	OFFICE OF WASTE MANAGEMENT AND RADIOLOGICAL PROTECTION POLICY AND PROCEDURE		DEPARTMENT OF ENVIRONMENTAL QUALITY
Original Effective Date: August 16, 1993 Revised Date: December 22, 2006 Reformatted Date: December 5, 2012	Subject: Laboratory Reporting Limits for Environmental Detection Monitoring Programs Division/Office and Program Names: RMD-Hazardous Waste and Solid Waste Programs Number: OWMRP-111/115-8		Category: <input checked="" type="checkbox"/> Internal/Administrative <input type="checkbox"/> External/Noninterpretive <input type="checkbox"/> External/Interpretive
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A Department of Environmental Quality (DEQ) Policy and Procedure cannot establish regulatory requirements for parties outside of the DEQ. This document provides direction to DEQ staff regarding the implementation of rules and laws administered by the DEQ. It is merely explanatory; does not affect the rights of, or procedures and practices available to, the public; and does not have the force and effect of law.

INTRODUCTION, PURPOSE, OR ISSUE:

Several programs administered by the Office of Waste Management and Radiological Protection (OWMRP) involve environmental detection monitoring components. Specifically, R 299.9611(1) of the administrative rules promulgated pursuant to Part 111, Hazardous Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), states “An owner or operator of a hazardous waste treatment, storage, or disposal facility shall develop an environmental monitoring program that is capable of detecting a release of hazardous waste or hazardous waste constituents from the facility.” R 299.4440(1) of the administrative rules for Part 115, Solid Waste Management, of Act 451 states “Detection monitoring is required at type II landfill units at all groundwater monitoring wells defined in R 299.4906.” Additionally, detection monitoring may be required as a component of mixing zones established under Part 31, Water Resources Protection, of Act 451. The purpose of this policy guidance document is to advise OWMRP staff reviewing proposed groundwater detection monitoring programs of laboratory reporting limits considered immediately acceptable to the OWMRP with no further review and to outline procedures for reviewing proposed reporting limits that are higher relative to those considered immediately acceptable in order to ensure that the administrative rule requirements for “capable” detection monitoring programs are met.

AUTHORITY:

R 299.9611(1) of the administrative rules promulgated pursuant to Part 111, R 299.4440(1) of the administrative rules for Part 115, Solid Waste Management, of Act 451, and Part 31, Water Resources Protection, of Act 451.

DEFINITIONS:

- Method Detection Limit (MDL): A MDL is the lowest concentration of an analyte that can be detected with 99 percent confidence that the analyte is actually present (i.e., based on a one-tailed Student’s t distribution).
- Reporting Limit (RL): A reporting limit RL is the lowest concentration of an analyte that can be reliably detected by the DEQ Environmental Laboratory in actual environmental samples

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in most instances. The RLs are derived from MDLs. The RL is equal to, or greater than, the MDL.

POLICY:

The attached table lists chemical analytical methods and RLs for water and soil. The RLs were developed by the DEQ Environmental Laboratory for use in environmental contamination detection, compliance, and response activities. Note that these RLs are subject to change depending on changes in technology, methods, or U.S. Environmental Protection Agency requirements. To reflect these changes, the OWMRP will update this policy guidance document as new RLs are issued, but no more than once a year. Facilities that are subject to DEQ detection limits should be advised of this policy and supplied with the most current version. These RLs are to be used by OWMRP staff reviewing proposed groundwater detection monitoring programs as laboratory RLs considered immediately acceptable to the OWMRP with no further review. Procedures for reviewing proposed RLs that are higher relative to those considered immediately acceptable are also outlined below.

PROCEDURES:

RLs is a term used by the DEQ Environmental Laboratory. The RLs are not MDLs. The RLs are derived from MDLs. The RL reflects the DEQ Environmental Laboratory's ability to achieve this level of detection on actual environmental samples in most instances. For ease of reporting, some RLs are rounded up to achieve consistency within an analyte group. The RL list provides general detection limits that serve as performance standards for evaluating a laboratory's capabilities. The OWMRP believes that these RLs for detection monitoring programs to be appropriate to meet statutory requirements for the following reasons:

- The OWMRP considers the RLs established by the DEQ Environmental Laboratory to be a reasonable performance standard for laboratories that do testing for environmental detection monitoring programs.
- Low detection limits are necessary to detect and react to a release to the environment at the earliest possible opportunity.
- The DEQ Environmental Laboratory will be used to analyze samples that are collected by OWMRP staff to evaluate the performance of environmental detection monitoring programs. Any resulting regulatory action would be based on the DEQ analytical data above the RLs.

The attached RLs are to be used by OWMRP staff for the development, evaluation, and implementation of any environmental detection monitoring programs (groundwater, surface water, soil, sediment, etc.) that are required pursuant to Part 31 (i.e., development of mixing zones), Part 111, and Part 115 of Act 451 and the administrative rules promulgated thereto. The OWMRP considers the routine achievement of these RLs by any laboratory utilized to

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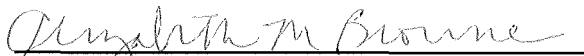
analyze data for environmental detection monitoring programs to be generally acceptable (exceptions are discussed in the following material). Proposed RLs may be lower than those listed.

Please note that some of the RLs listed in the attached table are lower than the detection limits used in other environmental programs which do not focus on timely detection of releases from regulated units. The OWMRP, in consultation with the DEQ Environmental Laboratory, is willing to consider and evaluate RLs other than those published by the DEQ depending on site specific conditions and sample/laboratory limitations. Exceptions may be made for specific analytes for which there is matrix interference. Also, exceptions may be made for analytes that occur naturally in groundwater at high levels. For example, if the background concentration of chloride in groundwater is 100 parts per million (ppm), then it may not be necessary to require that the facility meet a 1 ppm detection limit. A regulated entity proposing RLs higher than those listed herein should include a discussion as to how the proposed RLs will meet the statutory requirements for a detection monitoring program capable of detecting a release.

