90.00
101	Chlorinated Pesticides	Pesticides	Soil/Sediment	8081A	$90.00
102	Chlorinated Pesticides	Pesticides	Oil/Product	8081A	$90.00
103	Chlorinated Pesticides - NPDES	NPDES Scan 3	Aqueous	608/612	$90.00
104	Polychlorinated Biphenyls, Aroclors	PCBs	Aqueous	8082	$50.00

104	Polychlorinated Biphenyls, Aroclors	PCBs	Aqueous	8082	$50.00
105	Polychlorinated Biphenyls, Aroclors	PCBs	Soil/Sediment	8082	$50.00
106	Polychlorinated Biphenyls, Aroclors	PCBs	Oil/Product	8082	$50.00
107	Volatile Organic Compounds, w TICS	Volatiles	Aqueous	8260B	$145.00
108	Volatile Organic Compounds, w TICS	Volatiles	Soil/Sediment	8260B	$145.00
109	Volatile Organic Compounds, w TICS	Volatiles	Oil/Product	8260B	$145.00
110	Volatile Organic Compounds, w/o TICS	Volatiles	Aqueous	8260B	$70.00
111	Volatile Organic Compounds, w/o TICS	Volatiles	Soil/Sediment	8260B	$70.00
112	Volatile Organic Compounds, w/o TICS	Volatiles	Oil/Product	8260B	$70.00
113	VOC's	EGLE TCL	Air-tedlar	TO-15	$90.00
114	VOC's	EGLE TCL	Air-bottle vac	TO-15	$175.00
115	VOC's	EGLE TCL	Air-canister	TO-15	$200.00
116	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Aqueous	8260B	$45.00
117	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Soil/Sediment	8260B	$50.00
118	BTEX - MTBE - & TMBs	BTEX, MTBE, TMBs	Oil/Product	8260B	$50.00
119	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Aqueous	8270C	$205.00
120	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Soil/Sediment	8270C	$205.00
121	Semi-volatiles Organic Compounds, w TICS	Semivolatiles	Oil/Product	8270C	$205.00
122	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Aqueous	8270C	$130.00
123	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Soil/Sediment	8270C	$130.00
124	Semi-volatiles Organic Compounds, wo TICS	Semivolatiles	Oil/Product	8270C	$130.00
125	Semi-volatiles Organic Compounds - NPDES	Semivolatiles	Aqueous	625	$130.00
126	Polynuclear Aromatic Hydrocarbons	PNAs	Aqueous	8270C	$55.00
127	Polynuclear Aromatic Hydrocarbons	PNAs	Soil/Sediment	8270C	$55.00
128	Polynuclear Aromatic Hydrocarbons	PNAs	Oil/Product	8270C	$55.00
129	Phenols	Phenols	Aqueous	8270C	$75.00
130	Phenols	Phenols	Soil/Sediment	8270C	$75.00
131	Phenols	Phenols	Oil/Product	8270C	$75.00
132	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Aqueous	8260B-SIM 8011 or 504.1	$40.00
133	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Soil/Sediment	8260B-SIM 8011 or 504.1	N/A
134	Ethylene Dibromide and 1 - 2-Dibromo-3-chloropropane	EDB, DBCP	Oil/Product	8260B-SIM 8011 or 504.1	N/A
135	Dissolved Gases Methane/Ethane/ Ethene	EGLE TCL	Aqueous	RSK 175 or Isotech or 8015	$45.00
136	Methane/Ethane/ Ethene	EGLE TCL	Air	RSK 175 or Isotech or 8015	$65.00

Cost for Library Search or Fingerprint Analysis

The cost for a library search applies when analyses conducted using Gas Chromatography with Mass Selective Detection was used but tentative identified compounds were not initially requested, or when a search for specific compounds identified by the state must be conducted.

