APPENDIX I

CALCIUM FLUORIDE BASIN INFORMATION

2006 Calcium Fluoride Basin (looking southeast)

DuPont Montague Facility
Montague Michigan

CHEMICAL AND PHYSICAL CHARACTERIZATION OF CALCIUM FLUORIDE CONTAINING SLUDGE

Prepared for

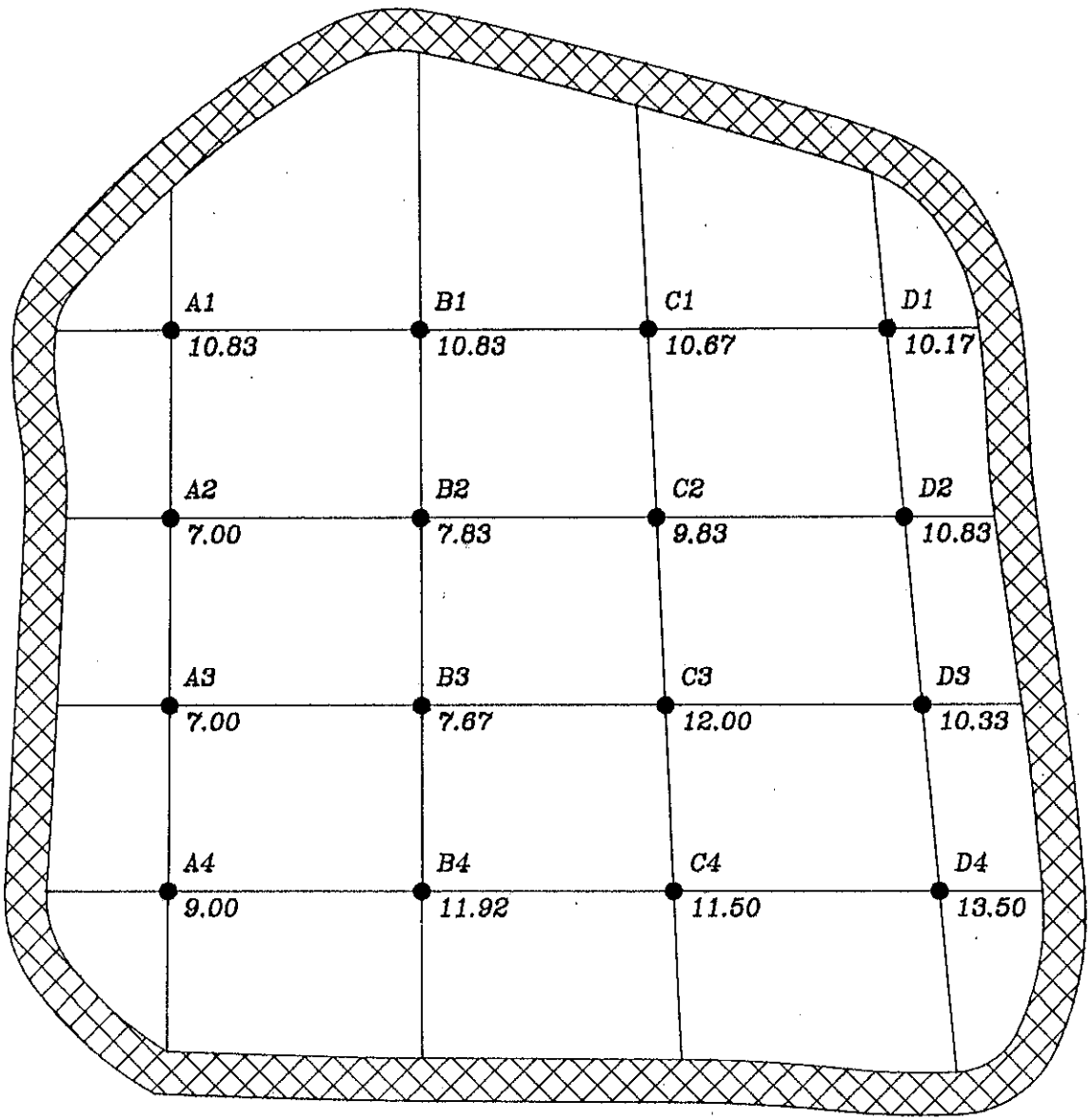
DuPont De Nemours & Company
Montague, Michigan