ATTACHMENT:

Table 1: Environmental Reporting Limits for DEQ- RD Laboratory Section

OFFICE CHIEF APPROVAL:



Elizabeth M. Browne, Chief
Office of Waste Management and Radiological Protection

12/3/12

Date

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

BTEX/MTBE/TMB VOLATILES	Water/Wastewater	MeOH Sediment/Soil	Oil	Water/Wastewater	Sediment/Soil	Oil
	Reporting Limits (ug/L)	Reporting Limits (ug/Kg)	Reporting Limits (mg/Kg)	Containers & Hold Times	Containers & Hold Times	Containers
Method	13	8260	8260			
Benzene	1.0	50	1.0	3 - 40mL glass vial	40mL tared glass	5mL of sample
Toluene	1.0	50	1.0	w/Teflon Septum	vial	in glass
Ethylbenzene	1.0	50	1.0	HCL pH<2	10grams sample	"
m & p-Xylene	2.0	100	2.0	14 days HT	in 10mL MeOH	"
o -Xylene	1.0	50	1.0	"	w/teflon seal	"
Methyl Tertiary Butyl Ether	1.0	50	1.0	"	14 days HT	"
1,2,3-Trimethylbenzene	1.0	50	1.0	"	"	"
1,2,4-Trimethylbenzene	1.0	50	1.0	"	"	"
1,3,5-Trimethylbenzene(Mesitylene)	1.0	50	1.0	"	"	"

CHLORINATED VOLATILE ORGANICS	Water	MeOH Sediment/Soil	Water	Sediment/Soil
	Reporting Limits (ug/L)	Reporting Limits (ug/Kg)	Containers & Hold Times	Containers & Hold Times
Method	8260	8260		
1,1,1,2-Tetrachloroethane	1.0	50	3 - 40mL glass vial	40mL tared glass
1,1,1-Trichloroethane	1.0	50	w/Teflon Septum	vial
1,1,2,2-Tetrachloroethane	1.0	50	HCL pH<2	10grams sample
1,1,2-Trichloroethane	1.0	50	14 days HT	in 10mL MeOH
1,1-Dichloroethane	1.0	50	"	w/teflon septum
1,1-Dichloroethylene	1.0	50	"	14 days HT
1,2-Dichloroethane	1.0	50	"	"
1,2-Dichloroethylene (cis)	1.0	50	"	"
1,2-Dichloroethylene (trans)	1.0	50	"	"
Chloroethane	5.0	250	"	"
Tetrachloroethylene	1.0	50	"	"
Trichloroethylene	1.0	50	"	"
Vinyl chloride	1.0	50(40)	"	"

Pesticides	Water/TCLP/SPLP	Sediment/Soil	Oil	Water	Sediment/Soil/TCLP/SPLP	Oil
	Reporting Limits (ug/L)	Reporting Limits (ug/Kg)	Reporting Limits (mg/Kg)	Containers & Hold Times	Containers & Hold Times	Containers
Method	8081	8081	8081			
Aldrin	0.01	20	0.2	2 - 1000mL glass	1 - 8 ounce glass	10mL in glass
a-BHC	0.02	10	0.2	amber bottles	14 days HT	"
b-BHC	0.02	20	0.2	7 days HT	"	"
d-BHC	0.02	20	0.2	"	"	"
g-BHC (lindane)	0.02	20	0.2	"	"	"
BP-6 (PBB)	0.05	250	0.7	"	"	"
a-Chlordane	0.01	20	0.2	"	"	"
g-Chlordane	0.01	20	0.2	"	"	"
4,4'-DDD	0.02	20	0.2	"	"	"
4,4'-DDE	0.02	20	0.2	"	"	"
4,4'-DDT	0.02	20	0.2	"	"	"
Dieldrin	0.02	20	0.2	"	"	"
Endosulfan I	0.02	20	0.2	"	"	"
Endosulfan II	0.03	20	0.4	"	"	"
Endosulfan Sulfate	0.05	20	0.4	"	"	"
Endrin	0.02	20	0.2	"	"	"
Endrin Aldehyde	0.02	20	0.4	"	"	"
Endrin Ketone	0.02	20	0.4	"	"	"
Heptachlor	0.01	20	0.4	"	"	"
Heptachlor epoxide	0.01	20	0.4	"	"	"
Hexabromobenzene	0.02	100	0.2	"	"	"
Methoxychlor	0.05	50	0.4	"	"	"
Mirex	0.02	50	0.2	"	"	"
Toxaphene	0.1	170	10	"	"	"

Specialty Pesticide Compounds	Water	Sediment/Soil	Water	Sediment/Soil
	Reporting Limits (ug/L)	Reporting Limits (ug/Kg)	Containers & Hold Times	Containers & Hold Times
Method	8081/8082	8081/8082		
2,4'-DDT	0.01	20	2 - 1000mL glass	1 - 8 ounce glass*
Tris(2,3-dibromopropyl)phosphate	10	330	amber bottles*	14 days HT
Technical Chlordane	0.05	30	7 days HT	

* can come from the same container as pesticides or PCBs

Low level PCB analysis available for water, wastewater or soil. Call Carol Smith for more information.

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RRD LABORATORY SECTION

NPDES Scan 3 (Pesticides, Chlorinated Hydrocarbon & PCBs) Method	Wastewater Reporting Limits (ug/L) 608/612	Wastewater Containers & Hold Times
Aldrin	0.01	2 - 1000mL glass
a-BHC	0.01	amber bottles
b-BHC	0.01	7 days HT
d-BHC	0.01	"
g-BHC (lindane)	0.01	"
BP-6 (PBB)	0.05	"
a-Chlordane	0.01	"
g-Chlordane	0.01	"
4,4'-DDD	0.05	"
4,4'-DDE	0.01	"
4,4'-DDT	0.01	"
Dieldrin	0.01	"
Endosulfan I	0.01	"
Endrin	0.01	"
Heptachlor	0.01	"
Heptachlor epoxide	0.01	"
Hexabromobenzene	0.01	"
Hexachlorobenzene	0.01	"
Hexachlorobutadiene	0.01	"
Hexachlorocyclopentadiene	0.01	"
Methoxychlor	0.05	"
Mirex	0.01	"
PCB 1016	0.1	"
PCB 1221	0.1	"
PCB 1232	0.1	"
PCB 1242	0.1	"
PCB 1248	0.1	"
PCB 1254	0.1	"
PCB 1260	0.1	"
PCB 1262	0.1	"
PCB 1268	0.1	"
Pentachlorobenzene	0.01	"
Pentachloronitrobenzene	0.01	"
Toxaphene	0.1	"
1,2,3,4-Tetrachlorobenzene	0.01	"
1,2,4,5-Tetrachlorobenzene	0.01	"

This scan is available for NPDES samples only.