Task #	Task Description	Method	Cost Per Sample
140	Fingerprint	8270C	**$90**
141	Library Search	8260B 8270C	$75.00

Costs for Cyanide Analyses

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
150	Cyanide - Total	Aqueous		9012A; 9014; 335.4; ASTM D7284	$25.00
151	Cyanide - Total (Extractable)	Soil/Sediment	9013A	9012A 9014 335.4	$40.00
152	Cyanide - Available	Aqueous		OIA 1677; ASTM D6888	$60.00
153	Cyanide - Available (Extractable)	Soil/Sediment	9013A	OIA 1677; ASTM D6888	$75.00
154	Cyanide – Total Preservation Kit	Aqueous		Provided with Kit	$15.00
155	Cyanide Available Preservation Kit	Aqueous		Provided With Kit	$15.00
156	Cyanide - Amenable	Aqueous			$70

Costs to Determine Nitrogen Forms

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
160	Ammonia	Aqueous		350.1 4500 NH3	$18.00
161	Ammonia	Soil/Sediment		350.1 Mod	N/A
162	Kjeldahl Nitrogen	Aqueous		351.1 351.2	N/A
163	Kjeldahl Nitrogen	Soil/Sediment		351.1 Mod. 351.2 Mod.	N/A
164	Nitrate, Nitrite, Nitrate + Nitrite	Aqueous		353.2 4500 NO3 F	N/A
165	Nitrate, Nitrite, Nitrate + Nitrite	Aqueous		300.0 300.1	$35.00
166	Nitrate, Nitrite, Nitrate + Nitrite	Soil/Sediment	D 3987-04	353.2 4500 NO3 F	N/A
167	Nitrate, Nitrite, Nitrate + Nitrite	Soil/Sediment	D 3987-04	300.0 300.1	$40.00

Costs for Organic Carbon

Task #	Task Description	Matrix	Method	Cost Per Sample
170	Total Organic Carbon (TOC)	Aqueous	415.1 5310C	N/A $25.00
171	Dissolved Organic Carbon (DOC)	Aqueous	415.1 or 5310C	$25.00
172	Total Organic Carbon (TOC)	Soil/Sediment	Loyd Kahn, Walkley-Black, Combustion	N/A
173	Fraction Organic Carbon	Soil/Sediment	Walkley-Black	N/A
174	Fraction Organic Carbon	Soil/Sediment	Combustion	N/A
175	Fraction Organic Carbon	Soil/Sediment	D2974-87	N/A

Waste Characterizations

The RCRA lists are provided in the latest guidance for waste characterization.

Task #	Task Description	TCL	Matrix	Method	Cost Per Sample
180	Ignitability - Pensky-Martens	NA	Various	1010	$15.00
181	Ignitability - Setaflash	NA	Various	1020A	N/A
182	Corrosivity - Ph	NA	Various	9040B	$10.00
183	Corrosivity - Towards Steel	NA	Various	1110	N/A
184	Volatile Organic Compounds	RCRA List	Extracts	8260B	$70.00
185	Semi-volatile Organic Compounds	RCRA List	Extracts	8270C	$130.00
186	Pesticides - RCRA	RCRA List	Extracts	8081A	$90.00
187	Polychlorinated biphenyls, Aroclors	RCRA List	Extracts	8082	$50.00
188	Herbicides	RCRA List	Extracts	8151	$150.00
189	Metals	RCRA List (8)	Extracts	Various	$67.00
190	Paint Filter Liquids Test	NA	Various	9095	$10.00

Costs for Common Environmental Parameters and Non-common Sample Extractions for Soil/Sediments

Task #	Task Description	Matrix	Preparation	Method	Cost Per Sample
200	Alkalinity	Aqueous		2320 B 310.2	$13.50 $13.50
201	Biochemical Oxygen Demand	Aqueous		5210 B	$25.00
202	Carbonaceous BOD	Aqueous		5210 B	$30.00
203	Chemical Oxygen Demand	Aqueous		410.3 410.4 5220 D	$25.00
204	Conductivity	Aqueous		120.1 2510 B	$13.50
205	Filtration - Dissolved Metals	Aqueous		3030 B	$10.00
206	Hardness - Ca-Mg Calculated	Aqueous		2340 B	$20.00
207	pH, Aqueous	Aqueous		9040C 4500H+B	$10.00 $10.00
208	pH, Soil/Sediments	Soil/Sediment		9045D	$15.00
209	Phenol	Aqueous		420.2 420.4 9066	$30.00

