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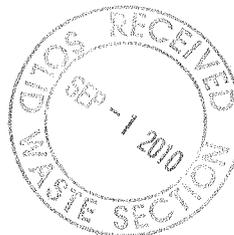
DuPont Engineering
6324 Fairview Road
Charlotte, NC 28210
Tel. (704) 362-6630
Fax (704) 362-6636



DuPont Engineering

August 23, 2010

Mr. Ethan Brown
NCDENR
Compliance Hydrogeologist
Solid Waste Section
1646 Mail Service Center
Raleigh, NC 27699-1646



Re: 2009 Annual Groundwater Monitoring Report
DuPont Industrial Landfills, NC Solid Waste Landfill Permit No. 10-06
Cape Fear Plant, Leland, NC

Dear Mr. Brown:

As required in Landfill Permit No.10-06, attached please find the results of the annual groundwater monitoring program completed at the DuPont Cape Fear Plant in May of 2009. The attached annual report was prepared using the New Guidelines for Electronic Submittal of Environmental Data specified by NCDENR in a memorandum dated October 27, 2006 and addendum dated February 23, 2007.

Please feel free to contact me at 704-362-6635 if you have any questions concerning this annual groundwater monitoring report.

Sincerely,

A handwritten signature in black ink that reads "Kevin P. Garon".

Kevin P. Garon
Project Director
DuPont Corporate Remediation Group

cc: Mr. Ervin Lane, NCDENR, SWS
File

DENR USE ONLY

Paper Report

Electronic Data - Email CD (data loaded: Yes / No)

Doc/Event #:

NC DENR

Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- Prepare one form for each individually monitored unit.
- Please type or print legibly.
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i)).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

DuPont

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Marc Harder, P.G.

Phone: 704-558-4199

E-mail: Marc.Harder@parsons.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
DAK Americas Cape Fear Plant	3500 Daniels Road NE Leland, NC 28451	10-06	.0500	May 19-21, 2009

Environmental Status: (Check all that apply)

- Initial/Background Monitoring Detection Monitoring Assessment Monitoring Corrective Action

Type of data submitted: (Check all that apply)

- Groundwater monitoring data from monitoring wells Methane gas monitoring data
 Groundwater monitoring data from private water supply wells Corrective action data (specify) _____
 Leachate monitoring data Other(specify) _____
 Surface water monitoring data

Notification attached?

- No. No groundwater or surface water standards were exceeded.
 Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
 Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Marc Harder

Principal Geologist

704-558-4199

Facility Representative Name (Print)

Title

(Area Code) Telephone Number

Affix NC Licensed Professional Geologist Seal

Signature

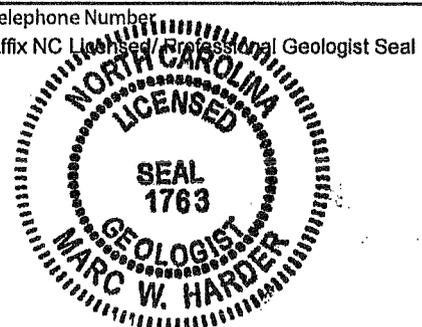
Date

4701 Hedgemore Drive, Charlotte, NC 28209

Facility Representative Address

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009



2009 Annual Landfill Groundwater Sampling Report
DAK Americas Cape Fear Plant (Former DuPont Cape Fear Plant)
Leland, North Carolina

As required in Landfill Permit No. 10-06, attached please find the results of the annual groundwater monitoring program completed at the DuPont Cape Fear Plant in May of 2009. This annual report was prepared using the New Guidelines for Electronic Submittal of Environmental Data specified by NCDENR in a memorandum dated October 27, 2006 and addendum dated February 23, 2007. As part of the new guidelines, a completed Environmental Monitoring Reporting Form has been submitted with this report.