Prepared by

WW ENGINEERING & SCIENCE
5555 GLENWOOD HILLS PARKWAY
GRAND RAPIDS, MICHIGAN 49588-0874

APRIL 1991
PROJECT 21929

WW Engineering & Science



N

LEGEND

LABEL
DEPTH — SOIL BORING LOCATION

— BERM LOCATION

0 50 100 200
SCALE IN FEET

KBV

FIGURE 1

SOIL BORING LOCATION MAP

DuPont
Montague, Michigan

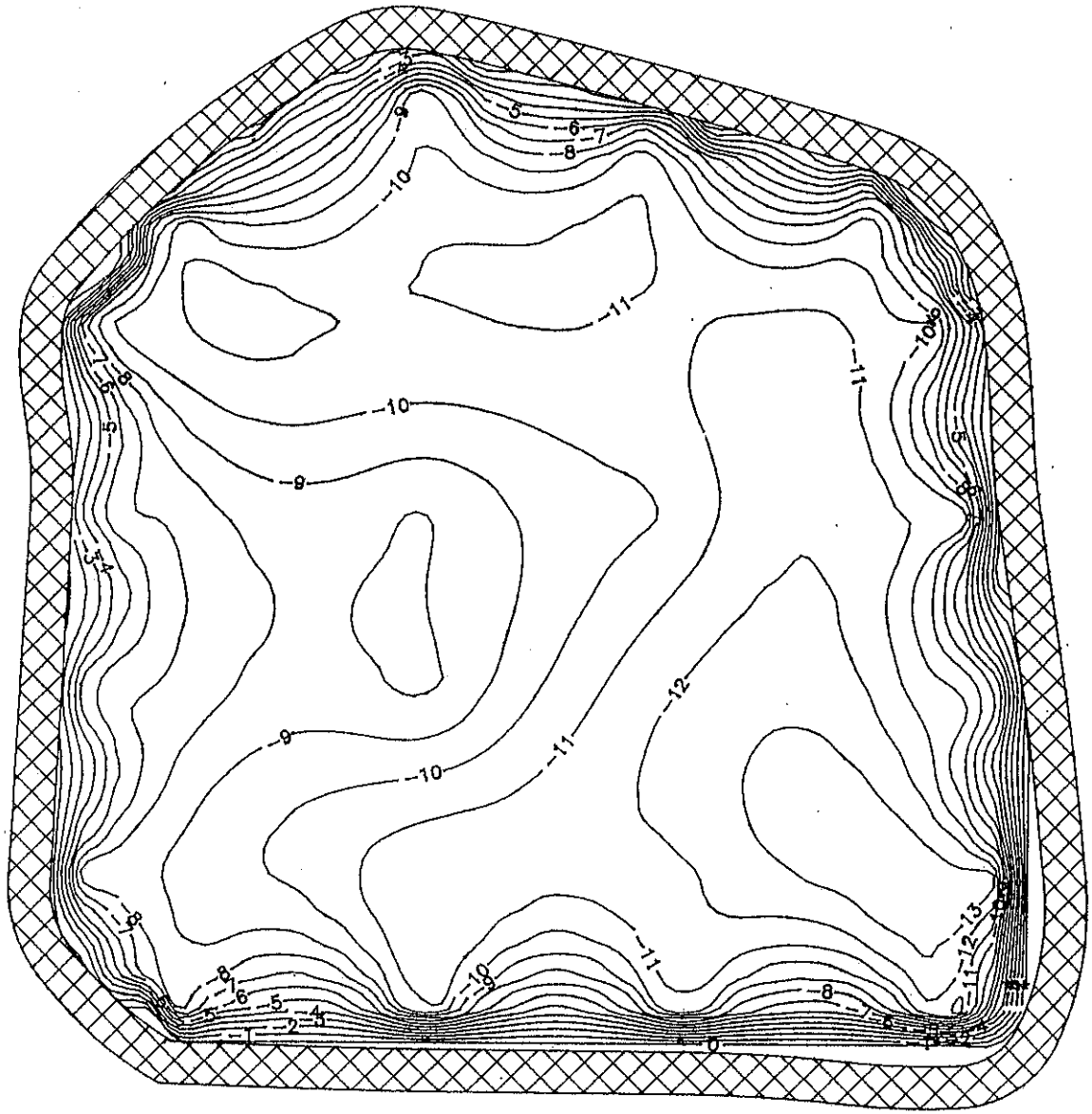


FIGURE 4

SLUDGE IMPOUNDMENT BOTTOM TOPOGRAPHY

DuPont
Montague, Michigan

Appendix I
Table 1
Calcium Fluoride Basin Material vs Industrial Drinking Water Protection