210	Solids - Total Dissolved	Aqueous		2540 C	$13.50
211	Solids - Total Suspended	Aqueous		2540 D	$13.50
212	Silica - Dissolved or Total	Aqueous		200.7 3120 B 4500-Si D 4500-SiO2 C	N/A N/A
213	Sulfide - Total and Dissolved	Aqueous		4500S2- D	$18.00
214	Sulfide - Extractable	Soil/Sediment	9031	4500S2- D	N/A
215	Total Solids	Aqueous		2540 B	$13.50
216	Turbidity	Aqueous		180.1 2130B	$15.00 $15.00
217	TPH - Aqueous	Aqueous		1664	$50.00
218	TPH - Solids	Soil/Sediment		9071A	N/A
219	TPH-Other	Oil/Product			N/A
220	Chloride	Aqueous		4500 Cl^- E	N/A
221	Chloride	Aqueous		300.0 300.1	$13.50
222	Chloride	Soil/Sediment	D 3987-04	4500 Cl^- E	N/A
223	Chloride	Soil/Sediment	D 3987-04	300.0 300.1	$35.00
224	Sulfate	Aqueous		375.2	N/A
225	Sulfate	Aqueous		300,0 300.1 ASTM 516-90(02)	$13.50
226	Sulfate	Soil/Sediment	D 3987-04	375.2	N/A
227	Sulfate	Soil/Sediment	D 3987-04	300,0 300.1 ASTM 516-90(02)	$35.00
228	Fluoride	Aqueous		4500-F B D E	N/A
229	Fluoride	Aqueous		300.0 300.1	$13.50
230	Fluoride	Soil/Sediment	D 3987-04	4500-F B D E	N/A
231	Fluoride	Soil/Sediment	D 3987-04	300.0 300.1	$35.00
232	Perchlorate	Aqueous		314.0 or Equivalent	N/A
233	Perchlorate	Soil/Sediment	D 3987-04	314.0 or Equivalent	N/A
234	Ortho-phosphorus	Aqueous		365.1	$13.50
235	Phosphorus - Total	Aqueous		365.4 4500P F 365.1	$18.00
236	Phosphorus - Total	Soil/Sediment		365.4 Mod	$33.00

Other Services

Task #	Task Description	TCL	Matrix	Method	Cost per Sample
250	Asbestos		ALL	600/R-93/116	$9.00
251	Formaldehyde		Aqueous	8315	N/A
252	Formaldehyde		Soil/ Sediment	8315	N/A
253	Explosives-Energetics	Explosives-Energetics TCL	Aqueous	8330	N/A
254	Explosives-Energetics	Explosives-Energetics TCL	Soil/ Sediment	8330	N/A
255	Nitroglycerin and PETN		Aqueous	8332	N/A
256	Nitroglycerin and PETN		Soil/ Sediment	8332	N/A
257	Bromide		Aqueous	300.0 9056	$13.50
258	Bromide		Soil/ Sediment	300.0 9056	$30.00
259	Total Volatile Solids		Aqueous	2540	$27.00
260	Chlorinated Hydrocarbons	Cl Hydrocarbons TCL	Aqueous	8121	N/A
261	Chlorinated Hydrocarbons	Cl Hydrocarbons TCL	Soil/ Sediment	8121	N/A
262	Acrylamide		Aqueous	8316	N/A
263	Acrylamide		Soil/ Sediment	8316	N/A
264	Total Organic Halogens (TOX)		Oil	9076	N/A
265	Total Organic Halogens (TOX)		Aqueous	9020B	N/A
266	Extractable Organic Halogens		Soil/ Sediment	9023	N/A
267	Alcohols	Alcohol TCL	Aqueous	8015B	$65.00
268	Alcohols	Alcohol TCL	Soil/ Sediment	8015B	$65.00
269	Color		Aqueous	NCASI 71.01	N/A
270	Carbon Dioxide		Aqueous	SM 4500	N/A
271	Dioxins/Furans		Aqueous	1613/8290	N/A
272	Dioxins/Furans		Soil/ Sediment	1613/8290	N/A
273	2,3,7, 8-D/F Congeners only		Aqueous	1613 or 1613B	N/A