Monitoring wells MW-1, -2, -3, and -9 are associated with the TPA Landfill (SWMU 53), MW-4, -5, -6, and -7 are associated with the Ash Landfill (SWMU 54), and MW-22, -23, and -24 are associated with the Demolition Landfill (SWMU 59). Attached to this letter report are the following figure and tables:

Figure 1: Potentiometric Surface Map: Shows the locations of the monitoring wells associated with the landfill monitoring program along with groundwater elevations at each well (measured in May, 2009). Groundwater elevation contours showing groundwater flow direction are also included on this map.

Table 1: Summary of Analytical Results: Lists the constituents that were detected in groundwater from the landfill monitoring wells and their corresponding concentrations (May 2009). Concentrations of constituents that exceed screening criteria (NC 2L Standards and Solid Waste Section Limits) are highlighted on this table.

Table 2: Target Analyte List: Lists the parameters that were analyzed in the laboratory along with corresponding CAS Numbers and Solid Waste Section ID Numbers.

Table 3: Groundwater Field Parameters: Lists the water quality parameters (i.e., temperature, specific conductivity) collected in the field prior to sampling (May 2009).

GENERAL

As part of an in-house quality assurance/quality control (QA/QC) process, the laboratory analytical data were reviewed and, in some cases, qualified by placing a "J" or "B" flag next to the resulting concentration (see Table 1). A "J" flag means that the value is estimated (it is between the method detection limit and practical quantitation limit) and a "B" flag indicates that the analyte was also detected in the associated laboratory (method) or field (equipment, trip) blank. Overall, the analytical data presented in this letter report is acceptable and considered usable.

LANDFILL ANALYTICAL RESULTS

At the TPA Landfill, 1,4-dioxane was detected in groundwater from monitoring wells MW-2 and MW-9 at a concentration of 0.0215 and 0.0751 milligrams per liter (mg/L), respectively. These values are above the NC2L standard of 0.003 mg/L and the Solid Waste Section Limit (SWSL) of 0.01 mg/L. Over the past six years, the concentration of 1,4-dioxane in groundwater at MW-2 and MW-9 has ranged from 0.0084-0.028 mg/L and 0.023-0.097 mg/L, respectively. Cadmium was detected at MW-1 and MW-9 at concentrations slightly above the NC2L standard of 0.002 mg/L and the SWSL of 0.001 mg/L. The cadmium detections were "J" flagged and as such the values may not be accurate or precise. MW-1 had diethylene glycol (DEG) detected at 13.1 mg/L but this compound was also detected in the equipment blank at 5.02 mg/L. All wells at the TPA Landfill had triethylene glycol (TEG) detections ranging from 11 to 17 mg/L. These detections are considered questionable due to the presence of DEG in the equipment blank and the fact that TEG has not been detected in any of the landfill wells since 2002. Concentrations of the remaining constituents detected in groundwater at the TPA landfill were below NC2L standards.

At the Ash Landfill, the total dissolved solids (TDS) concentration in groundwater was slightly above the NC2L standard (500 mg/L) at MW-6 (510 mg/L). At the Demolition Landfill, 1,4-dioxane was detected in groundwater from MW-23 at a concentration of 0.00647 J mg/L. The value is above the NC2L standard of 0.003 mg/L. The detection is J flagged and as such the value may not be accurate or precise. TDS was detected above the NC2L standard (500 mg/L) at MW-23 (696 mg/L). Although the concentration of barium was slightly above the SWSL at MW-23 and MW-24, it was well below the NC2L standard.