				Sample ID	A-1	A-2	A-2	A-3	A-4	B-1	B-2	B-3	B-3	B-4	C-1	C-2	C-3	C-4	C-4	C-4
				Date																
				Top (ft)	1	1	7	5	9	5	4	1	7	1	9	5	1	1	5	11
		Total (T)/	Screening	Bottom (ft)																
Analyte	**units**	**Diss. (D)**	**Criteria**	**Duplicate #**																
ANTIMONY	mg/kg	T	4.3		181	27	ND	ND	35	ND	ND	ND	ND	256	ND	ND	121	177	ND	ND
ARSENIC	mg/kg	T	4.6		922	2020	20	17	68	28	13	5.8	ND	1330	ND	ND	136	497	ND	ND
BARIUM	mg/kg	T	1300		NA	NA	NA	NA	NA	6	NA	NA	NA	NA	36	NA	NA	NA	NA	NA
CADMIUM	mg/kg	T	6		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.7	NA	NA	NA	NA	NA
CALCIUM			not avail		274000	359000	450000	434000	447000	443000	354000	457000	411000	350000	442000	404000	337000	313000	363000	452000
CHROMIUM	mg/kg	T	1,000,000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.8	8	NA	NA	NA	NA
COPPER	mg/kg	T	5800		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.6	NA	NA	NA	NA	NA
CYANIDE	mg/kg	T	4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	NA	NA	NA	NA	NA
FLUORINE	mg/kg	T	40		37800	21300	312	116	372	23	49	814	510	50400	64	NA	NA	NA	NA	NA
FLUORIDE	mg/kg	T	40		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	259	5200	16100	237	193
LEAD	mg/kg	T	700													NA	NA	NA	NA	NA
MAGNESIUM			22000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1100	NA	NA	NA	NA	NA
MERCURY	ug/kg	T	1700		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
SELENIUM	mg/kg	T	4		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
SILICON			not avail		21300	5250	10600	10200	10400	9120	10400	7190	8650	36200	10600	8920	7750	16100	9560	10300
SILVER	mg/kg	T	13		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NA	NA	NA	NA	NA
SODIUM			7000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	809	NA	NA	NA	NA	NA
ZINC	mg/kg	T	5000		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.86	NA	NA	NA	NA	NA

Criteria = MDEQ 21B Soil Indust DW Protection #21B 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 1
Calcium Fluoride Basin Material vs Industrial Drinking Water Protection

				Sample ID	D-1	D-1	D-1	D-2	D-3	D-4	DETECT
				Date							LIMIT
				Top (ft)	1	5	10	1	10	5	
		Total (T)/	Screening	Bottom (ft)							
Analyte	units	Diss. (D)	Criteria	Duplicate #							
ANTIMONY	mg/kg	T	4.3		ND	ND	ND	57	ND	9.7	4
ARSENIC	mg/kg	T	4.6		ND	ND	ND	37	ND	11	4
BARIUM	mg/kg	T	1300		NA	NA	NA	NA	NA	2	0.4
CADMIUM	mg/kg	T	6		NA	NA	NA	NA	NA	0.85	0.4
CALCIUM			not avail		397000	379000	285000	355000	377000	426000	10
CHROMIUM	mg/kg	T	1,000,000		NA	NA	NA	NA	NA	13	1.6
COPPER	mg/kg	T	5800		NA	NA	NA	NA	NA	4.9	0.6
CYANIDE	mg/kg	T	4		NA	NA	NA	NA	NA	4	0.5
FLUORINE	mg/kg	T	40		NA	NA	NA	NA	NA	NA	
FLUORIDE	mg/kg	T	40		240	131	20	14000	162	100	
LEAD	mg/kg	T	700		NA	NA	NA	NA	NA	ND	2
MAGNESIUM			22000		NA	NA	NA	NA	NA	1380	10
MERCURY	ug/kg	T	1700		NA	NA	NA	NA	NA	ND	100
SELENIUM	mg/kg	T	4		NA	NA	NA	NA	NA	ND	4
SILICON			not avail		8850	12400	5250	9060	9190	11800	62
SILVER	mg/kg	T	13		NA	NA	NA	NA	NA	ND	0.2
SODIUM			7000		NA	NA	NA	NA	NA	652	10
ZINC	mg/kg	T	5000		NA	NA	NA	NA	NA	2.3	0.4

Criteria = MDEQ 21B Soil Indust DW Protection #21B 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 2
Calcium Fluoride Material vs. Industrial Direct Contact

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID Date Top (ft) Bottom (ft) Duplicate #	A-1 1	A-2 1	A-2 7	A-3 5	A-4 9	B-1 5	B-2 4	B-3 1
ANTIMONY	mg/kg	T	670		181	27	ND	ND	35	ND	ND	ND
ARSENIC	mg/kg	T	37		922	2020	20	17	68	28	13	5.8
BARIUM	mg/kg	T	130000		NA	NA	NA	NA	NA	6	NA	NA
CADMIUM	mg/kg	T	2100		NA	NA	NA	NA	NA	NA	NA	NA
CALCIUM			not avail		274000	359000	450000	434000	447000	443000	354000	457000
CHROMIUM	mg/kg	T	1000000		NA	NA	NA	NA	NA	NA	NA	NA
COPPER	mg/kg	T	73000		NA	NA	NA	NA	NA	NA	NA	NA
CYANIDE	mg/kg	T	250		NA	NA	NA	NA	NA	NA	NA	NA
FLUORINE	mg/kg	T	67000		37800	21300	312	116	372	23	49	814
FLUORIDE	mg/kg	T	67000		NA	NA	NA	NA	NA	NA	NA	NA
LEAD	mg/kg	T	900									
MAGNESIUM			1000000		NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	mg/kg	T	580		NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	mg/kg	T	9600		NA	NA	NA	NA	NA	NA	NA	NA
SILICON			not avail		21300	5250	10600	10200	10400	9120	10400	7190
SILVER	mg/kg	T	9000		NA	NA	NA	NA	NA	NA	NA	NA
SODIUM			1000000		NA	NA	NA	NA	NA	NA	NA	NA
ZINC	mg/kg	T	630000		NA	NA	NA	NA	NA	NA	NA	NA