274	2,3,7, 8-D/F Congeners only		Soil/ Sediment	1613 or 1613B	N/A
275	Grain Size		Soil/ Sediment	ASTM D421/422	N/A
276	Iron, Ferrous		Aqueous	SM 3500	$25.00
277	Dehalococcoides		ALL	qPCR	N/A
278	Functional Genes		ALL	qPCR	N/A
279	DNA Sequencing		ALL		N/A
280	Method 24		Paints	EPA 24	N/A
281	Phenolics- chlorinated		Aqueous	1653	N/A
282	PCB Congeners (209 list)		Aqueous	1668	N/A
283	PCB Congeners (209 list)		Soil/ Sediment	1668	N/A
284	WHO PCB Coplanars		Aqueous	1668	N/A
285	WHO PCB Coplanars		Soil/ Sediment	1668	N/A
286	Reactive Cyanide		Aqueous	SW 846	$40.00
287	Reactive Cyanide		Soil/ Sediment	SW 846	$40.00
288	Reactive Cyanide		Oil/Product	SW 846	$40.00
289	Reactive Sulfide		Aqueous	SW 846	$40.00
290	Reactive Sulfide		Soil/ Sediment	SW 846	$40.00
291	Reactive Sulfide		Oil/Product	SW 846	$40.00
292	Surfactants (MBA's)		Aqueous	SW5540	N/A
293	VOC Exempt from method 24		Paints	EPA 8260	N/A
294	Volatile Fatty Acids		ALL		N/A
295	Glycol	Glycol TCL	Aqueous	8015	$55.00
296	Glycol	Glycol TCL	Aqueous	8015	$55.00
297	Pesticides Specialty List	Pesticide Specialty TCL	Aqueous	8081A	N/A
298	Pesticides Specialty List	Pesticide Specialty TCL	Soil/ Sediment	8081A	N/A
299	1,4-dioxane		Aqueous		N/A
300	1,4-dioxane		Soil/ Sediment		N/A
301	1,4-dioxane		Oil/Product		N/A
302	Chlordane	Chlordane	Aqueous	8081/8082	$50.00
303	Chlordane	Chlordane	Soil/ Sediment	8081/8082	$50.00
304	Ultra Pure Water		Liter		$35.00

Costs for Rush Turn Around Time

Task #	Task Description	Multiplier
310	Premium, 24 hour	x 2.00
311	Premium, 2-3 day	x 1.75
312	Premium, 4-7 day	x 1.50
313	Premium, 8-13 day	x 1.00

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Attachment to Cost Table

Please note the following changes to the cost table:

Under the header "**Costs Applicable to Cleanup Procedures**":

Tasks #3, 6, and 7, Fibertec, Inc. currently runs the updated methods of 3620C for Florisil Cleanup, 3660B for Sulfur Cleanup, and 3665A for Sulfuric Acid Perm. Cleanup.

Under the header "**Cost Per Sample for a Suite of Metals**":

Tasks #20, 21, and 22, Michigan 10 Metals, Fibertec, Inc. currently runs EPA methods 6020A, 7470A, and 7471B.

Tasks #23, 24, and 25, Former OPMEMO 2 Metals Fibertec, Inc. currently runs EPA methods 6020A, 7470A, and 7471B.

Under the header "**Cost Per Sample for Individual Metals by ICPAES or ICPMS,**" Tasks #30, 32, and 34, Fibertec, Inc. currently runs the updated method of 6020A for Metals by ICP/MS.

Under the header "**Costs for Chromium VI and Mercury Analysis**":

Task #40, Fibertec, Inc. currently runs the updated methods 7196A and 3500-CRB for Chromium VI – Color.

Task #43, Fibertec, Inc. currently runs the updated method 7471B for Mercury – Total in soil/sediment.

Task #44, Fibertec, Inc. currently runs the method 7471B Mercury – Total in oil/product.

Task #48, Fibertec, Inc. currently runs method NIOSH 6009 for Mercury in Air.

Under the header "**Costs to Establish Soil/Sediment Fractions,**" Task #50, Fibertec, Inc. currently runs the method MDEQ SOP 213 for Soil/Sediment Fraction Preparation.

Under the header "**Costs for Gasoline/Diesel Range Organics,**" Tasks #60, 61, 62, 66, 67, 68, Fibertec, Inc. currently runs the updated method 8015C for all analyses.

Under the header "**Organics with EGLE Laboratory TCLs**":

Tasks #100, 101, and 102, Fibertec, Inc. currently runs the updated method 8081B for Chlorinated Pesticides in all matrices. Fibertec does not analyze BP-6 (PBB), 2,4 – DDT, Endrin Ketone, and Mirex. Pricing does not include these compounds. Fibertec, Inc. analyzes and reports a-chlordane and g-chlordane as technical chlordane.