TABLES

Table 1. Summary of Analytical Results (May 2009)
Cape Fear Industrial Landfills

TPA LANDFILL						
Analyte	1006-MW-1	1006-MW-2	1006-MW-3	1006-MW-9	NC 2L	NC SWSL
1,4-DIOXANE		0.0215		0.0751	0.003	0.01
ARSENIC		0.00551 J		0.00514 J	0.01	0.01
BARIUM	0.0135 J	0.0160 J	0.00956 J	0.0304 J	0.7	0.1
CHLORIDE	3.41 J	13.8 J	2.33 J	10.7 J	250	N/A
CADMIUM	0.00206 J	0.000470 J	0.000260 J	0.00226 J	0.002	0.001
CHROMIUM	0.00276 J			0.00437 J	0.01	0.01
FLUORIDE	0.286 J	0.239 J	0.308 J	0.284 J	2	2
LEAD	0.00310 J	0.00176 J		0.00317 J	0.015	0.01
SELENIUM	0.00430 J				0.02	0.01
SULFATE	11.7 J	33.8 J	14 J	2.02 J	250	250
SILVER				0.00425 J	0.02	0.01
DIETHYLENE GLYCOL	13.1 J	9.78 J	7.81 J	5.54 J	N/A	N/A
TRIETHYLENE GLYCOL	16.9 J	16.1 J	13.3 J	11.1 J	N/A	N/A
TOTAL DISSOLVED SOLIDS	125	449	279	445	500	N/A

ASH LANDFILL						
Analyte	1006-MW-4	1006-MW-5	1006-MW-6	1006-MW-7	NC 2L	NC SWSL
BARIUM	0.0262 J		0.0304 J	0.0465 J	0.7	0.1
CHLORIDE	6.18 J		31.3 J	11.8 J	250	N/A
CADMIUM				0.000330 J	0.002	0.001
DI-N-BUTYL PHTHALATE				0.00201 J	0.7	0.01
CHROMIUM				0.00117 J	0.01	0.01
FLUORIDE	0.275 J		0.321 J		2	2
DIETHYLENE GLYCOL	7.13 J		5.54 J		N/A	N/A
TRIETHYLENE GLYCOL			12.5 J		N/A	N/A
TEREPHTHALIC ACID			4.38 J		N/A	N/A
SULFATE	108 J		16.6 J	21.2 J	250	250
TOTAL DISSOLVED SOLIDS	290		510	81.9	500	N/A

Analyte	DEMOLITION LANDFILL				BLANKS			
	1006-MW-22	1006-MW-23	1006-MW-24	EQBLK-1	TBLK-Landfill	TBLK-Landfill3	NC 2L	NC SWSL
1,4-DIOXANE	0.00291 J	0.00847 J	0.00171 J		NA	NA	0.003	0.01
ACETONE			0.000868 B		ND	ND	6	0.1
BARIUM	0.00784 J	0.204 J	0.195 J		NA	NA	0.7	0.1
BIS(2-ETHYLHEXYL)PHTHALATE	0.00291 B			0.00659 J	NA	NA	0.003	0.015
CHLORIDE	8.11 J	106 B	0.218 B	48.3 J	NA	NA	250	N/A
BUTYL BENZYL PHTHALATE				0.00192 J	NA	NA	1	0.01
DIETHYLENE GLYCOL	6.16 J			5.02 J	ND	ND	N/A	N/A
TRIETHYLENE GLYCOL		11.0 J	10.4 J		ND	ND	N/A	N/A
CHROMIUM	0.00191 J	0.00238 J	0.00341 J		NA	NA	0.01	0.01
CADMIUM	0.000580 J				NA	NA	0.002	0.001
FLUORIDE	0.281 J			0.245 J	NA	NA	2	2
SILVER	0.00320 J	0.00469 J	0.00459 J		NA	NA	0.02	0.01
SULFATE	19.5 J				NA	NA	250	250
TOTAL DISSOLVED SOLIDS	186	696	443		NA	NA	500	N/A

NOTE:

Yellow Shaded values are above NC 2L standards

Blue Shaded values are above NC SWSL standards

NC 2L = NC Administrative Code 15A NCAC 2L.0200 - North Carolina Groundwater Classifications and Standards

NC SWSL = North Carolina Solid Waste Section Limit

MW-5 was dry and not sampled.

All units are reported in in milligrams per liter (MG/L)

ND = Not Detected

NA = Not Analyzed

N/A = Not Available

J = In-House Qualifier. Analyte present, reported value may not be accurate or precise.