Criteria = MDEQ 27 Soil Direct Contact Indust/Comm II #27 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 2
Calcium Fluoride Material vs. Industrial Direct Contact

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID Date Top (ft) Bottom (ft) Duplicate #	B-3 7	B-4 1	C-1 9	C-2 5	C-3 1	C-4 1	C-4 5	C-4 11
ANTIMONY	mg/kg	T	670		ND	256	ND	ND	121	177	ND	ND
ARSENIC	mg/kg	T	37		ND	1330	ND	ND	136	497	ND	ND
BARIUM	mg/kg	T	130000		NA	NA	36	NA	NA	NA	NA	NA
CADMIUM	mg/kg	T	2100		NA	NA	0.7	NA	NA	NA	NA	NA
CALCIUM			not avail		411000	350000	442000	404000	337000	313000	363000	452000
CHROMIUM	mg/kg	T	1000000		NA	NA	8.8	8	NA	NA	NA	NA
COPPER	mg/kg	T	73000		NA	NA	2.6	NA	NA	NA	NA	NA
CYANIDE	mg/kg	T	250		NA	NA	4	NA	NA	NA	NA	NA
FLUORINE	mg/kg	T	67000		510	50400	64	NA	NA	NA	NA	NA
FLUORIDE	mg/kg	T	67000		NA	NA	ND	259	5200	16100	237	193
LEAD	mg/kg	T	900					NA	NA	NA	NA	NA
MAGNESIUM			1000000		NA	NA	1100	NA	NA	NA	NA	NA
MERCURY	mg/kg	T	580		NA	NA	ND	NA	NA	NA	NA	NA
SELENIUM	mg/kg	T	9600		NA	NA	ND	NA	NA	NA	NA	NA
SILICON			not avail		8650	36200	10600	8920	7750	16100	9560	10300
SILVER	mg/kg	T	9000		NA	NA	ND	NA	NA	NA	NA	NA
SODIUM			1000000		NA	NA	809	NA	NA	NA	NA	NA
ZINC	mg/kg	T	630000		NA	NA	0.86	NA	NA	NA	NA	NA

Criteria = MDEQ 27 Soil Direct Contact Indust/Comm II #27 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 2
Calcium Fluoride Material vs. Industrial Direct Contact

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID Date Top (ft) Bottom (ft) Duplicate #	D-1 1	D-1 5	D-1 10	D-2 1	D-3 10	D-4 5	DETECT LIMIT
ANTIMONY	mg/kg	T	670		ND	ND	ND	57	ND	9.7	4
ARSENIC	mg/kg	T	37		ND	ND	ND	37	ND	11	4
BARIUM	mg/kg	T	130000		NA	NA	NA	NA	NA	2	0.4
CADMIUM	mg/kg	T	2100		NA	NA	NA	NA	NA	0.85	0.4
CALCIUM			not avail		397000	379000	285000	355000	377000	426000	10
CHROMIUM	mg/kg	T	1000000		NA	NA	NA	NA	NA	13	1.6
COPPER	mg/kg	T	73000		NA	NA	NA	NA	NA	4.9	0.6
CYANIDE	mg/kg	T	250		NA	NA	NA	NA	NA	4	0.5
FLUORINE	mg/kg	T	67000		NA	NA	NA	NA	NA	NA	
FLUORIDE	mg/kg	T	67000		240	131	20	14000	162	100	
LEAD	mg/kg	T	900		NA	NA	NA	NA	NA	ND	2
MAGNESIUM			1000000		NA	NA	NA	NA	NA	1380	10
MERCURY	mg/kg	T	580		NA	NA	NA	NA	NA	ND	100
SELENIUM	mg/kg	T	9600		NA	NA	NA	NA	NA	ND	4
SILICON			not avail		8850	12400	5250	9060	9190	11800	62
SILVER	mg/kg	T	9000		NA	NA	NA	NA	NA	ND	0.2
SODIUM			1000000		NA	NA	NA	NA	NA	652	10
ZINC	mg/kg	T	630000		NA	NA	NA	NA	NA	2.3	0.4

Criteria = MDEQ 27 Soil Direct Contact Indust/Comm II #27 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

DuPont In-House Review (DDR)

The DDR is an automated internal review process used by the ADQM group to determine if the data is usable. The data is run through this automated program where a series of checks are performed on the data. The data is evaluated against hold time criteria, checked for blank contamination, assessed against matrix spike(MS)/matrix spike duplicate (MSD) recoveries, assessed against relative percent differences (RPDs) between these samples, assessed against laboratory control sample(LCS)/control sample duplicate (LCSD) recoveries, assessed against RPDs between these samples, assessed against RPDs between laboratory replicates, and assessed against surrogate spike recoveries. The DDR applies the following data qualifiers to analysis results, as warranted:

Qualifier	Definition
B	Not detected substantially above the level reported in the laboratory or field blanks.
R	Unusable result. Analyte may or may not be present in the sample.
J	Analyte present. Reported value may not be accurate or precise.
UJ	Not detected. Reporting limit may not be accurate or precise.