Task #103, Fibertec, Inc. currently runs the updated method 608.3 for Chlorinated Pesticides – NPDES Scan 3. Fibertec does not analyze BP-6 (PBB), hexachlorobenzene, hexabromobenzene, hexachlorobutadiene, hexachlorocyclopentadiene, Mirex, pentachlorobenzene, pentachloronitrobenzene, 1,2,3,4-Tetrachlorobenzene, and 1,2,4,5-Tetrachlorobenzene. Pricing does not include these compounds. Fibertec, Inc. analyzes and reports a-chlordane and g-chlordane as technical chlordane.

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Tasks #104, 105, and 106, Fibertec, Inc. currently runs the updated method 8082A for PCBs in all matrices.

Tasks #107, 108, 109, 110, 111, 112, 116, 117, and 118, Fibertec, Inc. currently runs the updated method 8260D for Volatile Organics in all matrices. Fibertec does not analyze for 2,2,4-Trimethylpentane, Hexane, and tertiary Amylmethylether. Pricing does not include these compounds.

Tasks #119-124, and #126-131, Fibertec, Inc. currently runs the updated methods 8270E for Semivolatiles, PNAs, and Phenols. Fibertec does not analyze for 2-chloroaniline, N-methylaniline, and N,N-dimethylaniline. Pricing does not include these compounds. Note that Bis (2-chloroisopropyl) ether's name has changed to 2,2'-oxybis(1-chloropropane).

Task #125, Fibertec, Inc. currently runs the updated method 625.1 for Semivolatile Compounds – NPDES. Fibertec does not analyze BP-6 (PBB), hexachlorobenzene, hexabromobenzene, hexachlorobutadiene, hexachlorocyclopentadiene, Mirex, pentachlorobenzene, pentachloronitrobenzene, 1,2,3,4-Tetrachlorobenzene, and 1,2,4,5-Tetrachlorobenzene. Pricing does not include these compounds. Fibertec, Inc. analyzes and reports a-chlordane and g-chlordane as technical chlordane.

Task #132, Fibertec, Inc. currently runs the updated method 8011 for EDB and DBCP in aqueous matrices.

Task #135, Fibertec, Inc. currently runs the method RSK 175 for Dissolved Gases in an aqueous matrix.

Task #136, Fibertec, Inc. currently runs method 8015C-M for Methane, Ethane, Ethene in air.

Under the header "**Cost for Library Search of Fingerprint Analysis,**" Task #140, Fibertec, Inc. currently runs updated method 8270E for Fingerprint Analysis.

Under the header "**Cost for Library Search of Fingerprint Analysis,**" Task #141, Fibertec, Inc currently runs updated methods 8260D and 8270E for Library Searches.

Under the header "**Costs for Cyanide Analysis**":

Task #150, Fibertec, Inc. currently runs method ASTM D7511-12 for Total Cyanide in water.

Task #151, Fibertec, Inc. currently preps soil/sediment samples via method 9013A-M for Total Cyanide (Extractable).

Tasks #152 and 153, Fibertec, Inc. currently runs method OIA-1677-09 for waters and soils/sediments for Available Cyanide.

Task #153, Fibertec, Inc. currently preps soils and sediments by OI Analytical validated Extraction Method for Cyanide – Available (Extractable).

Task #156, Fibertec, Inc. currently runs method ASTM D7511-12 for Cyanide, Amenable in aqueous matrix.

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Under the header "**Costs to Determine Nitrogen Forms**":

Task #160, Fibertec, Inc. currently runs updated method SM 4500 NH3-G-2011 to analyze Ammonia in water.

Task #165, Fibertec, Inc. currently runs methods 9056A/300.0 for analysis of Nitrite, Nitrate, Nitrate+Nitrite in aqueous matrix.

Task #167, Fibertec, Inc. currently runs method 9056A for analysis of Nitrate, Nitrite, Nitrate+Nitrite. For soils, Method 300 includes a method of preparation which is used instead of ASTM #D 3987-04.

Under the header "**Costs for Organic Carbon,**" Task #170 and #171, Fibertec, Inc. currently runs updated methods 5310B for Total Organic Carbon ad Dissolved Organic Carbon in wastewater and 9060A for in groundwater.