PCBs	Water/Wastewater Reporting Limits (ug/L) 8082/608	Sediment/Soil Reporting Limits (ug/Kg) 8082	Oil Reporting Limits (mg/Kg) 8082	Water/Wastewater Containers & Hold Times	Sediment/Soil Containers & Hold Times	Oil Containers
PCB-1016	0.1	100	1.0	2 - 1000mL glass	1 - 8 ounce glass*	10mL in glass*
PCB-1221	0.1	100	1.0	amber bottles*	14 days HT	"
PCB-1232	0.1	100	1.0	7 days HT	"	"
PCB-1242	0.1	100	1.0	"	"	"
PCB-1248	0.1	100	1.0	"	"	"
PCB-1254	0.1	100	1.0	"	"	"
PCB-1260	0.1	100	1.0	"	"	"
PCB-1262	0.1	100	1.0	"	"	"
PCB-1268	0.1	100	1.0	"	"	"

* can come from the same container as pesticides or PCBs

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Polynuclear Aromatic Hydrocarbons (PNA or PAH)	Water/TCLP/SPLP	Sediment/Soil	Oil	Water	Sediment/Soil/TCLP	Oil
	Reporting Limits (ug/L)	Reporting Limits (ug/Kg)	Reporting Limits (mg/Kg)	Containers & Hold Times	Containers & Hold Times	Containers
Method	8270	8270	8270			
Acenaphthene	1.0	100	100	2 - 1000mL glass	1 - 8 ounce glass	10mL in glass
Acenaphthylene	1.0	100	100	amber bottles	14 days HT	"
Anthracene	1.0	100	100	7 days HT	"	"
Benzo(a)anthracene	1.0	100	100	"	"	"
Benzo(b)fluoranthene	1.0	200	200	"	"	"
Benzo(k)fluoranthene	1.0	200	200	"	"	"
Benzo(a)pyrene	1.0	200	200	"	"	"
Benzo(g,h,i)perylene	1.0	200	200	"	"	"
Chrysene	1.0	100	100	"	"	"
Dibenz(a,h)anthracene	2.0	200	200	"	"	"
Fluoranthene	1.0	100	100	"	"	"
Fluorene	1.0	100	100	"	"	"
Indeno(1,2,3-cd)pyrene	2.0	200	200	"	"	"
2-Methylnaphthalene	5.0	250	500	"	"	"
Naphthalene	1.0	100	100	"	"	"
Phenanthrene	1.0	100	100	"	"	"
Pyrene	1.0	100	100	"	"	"

PHENOLS (ACIDS)	Water	Water
	Reporting Limits (ug/L)	Containers & Hold Times
Method	8270	8270
2-Chlorophenol	10	2 - 1000mL glass
4-Chloro-3-methylphenol	5.0	amber bottles
3/4-Methylphenol (m/p-cresol)	20	7 days HT
2-Methylphenol (o-cresol)	10	"
2,4-Dichlorophenol	10	"
2,4-Dimethylphenol	5.0	"
2,4-Dinitrophenol	25	"
2-Methyl-4,6-dinitrophenol	20	"
2-Nitrophenol	5.0	"
4-Nitrophenol	25	"
Pentachlorophenol	20*	"
Phenol	5.0	"
2,4,5-Trichlorophenol	5.0	"
2,4,6-Trichlorophenol	4.0	"

*If results are required below the limit listed, see below, OPMemo 2 special request.

OPMemo 2 Special Request	Water Reporting Limits (ug/L)	Sediment/Soil Reporting Limits (ug/Kg)	Water Containers* & Hold Times	Sediment/Soil Containers** & Hold Times
Method	8011Modified	8011Modified		
1,2-Dibromo-3-chloropropane (DBCP)	0.2	10	2 - 40mL glass via	40mL tared glass
1,2-Dibromoethane (EDB)	0.05	20	w/Teflon Septum	vial Analysis
Hexachlorobenzene (HCB)	0.2	20	HCL pH<2	10grams sample not yet available
Hexachlorobutadiene (HCBd)	0.05	50	14 days HT	in 10mL MeOH
Hexachlorocyclopentadiene (HCCP)	5.0	50	"	w/Teflon Septum
Pentachlorophenol (PCP)	1.0	20	"	14 days HT

*This is in addition to vials submitted for volatile analysis.
**The sample provided for volatile analysis may be used.