Laboratory Qualifiers

The laboratory may have applied one or more of the following data qualifiers to analysis results, as warranted:

DIL	The concentration is estimated or not reported due to dilution or to the presence of interfering analytes.
NC	The recovery and or RPD were not calculated.
J	Estimated value; result falls between method detection limit (mdl) and practical quantitation limit (pql).
U	Analyte was not detected at the specified reporting limit
B	Analyte concentration is not significantly greater than that detected in an associated method blank.

J	Estimated value; result falls between method detection limit (mdl) and practical quantitation limit (pql).
*	Surrogate recovery is outside stated control limits.
J	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
B	Estimated result. Result is less than reporting limit (RL)
Q	Elevated reporting limit. The reporting limit is elevated because sample dilution was required to bring target compounds within calibration range of the analytical system.
G	Elevated reporting limit. The reporting limit is elevated because sample dilution was required for analysis due to matrix interference.

These lab qualifiers are applied independent of DuPont In-House Data Review (DDR) qualifiers.

Appendix I
Table 3
Well LPW Groundwater Results vs. Industrial Drinking Water Criteria

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID Date Top (ft) Bottom (ft) Duplicate #	LPW 3/30/00 1	LPW 3/15/90 1	LPW 6/29/90 1	LPW 9/12/90 1	LPW 12/5/90 1	LPW 3/6/91 1	LPW 6/4/91 1	LPW 9/5/91 1	LPW 12/11/91 1	LPW 3/4/92 1	LPW 6/4/92 1	LPW 9/3/92 1	LPW 12/8/92 1	LPW 3/4/93 1	LPW 6/4/93 1	LPW 9/2/93 1	LPW 12/8/93 1	LPW 3/17/94 1	LPW 6/9/94 1	LPW 9/9/94 1
THIOCYANATE	ug/l	T			<250																			
1,1,1-TRICHLOROETHANE	ug/l	T	200		3. J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	3	<2.0	<2.0	<4.0	<2.0	2	<2.0	4	1.1	2.1	4.4
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/l	T	170000		58	180	280	160	150	260	250	100	260	160	150	79	150	41	160	57	190	97	130	150
1,1-DICHLOROETHANE	ug/l	T	2500		<2.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
1,1-DICHLOROETHENE	ug/l	T	7																					
1,2-DICHLOROETHENE	ug/l	T	12000										<5.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
BENZENE	ug/l	T	5		<1.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	1	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CARBON TETRACHLORIDE	ug/l	T	5		<1.	<5.0	^10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<4.0	<4.0	<4.0	<8.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
CHLOROFORM	ug/l	T	80		<1.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
CIS-1,2 DICHLOROETHENE	ug/l	T	70		<2.																			
ETHANE	ug/l	T																						
ETHENE	ug/l	T																						
METHANE	ug/l	T																						
METHYL CHLORIDE	ug/l	T	1100																					
METHYLENE CHLORIDE	ug/l	T	5		<2.																			
PROPANE	ug/l	T																						
TETRACHLOROETHYLENE	ug/l	T	5		<1.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
TOLUENE	ug/l	T	790		6. U	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TRANS-1,2-DICHLOROETHENE	ug/l	T	100		<2.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0												
TRICHLOROETHENE	ug/l	T	5		<1.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<2.0	<2.0	<2.0	<4.0	<2.0	<2.0	<2.0	<2.0	<1.0	<1.0	<1.0
TRICHLOROFLUOROMETHANE	ug/l	T	7300		<2.	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0	<6.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0
VINYL CHLORIDE	ug/l	T	2																					
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	T	6		<2.																			
ANTIMONY	ug/l	D	6		^<29																			
ANTIMONY	ug/l	T	6																					
ARSENIC	ug/l	D	10		<5.0																			
ARSENIC	ug/l	T	10																					
CADMIUM	ug/l	D	5		<.81																			
CADMIUM	ug/l	T	5																					
CALCIUM	ug/l	T																						
COPPER	ug/l	D	1000		<3.5																			
COPPER	ug/l	T	1000																					
IRON	ug/l	D	300																					
IRON	ug/l	T	300																					
LEAD	ug/l	D	4		<7.9																			
LEAD	ug/l	T	4																					
MAGNESIUM	ug/l	T	1100000																					
MANGANESE	ug/l	T	50																					
NICKEL	ug/l	D	100		<6.6																			
NICKEL	ug/l	T	100																					
POTASSIUM	ug/l	T																						
SILICON	ug/l	T																						
SILVER	ug/l	D	98		<1.7																			
SILVER	ug/l	T	98																					
SODIUM	ug/l	T	350000																					
VANADIUM	ug/l	D	62		<3.4																			
VANADIUM	ug/l	T	62																					
ZINC	ug/l	D	5000		16.5 J																			
ZINC	ug/l	T	5000																					
ALKALINITY, BICARB. AS CACO3 AT PH 4.5	ug/l	T																						
ALKALINITY, CARB.AS CACO3 AT PH 8.3	ug/l	T																						
AMMONIA	ug/l	T	10000																					
CHEMICAL OXYGEN DEMAND (COD)	ug/l	T			12800 U	14000	<5000	7700	13000	<5000	<5000	8300	15000	<5000	15000	8100	7600	10000	5800	7300	<5000	<5000	<5000	6000
CHLORIDE	ug/l	T	250000																					
CYANIDE	ug/l	T	200		5.2 U																			
NITRATE	ug/l	T	10000																					
NITRITE	ug/l	T	1000																					
PH	STD UNITS	T	6.5																					
PHOSPHORUS	ug/l	T	240000																					
SPECIFIC CONDUCTANCE	UMHOS/CM	T																						
SULFATE	ug/l	T	250000																					
SULFIDE	ug/l	T																						
TOTAL DISSOLVED SOLIDS	ug/l	T	500000		392000	350000	380000	312000	276000	309000	329000	228000	^526000	313000	401000	244000	227000	295000	256000	188000	292000	245000	366000	381000
TOTAL KJELDAHL NITROGEN	ug/l	T																						
TOTAL ORGANIC CARBON	ug/l	T																						
DEPTH TO WATER FROM TOC	Feet	T																						
ODOR (FIELD)	NONE	T				None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None	None
ODOR (FIELD)	TON	T																						
PH (FIELD)	STD UNITS	T				6.99	8.12	7.47	7.79	7.38	7.75	7.66	7.13	7.47	7.32	7.54	7.36	7.68	7.59	7.65	7.38	7.76	7.46	7.2
TOTAL SUSPENDED SOLIDS	ug/l	T																						