Under the header "**Waste Characterizations**":

Task #180, Fibertec, Inc. currently runs methods 1010A, ASTM D93-80 Procedure A for Ignitability – Pensky-Martens.

Task #182, Fibertec, Inc. currently runs updated methods SM 4500H+B, 9040C, and 9045D for Corrosivity – pH.

Tasks #184, 185, 186, 187, 188, 190, Fibertec, Inc. currently runs updated methods 8260D for Volatile Organic Compounds, 8270E for Semi-volatile Organic Compounds, 8081B for Pesticides – RCRA, 8082A for Polychlorinated biphenyls, Aroclors, 8151A for Herbicides, and 9095B for Paint Filter Liquids Test.

Task #189, Fibertec, Inc. currently runs updated methods 6020A, 7470A, and 7471B for RCRA List Metals.

Task #190, Fibertec, Inc. currently runs updated method 9095B for Paint Filter Liquids Test.

Under the header "**Costs for Common Environmental Parameters and Non-Common Sample Extractions for Soils/Sediments**":

Task #200, Fibertec, Inc. currently runs method 310.2 for Alkalinity in aqueous matrix.

Task #203, Fibertec, Inc. currently runs method HACH 8000 for COD in aqueous matrix.

Task #204, Fibertec, Inc. currently runs methods 9050A, 2510B-2011 for Conductivity in aqueous matrix.

Task #206, Fibertec, Inc. currently runs methods 6020A for Hardness in groundwater and 200.8 for Hardness in wastewater.

Task #209, Fibertec, Inc. currently runs methods 420.1 and 9065 for Phenols (Phenolics) in aqueous matrix.

Task #213, Fibertec, Inc. currently runs methods HACH 8131 for Sulfide – total and dissolved in aqueous matrix.

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Task #216, Fibertec, Inc. currently runs methods 180.1 and 2130B-2011 for Turbidity in aqueous matrix.

Task #217, Fibertec, Inc. currently runs method 1664B for TPH-Aqueous (Fats, Oils, and Greases).

Task #220, Fibertec, Inc. currently runs methods 300.0 and 9056A for Chloride in aqueous matrix.

Tasks #221, 225, and 229, Fibertec, Inc. currently runs method 300.0 for Chloride, Sulfate, and Fluoride in aqueous matrix.

Task #223, 227, and 231, Fibertec, Inc. currently does not use soil prep method D 3987-04 for analysis of Chloride, Sulfate or Fluoride in soil as Method 300.0 includes a method of preparation.

Task #223, 227, and 231 Fibertec, Inc. currently uses method 9056A for analysis of Chloride, Sulfate, and Fluoride in soil.

Tasks #235, and 236, Fibertec, Inc. currently uses methods SM 4500-P B(5), SM 4500-PE, and 365.3 for analysis of Phosphorus – Total in aqueous and soil/sediment matrices.

Under the header "**Other Services**":

Tasks #257 and 258, Fibertec, Inc currently uses methods 300.0 and 9056A to analyze Bromide in aqueous and soil/sediment matrices.

Task #259, Fibertec, Inc. currently uses methods 2540G-1997 to analyze Total Volatile Solids in aqueous matrix.

Task #267 and 268, Fibertec, Inc. currently uses method 8015C for Alcohols in aqueous and soil/sediment matrices.

Task #276, Fibertec, Inc. currently uses method HACH 8146 for analysis of Iron, Ferrous in aqueous matrix.

Task #286 - 291, Fibertec, Inc. currently uses method ASTM D7511-12 for analysis of Reactive Cyanide and method HACH 8131 for Reactive Sulfide in aqueous, soil/sediment, and oil matrices.

Tasks #295 and 296, Fibertec, Inc. currently uses method 8015C for analysis of Glycols in aqueous matrices.

Task #302, Fibertec, Inc. currently uses methods 8081B and 608.3 for analysis of Chlordane in aqueous matrix.

Task #303, Fibertec, Inc. currently uses method 8081B for analysis of Chlordane in soil/sediment matrix.

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Attachment to Cost Table for Per- and Polyfluoroalkyl Substances

Please note the following changes to the cost table:

Task #452, PFAS ASTM D7979 – 21 compound list for aqueous matrices. Fibertec, Inc. does not analyze for PFecHS, FHEA, FOEA, FDEA, FOUEA, FHpPA, or FHUEA.