B = In-House Qualifier. Not detected substantially above the level in the laboratory or field blanks.

Table 2. Target Analyte List - May 2009
Cape Fear Landfills

TYPE	CASNO	ANALYTE	SWS ID #
VOC	630206	1,1,1,2-TETRACHLOROETHANE	190
VOC	71556	1,1,1-TRICHLOROETHANE	200
VOC	79345	1,1,2,2-TETRACHLOROETHANE	191
VOC	79005	1,1,2-TRICHLOROETHANE	202
VOC	75343	1,1-DICHLOROETHANE	75
VOC	75354	1,1-DICHLOROETHENE	77
VOC	96184	1,2,3-TRICHLOROPROPANE	206
VOC	96128	1,2-DIBROMO-3-CHLOROPROPANE	67
VOC	106934	1,2-DIBROMOETHANE	68
VOC	107062	1,2-DICHLOROETHANE	76
VOC	78875	1,2-DICHLOROPROPANE	82
VOC	123911	1,4-DIOXANE	422
VOC	591786	2-HEXANONE	124
VOC	67641	ACETONE	3
VOC	107131	ACRYLONITRILE	8
VOC	71432	BENZENE	16
VOC	74975	BROMOCHLOROMETHANE	28
VOC	75274	BROMODICHLOROMETHANE	29
VOC	75252	BROMOFORM	30
VOC	75150	CARBON DISULFIDE	35
VOC	56235	CARBON TETRACHLORIDE	36
VOC	108907	CHLOROBENZENE	39
VOC	75003	CHLOROETHANE	41
VOC	67663	CHLOROFORM	44
VOC	156592	CIS-1,2-DICHLOROETHENE	78
VOC	10061015	CIS-1,3-DICHLOROPROPENE	86
VOC	124481	DIBROMOCHLOROMETHANE	66
VOC	74953	DIBROMOMETHANE	139
VOC	100414	ETHYLBENZENE	110
VOC	107211	ETHYLENE GLYCOL	424
VOC	74884	IODOMETHANE	142
VOC	67561	METHANOL	NE
VOC	74839	METHYL BROMIDE	136
VOC	74873	METHYL CHLORIDE	140
VOC	78933	METHYL ETHYL KETONE	141
VOC	75092	METHYLENE CHLORIDE	137
VOC	108101	METHYL-ISO-BUTYL KETONE	147
VOC	100425	STYRENE	186
VOC	127184	TETRACHLOROETHENE	192
VOC	108883	TOLUENE	196
VOC	156605	TRANS-1,2-DICHLOROETHENE	79
VOC	10061026	TRANS-1,3-DICHLOROPROPENE	87
VOC	110576	TRANS-1,4-DICHLORO-2-BUTENE	73
VOC	79016	TRICHLOROETHENE	201
VOC	75694	TRICHLOROFLUOROMETHANE	203
VOC	108054	VINYL ACETATE	210
VOC	75014	VINYL CHLORIDE	211
VOC	1330207	XYLENES (TOTAL)	346
SVOC	120821	1,2,4-TRICHLOROBENZENE	199
SVOC	95501	1,2-DICHLOROBENZENE	69
SVOC	541731	1,3-DICHLOROBENZENE	70
SVOC	106467	1,4-DICHLOROBENZENE	71
SVOC	95954	2,4,5-TRICHLOROPHENOL	204
SVOC	88062	2,4,6-TRICHLOROPHENOL	205
SVOC	120832	2,4-DICHLOROPHENOL	80
SVOC	105679	2,4-DIMETHYLPHENOL	95
SVOC	51285	2,4-DINITROPHENOL	99
SVOC	121142	2,4-DINITROTOLUENE	100
SVOC	606202	2,6-DINITROTOLUENE	101
SVOC	91587	2-CHLORONAPHTHALENE	47
SVOC	95578	2-CHLOROPHENOL	48
SVOC	91576	2-METHYLNAPHTHALENE	145
SVOC	88755	2-NITROPHENOL	154
SVOC	EVS-0197	3 OR 4-METHYLPHENOL	344