Criteria = MDEQ 2 GW Ind and Comm I, II, III DW Crit and RBSLs 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 3
Well LPW Groundwater Results vs. Industrial Drinking Water Criteria

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID	LPW 12/8/94	LPW 3/2/95	LPW 6/1/95	LPW 9/6/95	LPW 12/5/95	LPW 3/26/96	LPW 6/26/96	LPW 9/10/96	LPW 1/14/97	LPW 1/14/97	LPW 3/24/97	LPW 6/10/97	LPW 9/9/97	LPW 12/3/97	LPW 12/9/97	LPW 3/24/98	LPW 6/3/98	LPW 10/5/98	LPW 12/9/98	LPW 3/30/99
				Date																				
				Top (ft)																				
				Bottom (ft)																				
				Duplicate #	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1
THIOCYANATE	ug/l	T																						
1,1,1-TRICHLOROETHANE	ug/l	T	200		1.2	4.6	<1.0	<1.0	<1.0	3.4 J	2.1 J	1.6 J	1. J	1. J	1. J	2. J	4. J		5. J	4. J	5. J	3. J	4. J	3. J
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/l	T	170000		49	150	72	66	<1.0	120	120	90	110	90	94	130	120		140	83	83	47	92	77
1,1-DICHLOROETHANE	ug/l	T	2500		<1.0	<1.0	<1.0	<1.0	<1.0		<.9	<.3	<2.	<2.	<2.	<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
1,1-DICHLOROETHENE	ug/l	T	7							<1.3												<1.		
1,2-DICHLOROETHENE	ug/l	T	12000		<1.0	<2.0	<2.0	<2.0	<2.0						<2.									
BENZENE	ug/l	T	5		<1.0	<1.0	<1.0	<1.0	<1.0	<.8	<.8	<.3	<1.	<1.	<1.	<1.	<1.		<1.	<1.	1. J	<1.	<1.	<1.
CARBON TETRACHLORIDE	ug/l	T	5		<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<.4	<1.	<1.	<1.	<1.	^8.		<1.	<1.	1. J	<1.	<1.	<1.
CHLOROFORM	ug/l	T	80		<1.0	<1.0	<1.0	<1.0	<1.0	<.8	<.8	.54 J	<1.	<1.	<1.	<1.	<1.		<1.	<1.	<1.	1. J	<1.	<1.
CIS-1,2 DICHLOROETHENE	ug/l	T	70							<.7	<.7	<.3	<2.	<2.		<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
ETHANE	ug/l	T																				<1.		
ETHENE	ug/l	T																				<1.		
METHANE	ug/l	T																				12		
METHYL CHLORIDE	ug/l	T	1100																			<3.		
METHYLENE CHLORIDE	ug/l	T	5								<.9	<.4	<2.	<2.	<2.	<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
PROPANE	ug/l	T																				<1.		
TETRACHLOROETHYLENE	ug/l	T	5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.9	<1.9	<.5	<1.	<1.	<1.	<1.	<1.		<1.	<1.	<1.	<1.	<1.	<1.
TOLUENE	ug/l	T	790		<1.0	<1.0	<1.0	<1.0	<1.0	<3.8	<3.8	<.4	<2.	<2.	<2.	<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
TRANS-1,2-DICHLOROETHENE	ug/l	T	100							<1.1	<1.1	<.3	<2.	<2.		<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
TRICHLOROETHENE	ug/l	T	5		<1.0	<1.0	<1.0	<1.0	<1.0	<1.3	<1	<.4	<1.	<1.	<1.	<1.	<1.		<1.	<1.	<1.	<1.	<1.	<1.
TRICHLOROFLUOROMETHANE	ug/l	T	7300		<1.0	<1.0	<1.0	<1.0	<1.0	<2.2	<2.2	<.6	<2.	<2.	<2.	<2.	<2.		<2.	<2.	<2.	<2.	<2.	<2.
VINYL CHLORIDE	ug/l	T	2																			<2.		
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	T	6								1.3 J	3.5 J	^8. J		3. J	<2.	<1.		<1.	1. J	<2.	<2.	<2.	<2.
ANTIMONY	ug/l	D	6													^<15	^<19	^<19		^<19	^<19	^<25	^<25	^<25