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Semivolatile Organics Base/Neutral (BN)	Water	Sediment/Soil	Oil	Water	Sediment/Soil	Oil
	Reporting Limits (ug/L) 8270	Reporting Limits (ug/Kg) 8270	Reporting Limits (mg/Kg) 8270	Containers & Hold Times	Containers & Hold Times	Containers
Method						
1,2,4-Trichlorobenzene	2.0	200	200	2 - 1000mL glass	1 - 8 ounce glass	10mL in glass
2,4-Dinitrotoluene	5.0	250	500	amber bottles	14 days HT	"
2,6-Dinitrotoluene	5.0	250	500	7 days HT	"	"
2-Chloroaniline	5.0	NA	NA	"	"	"
2-Chloronaphthalene	2.0	200	200	"	"	"
2-Methylnaphthalene	5.0	250	500	"	"	"
2-Nitroaniline	20	500	2000	"	"	"
3-Nitroaniline	20	500	2000	"	"	"
4-Bromophenyl phenylether	2.0	200	200	"	"	"
4-Chloroaniline	10	NA	NA	"	"	"
4-Chlorophenyl phenylether	1.0	100	100	"	"	"
4-Nitroaniline	20	500	2000	"	"	"
Acenaphthene	1.0	100	100	"	"	"
Acenaphthylene	1.0	100	100	"	"	"
Aniline	4.0	NA	NA	"	"	"
Anthracene	1.0	100	100	"	"	"
Azobenzene	2.0	200	200	"	"	"
Benzo(a)anthracene	1.0	100	100	"	"	"
Benzo(a)pyrene	1.0	200	200	"	"	"
Benzo(b)fluoranthene	1.0	200	200	"	"	"
Benzo(g,h,i)perylene	1.0	200	200	"	"	"
Benzo(k)fluoranthene	1.0	200	200	"	"	"
Benzyl Alcohol	50	2,500	NA	"	"	"
Bis(2-chloroethoxy)methane	2.0	200	200	"	"	"
Bis(2-chloroethyl)ether	1.0	100	100	"	"	"
Bis(2-chloroisopropyl)ether	1.0	100	100	"	"	"
Bis(2-ethylhexyl)phthalate	5.0	250	500	"	"	"
Butyl benzyl phthalate	5.0	250	500	"	"	"
Carbazole	5.0	250	1000	"	"	"
Chrysene	1.0	100	100	"	"	"
Dibenz(a,h)anthracene	2.0	200	200	"	"	"
Dibenzofuran	4.0	250	500	"	"	"
Diethyl phthalate	5.0	250	500	"	"	"
Dimethyl phthalate	5.0	250	500	"	"	"
Di-n-butyl phthalate	5.0	250	500	"	"	"
Di-n-octyl phthalate	5.0	250	500	"	"	"
Fluoranthene	1.0	100	100	"	"	"
Fluorene	1.0	100	100	"	"	"
Hexachlorobenzene	1.0*	200	200	"	"	"
Hexachlorobutadiene	1.0*	100(50)	200	"	"	"
Hexachlorocyclopentadiene	10(5)	1000(330)	1000	"	"	"
Hexachloroethane	1.0	100	100	"	"	"
Indeno(1,2,3-cd)pyrene	2.0	200	200	"	"	"
Isophorone	1.0	100	100	"	"	"
Naphthalene	1.0	100	100	"	"	"
Nitrobenzene	2.0	200	200	"	"	"
N-Methylaniline	1.0	NA	NA	"	"	"
N,N-Dimethylaniline	5.0	NA	NA	"	"	"
N-Nitrosodimethylamine	5.0	250	500	"	"	"
N-Nitrosodi-n-propylamine	2.0	200	200	"	"	"
N-Nitrosodiphenylamine	2.0	200	200	"	"	"
Phenanthrene	1.0	100	100	"	"	"
Pyrene	1.0	100	100	"	"	"
Pyridene	20	NA	NA	"	"	"
Tetramethylurea	1.0	NA	NA	"	"	"

Note: Results in () are lower than the RL and will be reported with a "Z" and/or "T" qualifier code.
 *If results are required below the limit listed, see page 4, OPMemo 2 special request.

Semivolatile Organics Benzidines	Water Reporting Limits (ug/L) 8270	Water Containers & Hold Times
Method		
Benzidines	20	2 - 1000mL glass
3,3'-Dichlorobenzidine	50	amber bottles*

*Can come from the same amber bottles as BNS or BNAs.