MDL= Method Detection Limit

PQL= Practical Quantitation Limit

SWSL= Solid Waste Section Limit

SWS ID#=Solid Waste Section ID Number

UG/L= micrograms per liter

NE=Not Established

Table 2. Target Analyte List - May 2009
Cape Fear Landfills

TYPE	CASNO	ANALYTE	SWS ID #
SVOC	91941	3,3'-DICHLORO BENZIDINE	72
SVOC	534521	4,6-DINITRO-2-METHYLPHENOL	98
SVOC	101553	4-BROMOPHENYL PHENYL ETHER	31
SVOC	59507	4-CHLORO-3-METHYLPHENOL	45
SVOC	106478	4-CHLOROANILINE	38
SVOC	7005723	4-CHLOROPHENYL PHENYL ETHER	49
SVOC	100027	4-NITROPHENOL	159
SVOC	83329	ACENAPHTHENE	1
SVOC	208968	ACENAPHTHYLENE	2
SVOC	120127	ANTHRACENE	12
SVOC	56553	BENZO(A)ANTHRACENE	17
SVOC	50328	BENZO(A)PYRENE	21
SVOC	205992	BENZO(B)FLUORANTHENE	18
SVOC	191242	BENZO(G,H,I)PERYLENE	20
SVOC	207089	BENZO(K)FLUORANTHENE	19
SVOC	111911	BIS(2-CHLOROETHOXY)METHANE	42
SVOC	111444	BIS(2-CHLOROETHYL) ETHER	43
SVOC	108601	BIS(2-CHLOROISOPROPYL)ETHER	NE
SVOC	117817	BIS(2-ETHYLHEXYL)PHTHALATE	111
SVOC	85687	BUTYL BENZYL PHTHALATE	32
SVOC	86748	CARBAZOLE	NE
SVOC	218019	CHRYSENE	52
SVOC	53703	DIBENZO(A,H)ANTHRACENE	64
SVOC	132649	DIBENZOFURAN	65
SVOC	84662	DIETHYL PHTHALATE	90
SVOC	131113	DIMETHYL PHTHALATE	96
SVOC	84742	DI-N-BUTYL PHTHALATE	33
SVOC	117840	DI-N-OCTYL PHTHALATE	168
SVOC	101848	DIPHENYL ETHER	423
SVOC	206440	FLUORANTHENE	115
SVOC	86737	FLUORENE	116
SVOC	118741	HEXACHLORO BENZENE	119
SVOC	87683	HEXACHLOROBUTADIENE	120
SVOC	77474	HEXACHLOROCYCLOPENTADIENE	121
SVOC	67721	HEXACHLOROETHANE	122
SVOC	193395	INDENO(1,2,3-CD)PYRENE	125
SVOC	78591	ISOPHORONE	128
SVOC	99092	M-NITROANILINE	153
SVOC	91203	NAPHTHALENE	148
SVOC	98953	NITROBENZENE	156
SVOC	621647	N-NITROSODI-N-PROPYLAMINE	164
SVOC	86306	N-NITROSODIPHENYLAMINE	163
SVOC	95487	O-CRESOL	56
SVOC	88744	O-NITROANILINE	154
SVOC	87865	PENTACHLOROPHENOL	173
SVOC	85018	PHENANTHRENE	175
SVOC	108952	PHENOL	177
SVOC	100016	P-NITROANILINE	155
SVOC	129000	PYRENE	181
METALS	7440360	ANTIMONY	13
METALS	7440382	ARSENIC	14
METALS	7440393	BARIUM	15
METALS	7440439	CADMIUM	34
METALS	7440473	CHROMIUM	51
METALS	7439921	LEAD	131
METALS	7439976	MERCURY	132
METALS	7782492	SELENIUM	183
METALS	7440224	SILVER	184
MISC	16887006	CHLORIDE	455
MISC	16984488	FLUORIDE	312
MISC	14808798	SULFATE	315
MISC	C-010	TOTAL DISSOLVED SOLIDS	311
MISC	92524	1,1 -BIPHENYL	421
MISC	111466	DIETHYLENE GLYCOL	NE