ANTIMONY	ug/l	T	6								<5.00	<5.00	<3.1		^<15									
ARSENIC	ug/l	D	10													3.9 J	<5.0	<5.0		<5.0	<5.0	<7.0	<7.0	<7.0
ARSENIC	ug/l	T	10								<2.50	<5.00	11		<2.7									
CADMIUM	ug/l	D	5													<.52	<.42	<.42		<.42	<.42	<.63	<.63	<.63
CADMIUM	ug/l	T	5								<2.0	1.99	<.52		<.52									
CALCIUM	ug/l	T																				80500		
COPPER	ug/l	D	1000													<3.8	<4.5	<4.5		<4.5	<4.5	<5.8	<5.8	<5.8
COPPER	ug/l	T	1000							<5.8	<4.0	7 J	5.4 J		11.0 J									
IRON	ug/l	D	300																			92 J		
IRON	ug/l	T	300																			110		
LEAD	ug/l	D	4													<2.0	<3.4	<3.4		<3.4	<3.4	<6.5	<6.5	<6.5
LEAD	ug/l	T	4								^135	^103	^513		^365									
MAGNESIUM	ug/l	T	1100000																			23000		
MANGANESE	ug/l	T	50																			34		
NICKEL	ug/l	D	100													<5.4	<7.8	<7.8		<7.8	<7.8	<5.4	<5.4	<5.4
NICKEL	ug/l	T	100								<10.0	<10.0	<5.4		<5.4									
POTASSIUM	ug/l	T																				1000		
SILICON	ug/l	T																				4390		
SILVER	ug/l	D	98													.71 J	<.81	<.81		<.81	<.81	<1.4	<1.4	<1.4
SILVER	ug/l	T	98								<5.1	<.500	<.51		<.51									
SODIUM	ug/l	T	350000																			12100		
VANADIUM	ug/l	D	62													<7.0	<5.6	<5.6		<5.6	<5.6	<2.8	<2.8	<2.8
VANADIUM	ug/l	T	62								<4.2	<4.2	<7.0		<7.0									
ZINC	ug/l	D	5000													13 J	<9.0	<9.0		<9.0	<9.0	14.4 J	3.5 J	11.6 J
ZINC	ug/l	T	5000								39.3 J	42 J	59		56									
ALKALINITY, BICARB. AS CACO3 AT PH 4.5	ug/l	T																				205000		
ALKALINITY, CARB.AS CACO3 AT PH 8.3	ug/l	T																				<460		
AMMONIA	ug/l	T	10000																			<250		
CHEMICAL OXYGEN DEMAND (COD)	ug/l	T			<5000	<5000	<5000	<5000	17000	<5000	<7000	10000	10500		14000	15000	16100		7500 J	10600	11500	19900	14400	11100
CHLORIDE	ug/l	T	250000																			50300		
CYANIDE	ug/l	T	200								4 J	<4	<4.0		<4.0	<4.0	<4.0		<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
NITRATE	ug/l	T	10000																			4570		
NITRITE	ug/l	T	1000																			<15		
PH	STD UNITS	T	6.5																			^7.74		
PHOSPHORUS	ug/l	T	240000																			<40		
SPECIFIC CONDUCTANCE	UMHOS/CM	T																				640		
SULFATE	ug/l	T	250000																			22000		
SULFIDE	ug/l	T																				<560		
TOTAL DISSOLVED SOLIDS	ug/l	T	500000		310000	342000	255000	342000	298000	356000	360000	330000	332000		350000	362000	383000		394000	378000	359000	373000	361000	305000
TOTAL KJELDAHL NITROGEN	ug/l	T																				1340		
TOTAL ORGANIC CARBON	ug/l	T																				4300		
DEPTH TO WATER FROM TOC	Feet	T								45.74														
ODOR (FIELD)	NONE	T			None	None	None	None	None															
ODOR (FIELD)	TON	T								5	3		10		4.4	1.8	2.3		1.4	1.7	2	2		
PH (FIELD)	STD UNITS	T			7.13	7.82	8.45	7.44	7.3	7.13														
TOTAL SUSPENDED SOLIDS	ug/l	T																				<2600		