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Semivolatile Organics Base/Neutral/Acids(BNAs)	Water	TCLP/SPLP	Sediment/Soil	Oil	Wastewater	Water/Wastewater	Sediment/Soil/TCLP/SPLP	Oil
	Reporting Limits (ug/L) 8270	Reporting Limits (ug/L) 8270	Reporting Limits (ug/Kg) 8270	Reporting Limits (mg/Kg) 8270	Reporting Limits (ug/L) 625	Containers & Hold Times	Containers & Hold Times	Containers
1,2,4-Trichlorobenzene	2.0	2.0	200	200	2.0	2 - 1000mL glass	1 - 8 ounce glass	10mL in glass
2,4,5-Trichlorophenol	5.0	5.0	330	1000	10	amber bottles	14 days HT	"
2,4,6-Trichlorophenol	4.0	4.0	330	1000	10	7 days HT	"	"
2,4-Dichlorophenol	10	10	330	1000	10	"	"	"
2,4-Dimethylphenol	5.0	5.0	330	1000	10	"	"	"
2,4-Dinitrophenol	25	25	1700(830)	5000	50	"	"	"
2,4-Dinitrotoluene	5.0	5.0	250	500	5.0	"	"	"
2,6-Dinitrotoluene	5.0	5.0	250	500	5.0	"	"	"
2-Chloroaniline	5.0	NA	NA	NA	NA	"	"	"
2-Chloronaphthalene	2.0	2.0	200	200	2.0	"	"	"
2-Chlorophenol	10	10	330	1000	10	"	"	"
2-Methyl-4,6-dinitrophenol	20	20	1700(830)	5000	50	"	"	"
2-Methylnaphthalene	5.0	5.0	250	500	5.0	"	"	"
2-Methylphenol	10	10	330	1000	10	"	"	"
2-Nitroaniline	20	20	500	2000	20	"	"	"
2-Nitrophenol	5.0	5.0	330	1000	10	"	"	"
3/4-Methylphenol	20	20	660	2000	20	"	"	"
3-Nitroaniline	20	20	500	2000	20	"	"	"
4-Bromophenyl phenylether	2.0	2.0	200	200	2.0	"	"	"
4-Chloro-3-methylphenol	5.0	5.0	200	1000	10	"	"	"
4-Chloroaniline	10	NA	NA	NA	NA	"	"	"
4-Chlorophenyl phenylether	1.0	1.0	100	100	1.0	"	"	"
4-Nitroaniline	20	20	500	2000	20	"	"	"
4-Nitrophenol	25	25	1700(830)	5000	50	"	"	"
Acenaphthene	1.0	1.0	100	100	1.0	"	"	"
Acenaphthylene	1.0	1.0	100	100	1.0	"	"	"
Aniline	4.0	4.0	NA	NA	NA	"	"	"
Anthracene	1.0	1.0	100	100	1.0	"	"	"
Azobenzene	2.0	2.0	200	200	2.0	"	"	"
Benzo(a)anthracene	1.0	1.0	100	100	1.0	"	"	"
Benzo(a)pyrene	1.0	1.0	200	200	2.0	"	"	"
Benzo(b)fluoranthene	1.0	1.0	200	200	2.0	"	"	"
Benzo(g,h,i)perylene	1.0	1.0	200	200	2.0	"	"	"
Benzo(k)fluoranthene	1.0	1.0	200	200	2.0	"	"	"
Benzyl Alcohol	50	50	2,500	NA	NA	"	"	"
Bis(2-chloroethoxy)methane	2.0	2.0	200	200	2.0	"	"	"
Bis(2-chloroethyl)ether	1.0	1.0	100	100	1.0	"	"	"
Bis(2-chloroisopropyl)ether	1.0	1.0	100	100	1.0	"	"	"
Bis(2-ethylhexyl)phthalate	5.0	5.0	250	500	5.0	"	"	"
Butyl benzyl phthalate	5.0	5.0	250	500	5.0	"	"	"
Carbazole	5.0	5.0	250	1000	10	"	"	"
Chrysene	1.0	1.0	100	100	1.0	"	"	"
Dibenz(a,h)anthracene	2.0	2.0	200	200	2.0	"	"	"
Dibenzofuran	4.0	4.0	250	500	5.0	"	"	"
Diethyl phthalate	5.0	5.0	250	500	5.0	"	"	"
Dimethyl phthalate	5.0	5.0	250	500	5.0	"	"	"
Di-n-butyl phthalate	5.0	5.0	250	500	5.0	"	"	"
Di-n-octyl phthalate	5.0	5.0	250	500	5.0	"	"	"
Fluoranthene	1.0	1.0	100	100	1.0	"	"	"
Fluorene	1.0	1.0	100	100	1.0	"	"	"
Hexachlorobenzene	1.0*	1.0*	200	200	2.0	"	"	"
Hexachlorobutadiene	1.0*	1.0*	100(50)	200	2.0	"	"	"
Hexachlorocyclopentadiene	10(5)	10(5)	1000(330)	1000	10	"	"	"
Hexachloroethane	1.0	1.0	100	100	1.0	"	"	"
Indeno(1,2,3-cd)pyrene	2.0	2.0	200	200	2.0	"	"	"
Isophorone	1.0	1.0	100	100	1.0	"	"	"
Naphthalene	1.0	1.0	100	100	1.0	"	"	"
Nitrobenzene	2.0	2.0	200	200	2.0	"	"	"
N-Methylaniline	1.0	NA	NA	NA	NA	"	"	"
N,N-Dimethylaniline	5.0	NA	NA	NA	NA	"	"	"
N-Nitrosodimethylamine	5.0	5.0	250	500	5.0	"	"	"
N-Nitrosodi-n-propylamine	2.0	2.0	200	200	2.0	"	"	"
N-Nitrosodiphenylamine	2.0	2.0	200	200	2.0	"	"	"
Pentachlorophenol	20*	20*	1700(800)*	5000	50	"	"	"
Phenanthrene	1.0	1.0	100	100	1.0	"	"	"
Phenol	5.0	5.0	330	1000	10	"	"	"
Pyrene	1.0	1.0	100	100	1.0	"	"	"
Pyridene	20	20	NA	NA	NA	"	"	"
Tetramethylurea	1.0	NA	NA	NA	NA	"	"	"

Note: Results in () are lower than the RL and will be reported with a "Z" and/or "T" qualifier code.

*If results are required below the limit listed, see page 4, OPMemo 2 special request.

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Metals	(W) Water Reporting Limits (ug/L)	(S) Sediment/Soil Reporting Limits (ug/Kg)	(T) TCLP/SPLP Reporting Limits (ug/L)	(O) Oil Reporting Limits (mg/Kg)	¹ Analytical Method Reference or SM / SW-846 EPA	MDEQ Technique	Water Containers & Hold Times	Sediment/Soil/ Solids/TCLP/ SPLP and Oil Containers & Hold Times
Aluminum	50	1,000	100	5	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Antimony	1	300	NA	NA	200.8/6020A	ICP-MS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Arsenic	1	500	15	0.5	200.8/6020A (T) 7060 (O) 6010C	ICP-MS (W/S) GFAA (T) ICP (O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Barium	5	1,000	10	1	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Beryllium	1	200	2	0.2	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Boron	20	NA	NA	NA	200.7/6010C	ICP (W)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Cadmium	0.2	200	20	2	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Calcium	1,000	50,000	NA	NA	SM 3111B/7140	FAAS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Chromium	1	2,000	50	2	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Chromium VI	5	NA	SPLP - 50	NA	SM 3500-Cr-B	DPC (W/T)	500 mL plastic 24 hours HT	NA
Cobalt	15	500	30	NA	200.8/6020A (W/S) 6010C (T)	ICP-MS (W/S) ICP (T)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Copper	1	1,000	20	2	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Iron	20	5,000	40	5	200.7/6010C	ICP (W/S/T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Lead	1	1,000	100	10	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Lithium	10	2,000	20	NA	200.7/6010C	ICP (W/S/T)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Magnesium	1,000	50,000	NA	NA	SM 3111B/7450	FAAS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Manganese	5	1,000	10	1	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Mercury	0.2	50	0.4	0.1	245.1/7470A,7471A	Cold Vapor (W/S/T/O)	500 mL plastic 28 days HT	250 mL glass jar 28 days HT
Mercury (Low Level)	.0005	.001	NA	NA	1631E/Appendix 1631	CVAFS (W/S)	FP bottles 90 days HT	250 mL glass jar 28 days HT
Molybdenum	25	1,000	50	5	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Nickel	2	1,000	50	5	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Potassium	100	5,000	NA	NA	SM 3111B/7610	FAAS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Selenium	1	200	10	NA	200.8/6020A (W/S) 7740 (T)	ICP-MS (W/S) GFAA (T)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Silver	0.2	100	5	NA	200.8/6020A 7761	ICP-MS (W/S) GFAA (T)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Sodium	1,000	50,000	NA	NA	SM 3111B/7770	FAAS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Strontium	5	1,000	NA	NA	200.8/6020A	ICP-MS (W/S)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Thallium	2	500	20	NA	200.8/6020A 7841	ICP-MS (W/S) GFAA (T)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Titanium	10	1,000	20	1	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Vanadium	2	1,000	20	1	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT
Zinc	10	1,000	20	5	200.8/6020A (W/S) 6010C (T/O)	ICP-MS (W/S) ICP (T/O)	500 mL plastic 6 mo. HT	250 mL glass jar 6 month HT