Task #453, PFAS MPART 28 Compound List. Fibertec, Inc. does not analyze for HFPO-DA, 11Cl-PF3OUdS, 9Cl-PF3ONS, or ADONA.

Task #454, PFAS ASTM D7979 – 21 compound list for soil/sediment matrices. Fibertec, Inc. analyzes compounds via method ASTM D7968. Fibertec, Inc. does not analyze for PFecHS, FHEA, FOEA, FDEA, FOUEA, FHpPA, or FHUEA.

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R 12/16/13

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
State Facilities Administration
Design & Construction Division

Certification of a Michigan Based Business

(Information Required Prior to Contract Award for Application of State Preference/Reciprocity Provisions)

To qualify as a Michigan business:

Vendor must have, during the 12 months immediately preceding this bid deadline:
or
If the business is newly established, for the period the business has been in existence, it has:

(check all that apply):

- ☐ Filed a Michigan single business tax return showing a portion or all of the income tax base allocated or apportioned to the State of Michigan pursuant to the Michigan Single Business Tax Act, 1975 PA 228, MCL ~208.1 – 208.145; or
- ☑ Filed a Michigan income tax return showing income generated in or attributed to the State of Michigan; or
- ☑ Withheld Michigan income tax from compensation paid to the bidder's owners and remitted the tax to the Department of Treasury; or

I certify that I **have personal knowledge** of such filing or withholding, that it was more than a nominal filing for the purpose of gaining the status of a Michigan business, and that it indicates a significant business presence in the state, considering the size of the business and the nature of its activities.

I authorize the Michigan Department of Treasury to verify that the business has or has not met the criteria for a Michigan business indicated above and to disclose the verifying information to the procuring agency.

Bidder shall also indicate one of the following:

- ☑ Bidder qualifies as a Michigan business (provide zip code: 48842)
- ☐ Bidder does not qualify as a Michigan business (provide name of State: _____).
- ☐ Principal place of business is outside the State of Michigan, however service/commodity provided by a location within the State of Michigan (provide zip code: _____)

Bidder: Fibertec, Inc.

MATTHEW H FRISCH
Authorized Agent Name (print or type)

12/26/19
Authorized Agent Signature & Date

Fraudulent Certification as a Michigan business is prohibited by MCL 18.1268 § 268. A BUSINESS THAT PURPOSELY OR WILLFULLY SUBMITS A FALSE CERTIFICATION THAT IT IS A MICHIGAN BUSINESS OR FALSELY INDICATES THE STATE IN WHICH IT HAS ITS PRINCIPAL PLACE OF BUSINESS IS GUILTY OF A FELONY, PUNISHABLE BY A FINE OF NOT LESS THAN $25,000 and subject to debarment under MCL 18.264.

R 12/16/13

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
State Facilities Administration
Design & Construction Division

Responsibility Certification

The bidder certifies to the best of its knowledge and belief that, within the past three (3) years, the bidder, an officer of the bidder, or an owner of a 25% or greater interest in the bidder:

(a) Has not been convicted of a criminal offense incident to the application for or performance of a contract or subcontract with the State of Michigan or any of its agencies, authorities, boards, commissions, or departments.

(b) Has not had a felony conviction in any state (including the State of Michigan).

(c) Has not been convicted of a criminal offense which negatively reflects on the bidder's business integrity, including but not limited to, embezzlement, theft, forgery, bribery, falsification, or destruction of records, receiving stolen property, negligent misrepresentation, price-fixing, bid-rigging, or a violation of state or federal anti-trust statutes.

(d) Has not had a loss or suspension of a license or the right to do business or practice a profession, the loss or suspension of which indicates dishonesty, a lack of integrity, or a failure or refusal to perform in accordance with the ethical standards of the business or profession in question.

(e) Has not been terminated for cause by the Owner.

(f) Has not failed to pay any federal, state, or local taxes.

(g) Has not failed to comply with all requirements for foreign corporations.

(h) Has not been debarred from participation in the bid process pursuant to Section 264 of 1984 PA 431, as amended, MCL 18.1264, or debarred or suspended from consideration for award of contracts by any other State or any federal Agency.