Criteria = MDEQ 2 GW Ind and Comm I, II, III DW Crit and RBSLs 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit

Appendix I
Table 3
Well LPW Groundwater Results vs. Industrial Drinking Water Criteria

Analyte	Units	Total (T)/ Diss. (D)	Screening Criteria	Sample ID Date Top (ft) Bottom (ft) Duplicate #	LPW 7/7/99 1	LPW 9/30/99 1	LPW 12/8/99 1
THIOCYANATE	ug/l	T					
1,1,1-TRICHLOROETHANE	ug/l	T	200		2. J	3. J	3. J
1,1,2-TRICHLOROTRIFLUOROETHANE	ug/l	T	170000		47	71	43
1,1-DICHLOROETHANE	ug/l	T	2500		<1.	<2.	<2.
1,1-DICHLOROETHENE	ug/l	T	7				
1,2-DICHLOROETHENE	ug/l	T	12000				
BENZENE	ug/l	T	5		<1.	<1.	<1.
CARBON TETRACHLORIDE	ug/l	T	5		<1.	<1.	4. U
CHLOROFORM	ug/l	T	80		<1.	<1.	<1.
CIS-1,2 DICHLOROETHENE	ug/l	T	70		<2.	<2.	<2.
ETHANE	ug/l	T					
ETHENE	ug/l	T					
METHANE	ug/l	T					
METHYL CHLORIDE	ug/l	T	1100				
METHYLENE CHLORIDE	ug/l	T	5		<2.	<2.	<2.
PROPANE	ug/l	T					
TETRACHLOROETHYLENE	ug/l	T	5		1. J	2. U	^9. U
TOLUENE	ug/l	T	790		<2.	<2.	<2.
TRANS-1,2-DICHLOROETHENE	ug/l	T	100		<2.	<2.	<2.
TRICHLOROETHENE	ug/l	T	5		<1.	<1.	<1.
TRICHLOROFLUOROMETHANE	ug/l	T	7300		<2.	<2.	<2.
VINYL CHLORIDE	ug/l	T	2				
BIS(2-ETHYLHEXYL)PHTHALATE	ug/l	T	6		<2.	<2.	<2.
ANTIMONY	ug/l	D	6		^<25	^<25	^<29
ANTIMONY	ug/l	T	6				
ARSENIC	ug/l	D	10		<7.0	<7.0	<5.0
ARSENIC	ug/l	T	10				
CADMIUM	ug/l	D	5		<.63	<.63	<.81
CADMIUM	ug/l	T	5				
CALCIUM	ug/l	T					
COPPER	ug/l	D	1000		<5.8	<5.8	<3.5
COPPER	ug/l	T	1000				
IRON	ug/l	D	300				
IRON	ug/l	T	300				
LEAD	ug/l	D	4		<6.5	<6.5	<7.9
LEAD	ug/l	T	4				
MAGNESIUM	ug/l	T	1100000				
MANGANESE	ug/l	T	50				
NICKEL	ug/l	D	100		<5.4	<5.4	<6.6
NICKEL	ug/l	T	100				
POTASSIUM	ug/l	T					
SILICON	ug/l	T					
SILVER	ug/l	D	98		<1.4	<1.4	<1.7
SILVER	ug/l	T	98				
SODIUM	ug/l	T	350000				
VANADIUM	ug/l	D	62		<2.8	<2.8	<3.4
VANADIUM	ug/l	T	62				
ZINC	ug/l	D	5000		16.3 J	16.9 U	12.3 U
ZINC	ug/l	T	5000				
ALKALINITY, BICARB. AS CACO3 AT PH 4.5	ug/l	T					
ALKALINITY, CARB.AS CACO3 AT PH 8.3	ug/l	T					
AMMONIA	ug/l	T	10000				
CHEMICAL OXYGEN DEMAND (COD)	ug/l	T			46200	15000 U	17400 U
CHLORIDE	ug/l	T	250000				
CYANIDE	ug/l	T	200		<4.0	<4.0	<4.0
NITRATE	ug/l	T	10000				
NITRITE	ug/l	T	1000				
PH	STD UNITS	T	6.5				
PHOSPHORUS	ug/l	T	240000				
SPECIFIC CONDUCTANCE	UMHOS/CM	T					
SULFATE	ug/l	T	250000				
SULFIDE	ug/l	T					
TOTAL DISSOLVED SOLIDS	ug/l	T	500000		401000	480000	355000
TOTAL KJELDAHL NITROGEN	ug/l	T					
TOTAL ORGANIC CARBON	ug/l	T					
DEPTH TO WATER FROM TOC	Feet	T					
ODOR (FIELD)	NONE	T					
ODOR (FIELD)	TON	T					
PH (FIELD)	STD UNITS	T					
TOTAL SUSPENDED SOLIDS	ug/l	T					

Criteria = MDEQ 2 GW Ind and Comm I, II, III DW Crit and RBSLs 12/2004
^ and shaded cells = Concentration above criteria (NDs [^^] assumed to be 50% reporting limit)
< and ND = Non detect at stated reporting limit