¹EPA Methods for Chemical Analysis of Water and Wastes or SM / SW-846 EPA Test Methods for Evaluating Solid Waste

SM = Standard Methods for the Examination of Water and Wastewater 18th, 19th or 20th Edition

GFAA = Graphite Furnace Atomic Absorption Spectroscopy

ICP-MS = Inductively Coupled Plasma - Mass Spectroscopy

ICP = Argon Plasma Emission Spectroscopy

FAAS = Flame Atomic Absorption Spectroscopy

DPC = Diphenylcarbazide, Colorimetric

CVAFS = Cold Vapor Atomic Fluorescence Spectrometry

FP = Fluoropolymer Bottles

NA = Not Available

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Non-Metals	Water Reporting Limits (ug/L)	Sediment/Soil Reporting Limits (mg/Kg)	Analytical Method Reference EPA / SW-846	MDEQ Technique	Sampling Containers Waters/Sediment-Soil	Hold Times Water
Absorbance	.007~	NA	² 204B	Spectrophotometric	250 mL plastic	48 hours
Alkalinity	20,000	NA	310.2	Auto Colorimetric Methyl Orange	500 mL plastic	14 days
Alkalinity, Bicarbonate	10,000	NA	² 2320B	Manual Titration	500 mL plastic	14 days
Alkalinity, Carbonate	10,000	NA	² 2320B	Manual Titration	500 mL plastic	14 days
Ammonia	10	NA	350.1	Auto Colorimetric Phenolate	500 mL plastic	28 days
BOD-5 Day Carb.	2000	NA	² 5210 B	5 Day-DO Probe	500 mL plastic	48 hours
BOD-5 Day Total	2000	NA	² 5210 B	5 Day-DO Probe	500 mL plastic	48 hours
Chloride	1000	NA	² 4500-Cl-E	Auto Colorimetric Ferricyanide	500 mL plastic	28 days
Chlorophyll	1.0	NA	² 10200H	Fluorometric	250 mL plastic	48 hours
COD	5000	500	410.4	Colorimetric	500 mL plastic/ 250 mL glass jar	28 days
Conductance, Specific	1.0*	NA	120.1	Conductivity Cell	500 mL plastic	28 days
Cyanide	5	0.1	335.4/9010	Man. Dist., Colorimetric PBA	500 mL plastic/ 250 mL glass jar	14 days
Cyanide, Available	2	0.1	31A-167// ASTM D6888-04	Amperometric	50 mL plastic tube/ 250 mL glass jar	14 days
Dissolved Oxygen	100	NA	² 4500-O	Manual Titration	250 mL glass	8 hours
Flash Point	>15°C	Yes/No	1010/1030	Closed Cup/Ignitability of Solid	500 mL plastic/ 250 mL glass jar	28 days
Hardness (Ca ₂ CO ₃)	5000	NA	² 3111 B	Calculated (Calcium & Magnesium)	500 mL plastic	6 months
Nitrate	10	NA	353.2	Calculated (Nitrate+Nitrite minus Nitrite)	2-500 mL plastic	48 hrs/28 days
Nitrate + Nitrite	10	NA	353.2	Auto Colorimetric Cd Reduction	500 mL plastic	28 days
Nitrite	10	NA	353.2	Auto Colorimetric	500 mL plastic	48 hours
Nitrogen, Kjeldahl	100	%TS Dependent	351.2	BD, Auto Colorimetric Salicylate	500 mL plastic/ 250 mL glass jar	28 days
Ortho-Phosphate	10	NA	365.1	Auto Colorimetric Ascorbic Acid Reduction	500 mL plastic	48 hours
pH	0.1	0.5	² 4500-H / 9040C/9045	Electrometric	500 mL plastic/ 250 mL glass jar	15 minutes
Phenols	10	0.4	420.4/9066	Manual Dist., Auto Colorimetric 4AAP	250 mL glass/ 250 mL glass jar	28 days
Phosphorous, Total	10	%TS Dependent	365.4	BD, Auto Colori. Ascorbic Acid Reduc.	500 mL plastic/ 250 mL glass jar	28 days
Residue (TDS)	20,000	NA	160.1	Total Filtr-TDS 180°C	500 mL plastic	7 days
Residue (TSS)	4000	NA	160.2	Non Filtr-Susp. Sol. 105°C	500 mL plastic	7 days
Sulfate	2000	NA	375.2	Auto Color. Methylthymol Blue	500 mL plastic	28 days
Sulfide	20	NA	² 4500-S ²⁻ -D	Colorimetric, Methylene blue	250 mL plastic	7 days
TOC	500	200	² 5310 B, C, or D / Walkley-Black	UV/Persulfate/Acid Dichromate	500 mL plastic/ 250 mL glass jar	28 days
Turbidity	1.0 #	NA	180.1	Nephelometric	500 mL plastic	48 hours
Oil & Grease	10,000	NA	1664A	Solid Phase Extraction	2-250 mL glass jar	28 days

¹EPA Methods for Chemical Analysis of Water and Wastes / SW-846 EPA Test Methods for Evaluating Solid Waste

²Standard Methods for the Examination of Water and Wastewater 18th, 19th or 20th Edition