(i) Has not been convicted of a criminal offense or other violation of other state or federal law, as determined by a court of competent jurisdiction or an administrative proceeding, which in the opinion of DTMB indicates that the bidder is unable to perform responsibly or which reflects a lack of integrity that could negatively impact or reflect upon the State of Michigan, including but not limited to, any of the following offenses under or violations of:

  i. The Natural Resources and Environmental Protection Act, 1994 PA 451, MCL 324.101 to 324.90106.
  ii. A persistent and knowing violation of the Michigan Consumer Protection Act, 1976 PA 331, MCL 445.901 to 445.922.
  iii. 1965 PA 166, MCL 408.551 to 408.558 (law relating to prevailing wages on state projects) and a finding that the bidder failed to pay the wages and/or fringe benefits due within the time period required.
  iv. Repeated or flagrant violations of 1978 PA 390 MCL 408.471 to 408.490 (law relating to payment of wages and fringe benefits).
  v. A willful or persistent violation of the Michigan Occupational Health and Safety Act, 1974, PA 154, MCL 408.10001 to 408.1094, including: a criminal conviction, repeated willful violations that are final orders, repeated violations that are final orders, and failure to abate notices that are final orders.
  vi. A violation of federal or state civil rights, equal rights, or non-discrimination laws, rules, or regulations.
  vii. Been found in contempt of court by a Federal Court of Appeals for failure to correct an unfair labor practice as prohibited by Section 8 of Chapter 372 of the National Labor Relations Act, 29 U. s. C. 158 (1980 PA 278, as amended, MCL 423.321 et seq).

(j) Is NOT an Iran linked business as defined in MCL 129.312.

I understand that a false statement, misrepresentation, or concealment of material facts on this certification may be grounds for rejection of this proposal or termination of the award and may be grounds for debarment.

Bidder: Fibertec, Inc.

Matthew H. Fesch
Authorized Agent Name (print or type)

12/26/19
Authorized Agent Signature & Date

☐ I am unable to certify to the above statements. My explanation is attached.

APPENDIX III

PROFESSIONAL CERTIFICATION FORMS

(See pages 909 - 910 of contract)

APPENDIX IV

CERTIFICATES OF INSURANCE

FIBEINC-01 CCEDILLO

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 2/28/2020

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
David Chapman Agency, Inc.
P.O. Box 30109
Lansing, MI 48909

CONTACT NAME: Cathy Cedillo
PHONE (A/C, No, Ext): (517) 319-8226 FAX (A/C, No): (517) 321-9443
E-MAIL ADDRESS: ccedillo@davidchapmanagency.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : COLONY INSURANCE COMPANY	39993
INSURER B : Auto Owners Insurance Company	18988
INSURER C : Accident Fund National Insurance Company	12305
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Fibertec Inc.dba Fibertec Environmental Services, Fibertec Industrial Hygiene Services Inc.
1914 Holloway Drive
Holt, MI 48842

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR	X	X	PACE4245704	7/30/2019	7/30/2020	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
	X Contractural						MED EXP (Any one person)	$ 5,000
	X X, C & U						PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY X PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO	X		5243030100	7/30/2019	7/30/2020	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY / SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY / X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	$ 5,000,000
	X EXCESS LIAB CLAIMS-MADE			EXC4245705	7/30/2019	7/30/2020	AGGREGATE	$ 5,000,000
	DED RETENTION $							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						X PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N (Mandatory in NH)	N / A	X	WCV6193212	7/30/2019	7/30/2020	E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
A	Errors & Omissions			PACE4245704	7/30/2019	7/30/2020	Per Claim &Aggregate	1,000,000
A	Pollution Liability			PACE4245704	7/30/2019	7/30/2020	Per Claim &Aggregate	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
The Excess Liability/Umbrella policy applies above the General Liability, Auto Liability, Employers Liability, Professional Liability and Pollution Liability.

2020 Laboratory Services ISID 00869

The State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees & agents is Additional Insureds for General Liability and Automobile Liability that includes hired and non-owned automobile coverage. Waiver of subrogation, except where waiver is prohibited by law.

CERTIFICATE HOLDER

State of Michgian - Dept of Tech, Management & Budget
Design & Construction Division
3111 W. St. Joseph St.
Lansing, MI 48917

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
David L. Chapman

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