MDL= Method Detection Limit

PQL= Practical Quantitation Limit

SWSL= Solid Waste Section Limit

SWS ID#=Solid Waste Section ID Number

UG/L= micrograms per liter

NE=Not Established

Table 2. Target Analyte List - May 2009
Cape Fear Landfills

TYPE	CASNO	ANALYTE	SWS ID #
MISC	120616	DIMETHYLTEREPHTHALATE	NE
MISC	100210	TEREPHTHALIC ACID	NE
MISC	112276	TRIETHYLENE GLYCOL	NE

MDL= Method Detection Limit
PQL= Practical Quantitation Limit
SWSL= Solid Waste Section Limit
SWS ID#=Solid Waste Section ID Number

UG/L= micrograms per liter
NE=Not Established

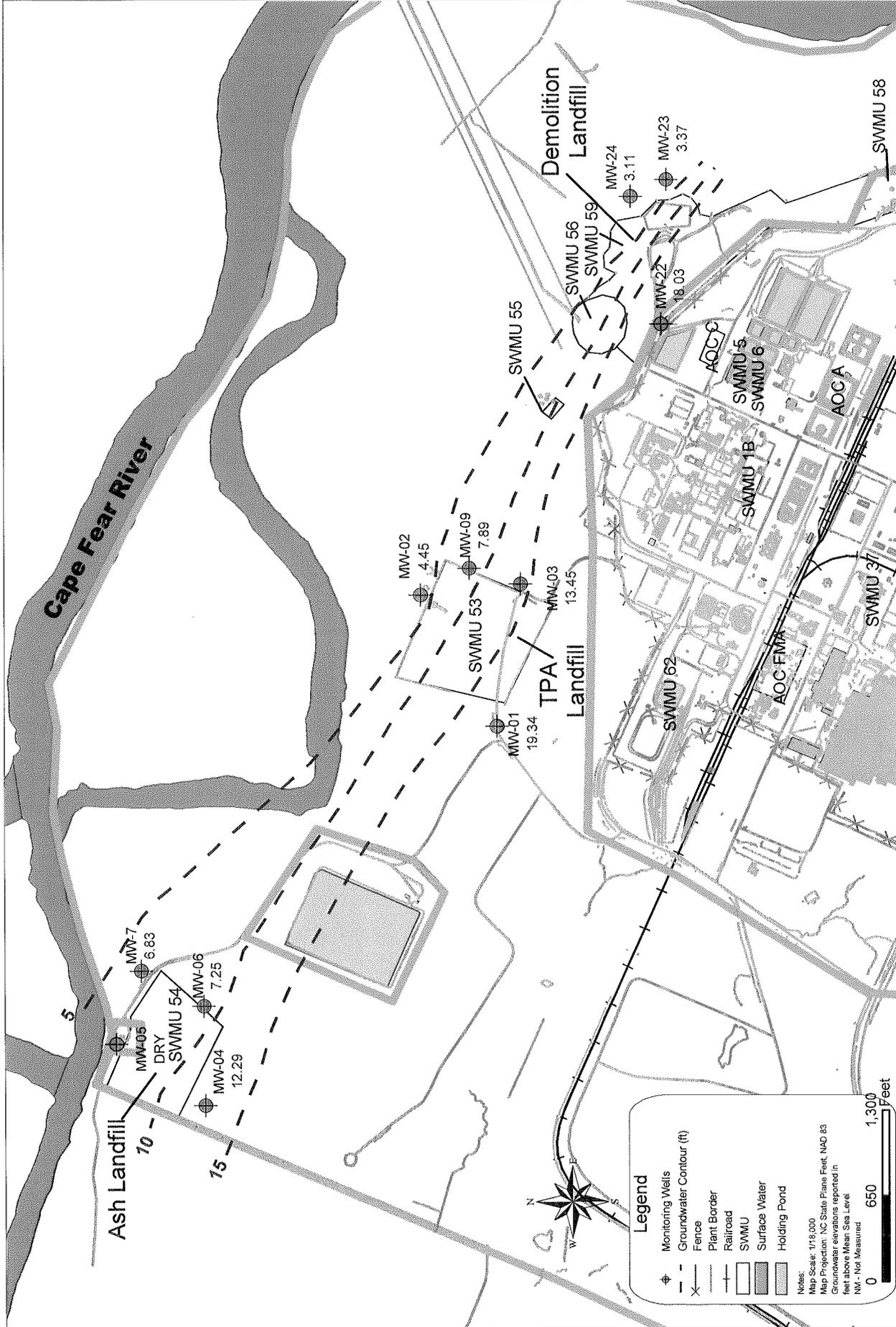
Table 3. Water Quality Field Parameters (May 2009)