* = umhos/cm

= NTU

~ = absorbance units

NA = Not Available

Calculate = Value is calculated from existing data

DO Probe = Dissolved Oxygen (YSI) Probe

Cd Reduc. = Cadmium Reduction

BD = Block Digester

Man. Dist.= Manual Distillation

Color. = Colorimetric

4AAP = 4 Amino Antipyrine

BOD = Biochemical Oxygen Demand

COD = Chemical Oxygen Demand

TOC = Total Organic Carbon

TDS = Total Dissolved Solids

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

VOLATILE ORGANICS	Air Reporting Limits (ppbv)	Air Reporting Limits (ug/M3)	Air Containers
Method TO-15			
Dichlorodifluoromethane	0.3	1.5	6L Canister
Chloromethane	0.3	0.6	"
1,2-Dichloro-1,1,2,2-tetrafluoroethane	0.3	2.1	"
1,3-Butadiene	0.3	0.7	"
Vinyl Chloride	0.3	0.8	"
Bromomethane	0.3	1.1	"
Chloroethane	0.3	0.8	"
Acetonitrile	1.0	1.7	"
Trichlorofluoromethane	0.3	1.7	"
Acrylonitrile	0.5	1.1	"
1,1-Dichloroethylene	0.3	1.2	"
Methylene Chloride	0.3	1.0	"
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.3	2.3	"
Trans-1,2-Dichloroethylene	0.3	1.2	"
1,1-Dichloroethane	0.3	1.2	"
Methyl Tert-Butyl Ether	0.5	1.8	"
Methyl Ethyl Ketone	5.0	14.5	"
2-Chloro-1,3-Butadiene	0.3	1.1	"
Cis-1,2-Dichloroethylene	0.3	1.2	"
Hexane	1.0	3.5	"
Chloroform	0.3	1.4	"
1,2-Dichloroethane	0.3	1.2	"
1,1,1-Trichloroethane	0.3	1.6	"
Benzene	0.3	0.9	"
Carbontetrachloride	0.3	1.9	"
1,2-Dichloropropane	0.3	1.4	"
Bromodichloromethane	0.3	2.0	"
Trichloroethylene	0.3	1.6	"
2,2,4-Trimethylpentane	0.3	1.4	"
Cis-1,3-Dichloropropylene	0.3	1.3	"
Methyl Isobutyl Ketone	1.0	4.0	"
Trans-1,3-Dichloropropylene	0.3	1.3	"
1,1,2-Trichloroethane	0.3	1.6	"
Toluene	0.3	1.1	"
Dibromochloromethane	0.3	2.5	"
1,2-Dibromoethane	0.3	2.3	"
Tetrachloroethylene	0.3	2.0	"
Chlorobenzene	0.3	1.4	"
Ethylbenzene	0.3	1.3	"
m&p-Xylene	0.3	1.3	"
Bromoform	0.3	3.0	"
Styrene	0.3	1.3	"
1,1,2,2-Tetrachloroethane	0.3	2.0	"
o-Xylene	0.3	1.3	"
1,3,5-Trimethylbenzene	0.3	1.4	"
1,2,4-Trimethylbenzene	0.3	1.4	"
Benzyl Chloride	0.3	1.5	"
1,3-Dichlorobenzene	0.3	1.8	"
1,4-Dichlorobenzene	0.3	1.8	"
1,2-Dichlorobenzene	0.3	1.8	"
1,2,4-Trichlorobenzene	0.3	2.2	"
Hexachloro-1,3-Butadiene	0.3	3.1	"

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

Aldehydes Method TO-11	Air Reporting Limits (ug)	Containers Hold Time
Formaldehyde	0.30	DNPH Cartridges
Acetaldehyde	0.30	14 Days for Extraction
Acetone	0.30	"
Propionaldehyde	0.30	"
Crotonaldehyde	0.30	"
n-Butyraldehyde	0.30	"
Benzaldehyde	0.40	"
Isovaleraldehyde	0.40	"
Valeraldehyde	0.40	"
o-Tolualdehyde	0.40	"
m,p-Tolualdehyde	0.40	"
Hexanaldehyde	0.40	"
2,5-Dimethylbenzaldehyde	0.40	"

	Water Reporting Limits (ug/L)	Sediment/Soil Reporting Limits (ug/Kg)	Water Containers & Hold Times	Sediment/Soil* Containers & Hold Times
Method 8260SIM				
1,4-Dioxane	1.0	250	2 - 40mL glass vial w/Teflon Septum HCL pH<2 14 days HT	40mL tared glass vial 10grams sample in 10mL MeOH w/teflon septum 14 days HT
* Analysis may be taken from same MeOH container as volatiles or GRO analysis.				

	Water Reporting Limits (ug/L)	Sediment/Soil Reporting Limits (ug/Kg)	Water Containers & Hold Times	Sediment/Soil* Containers & Hold Times
Modified Method 8260				
Gasoline Range Organics (GRO)	100	5000	2 - 40mL glass vial w/Teflon Septum HCL pH<2 14 days HT	40mL tared glass vial 10grams sample in 10mL MeOH w/teflon septum 14 days HT
* Analysis may be taken from same MeOH container as volatiles or 1,4-dioxane analysis.				

	Water Reporting Limits (ug/L)	Sediment/Soil Reporting Limits (ug/Kg)	Oil Reporting Limits (mg/Kg)	Water Containers & Hold Times	Sediment/Soil Containers & Hold Times	Oil Containers & Hold Times
Method 8015						
DRO (Diesel Range Organics)	100	5000	1300	2 - 1000mL glass amber bottles	1 - 8 ounce glass	10mL in glass
ORO (Oil Range Organics)	500	20000	5000	7 days HT	14 days HT	

Table 1: ENVIRONMENTAL REPORTING LIMITS (RL) FOR DEQ-RD LABORATORY SECTION

VOLATILE ORGANICS Method	Water/TCLP/SPLF	MeOH Sediment/Soil	Oil	Wastewater	Water/Wastewater	Sediment/Soil	Oil	TCLP/SPLP
	Reporting	Reporting	Reporting	Reporting	Containers	Containers	Containers	Containers
	Limits (ug/L) 8260	Limits (ug/Kg) 8260	Limits (mg/Kg) 8260	Limits (ug/L) 624.0	& Hold Times	& Hold Times		& Hold Times
1,1,1,2-Tetrachloroethane	1.0	50	1.0	1.0	3 - 40mL glass vial	40mL tared	5mL of	1 - 8 ounce glass
1,1,1-Trichloroethane	1.0	50	1.0	1.0	w/Teflon Septum	glass vial	sample in	14 days HT
1,1,2,2-Tetrachloroethane	1.0	50	1.0	1.0	HCL pH<2	10grams sample	glass	
1,1,2-Trichloroethane	1.0	50	1.0	1.0	14 days HT	in 10mL MeOH	"	OR
1,1-Dichloroethane	1.0	50	1.0	1.0	"	w/teflon septum	"	"
1,1-Dichloroethylene	1.0	50	1.0	1.0	"	14 days HT	"	for OPMEMO 2
1,2,3-Trichlorobenzene	5.0	250	5.0	5.0	"	"	"	Attachment 2
1,2,3-Trichloropropane	1.0	50	1.0	1.0	"	"	"	only 2-25g
1,2,3-Trimethylbenzene	1.0	50	1.0	NA	"	"	"	Encores 48 hours
1,2,4-Trichlorobenzene	5.0	250	5.0	5.0	"	"	"	refrigerated then
1,2,4-Trimethylbenzene	1.0	50	1.0	1.0	"	"	"	up to 12 days
1,2-Dibromo-3-chloropropane	5.0*	250*	5.0	5.0	"	"	"	frozen HT
1,2-Dibromoethane (EDB)	1.0*	50(20)	1.0	1.0	"	"	"	"
1,2-Dichlorobenzene	1.0	50	1.0	1.0	"	"	"	"
1,2-Dichloroethane	1.0	50	1.0	1.0	"	"	"	"
1,2-Dichloroethylene (cis)	1.0	50	1.0	1.0	"	"	"	"
1,2-Dichloroethylene (trans)	1.0	50	1.0	1.0	"	"	"	"
1,2-Dichloropropane	1.0	50	1.0	1.0	"	"	"	"
1,3,5-Trimethylbenzene(Mesitylene)	1.0	50	1.0	1.0	"	"	"	"
1,3-Dichlorobenzene	1.0	50	1.0	1.0	"	"	"	"
1,3-Dichloropropene (cis)	1.0	50	1.0	1.0	"	"	"	"
1,3-Dichloropropene (trans)	1.0	50	1.0	1.0	"	"	"	"
1,4-Dichloro-2-butene(trans)	5.0(1.0)	250(50)	5.0	5.0	"	"	"	"
1,4-Dichlorobenzene	1.0	50	1.0	1.0	"	"	"	"
2-B utanone (MEK)	5.0	250	5.0	5.0	"	"	"	"
2-Hexanone	5.0	250	5.0	5.0	"	"	"	"
2-Methylnaphthalene	5.0	250	5.0	5.0	"	"	"	"
Acetone (2-Propanone)	20	1,000	20	20	"	"	"	"
4-Methyl-2-Pentanone (MIBK)	5.0	250	5.0	5.0	"	"	"	"
Acrylonitrile	5.0(2.0)	250(100)	5.0	5.0	"	"	"	"
Benzene	1.0	50	1.0	1.0	"	"	"	"
Bromobenzene	1.0	50	1.0	1.0	"	"	"	"
Bromochloromethane	1.0	50	1.0	1.0	"	"	"	"
Bromodichloromethane	1.0	50	1.0	1.0	"	"	"	"
Bromoform	1.0	50	1.0	1.0	"	"	"	"
Bromomethane	5.0	200	5.0	5.0	"	"	"	"
Carbon disulfide	1.0	50	1.0	1.0	"	"	"	"
Carbon tetrachloride	1.0	50	1.0	1.0	"	"	"	"
Chlorobenzene	1.0	50	1.0	1.0	"	"	"	"
Chloroethane	5.0	250	5.0	5.0	"	"	"	"
Chloroform	1.0	50	1.0	1.0	"	"	"	"
Chloromethane	5.0	250	5.0	5.0	"	"	"	"
Cyclohexane	5.0	250	5.0	NA	"	"	"	"
Dibromochloromethane	1.0	50	1.0	1.0	"	"	"	"
Dibromomethane	1.0	50	1.0	1.0	"	"	"	"
Dichlorodifluoromethane	5.0	250	5.0	5.0	"	"	"	"
Diethyl ether	5.0	200	5.0	5.0	"	"	"	"
Diisopropyl Ether	5.0	250	5.0	NA	"	"	"	"
Ethylbenzene	1.0	50	1.0	1.0	"	"	"	"
Ethyltertiarybutylether	5.0	250	5.0	NA	"	"	"	"
Hexachloroethane	5.0	250	5.0	5.0	"	"	"	"
Isopropylbenzene	1.0	50	1.0	1.0	"	"	"	"
m&p-Xylene	2.0	100	2.0	2.0	"	"	"	"
Methyl Iodide (Iodomethane)	1.0	50	1.0	1.0	"	"	"	"
Methyl Tertiary Butyl Ether (MTBE)	1.0	50	1.0	1.0	"	"	"	"
Methylene chloride	5.0	100	5.0	5.0	"	"	"	"
Naphthalene	5.0	250	5.0	5.0	"	"	"	"
n-Butylbenzene	1.0	50	1.0	1.0	"	"	"	"
n-Propylbenzene	1.0	50	1.0	1.0	"	"	"	"
o-Xylene	1.0	50	1.0	1.0	"	"	"	"
p-Isopropyl Toluene (p-Cymene)	1.0	50	1.0	1.0	"	"	"	"
sec-Butylbenzene	1.0	50	1.0	1.0	"	"	"	"
Styrene	1.0	50	1.0	1.0	"	"	"	"
tertiaryAmylmethylether	5.0	250	5.0	NA	"	"	"	"
Tertiary Butyl Alcohol	50	2,500	50	NA	"	"	"	"
tertiary Butylbenzene	1.0	50	1.0	1.0	"	"	"	"
Tetrachloroethylene	1.0	50	1.0	1.0	"	"	"	"
Tetrahydrofuran	5.0	250	5.0	5.0	"	"	"	"
Toluene	1.0	50	1.0	1.0	"	"	"	"
Trichloroethylene	1.0	50	1.0	1.0	"	"	"	"
Trichlorofluoromethane	1.0	50	1.0	1.0	"	"	"	"
Vinyl chloride	1.0	50(40)	1.0	1.0	"	"	"	"

Note: Results in () are lower than the RL and will be reported with a "Z" and/or "T" qualifier code.

*If results are required below the limit listed, see page 4, OPMemo 2 special request.