SAMPLE (WELL ID)	DATE SAMPLED	TIME SAMPLED	WATER ELEV (ft MSL)	pH	TEMP (C)	SPECIFIC CONDUCTANCE (mS/cm)	DISSOLVED OXYGEN (mg/l)	REDOX (mV)	TURBIDITY (NTU)	COLOR	ODOR
1006-MW-1	5/19/2009	1030	19.34	6.55	17.58	0.162	5.2	171.7	3.4	clear	none
1006-MW-2	5/19/2009	1130	4.45	6.86	17.63	0.581	0.29	-68.8	4	clear	none
1006-MW-3	5/19/2009	1320	13.45	7.12	19.48	0.369	0.35	-17.5	2.1	clear	none
1006-MW-4	5/19/2009	1430	12.29	6.01	19.06	0.339	4.11	233	0	clear	none
1006-MW-5											
DRY											
1006-MW-6	5/20/2009	1030	7.25	6.28	16.65	0.661	0.28	-69.1	2.1	clear	sulfur
1006-MW-7	5/20/2009	1130	6.83	4.98	18.37	0.097	1.28	61.2	3	clear	none
1006-MW-9	5/20/2009	1415	7.89	6.22	17.82	0.613	0.24	-78	9.1	clear	sulfur
1006-MW-22	5/20/2009	1515	18.03	6.88	19.28	0.254	5.89	107	1.4	clear	none
1006-MW-23	5/21/2009	1150	3.37	5.79	16.64	0.718	0.23	3.6	3.9	yellow	sulfur
1006-MW-24	5/21/2009	1300	3.11	5.33	17.12	0.276	0.14	49.7	2.4	yellow	sulfur

ft MSL = feet above Mean Sea Level mS/cm = milliSeimens per centimeter mV = milli-Volts

mg/l = milligrams per liter NTU = National Turbidity Unit C = degrees Celsius

FIGURE



POTENTIOMETRIC SURFACE MAP (MAY, 2009) CAPE FEAR LANDFILL ANNUAL REPORT DAK AMERICAS CAPE FEAR PLANT LELAND, NORTH CAROLINA		DRAWN: K. Teague DATE: 06/09/10 REVISION: 1	DuPont Project #: 504182 Parsons Project #: 445332.02000
TITLE: Potentiometric Surface Map (May, 2009) Cape Fear Landfill Annual Report DAK Americas Cape Fear Plant Leland, North Carolina		FILE NAME: G:\GIS\CapeFear\Gis\Project_figures\Landfill_Sampling_Annual_Report\2010\CF_Pot_Map_6_2010.mxd	

APPENDIX

Memorandum

DATE: July 7, 2009

TO: James Henderson – DuPont CRG

FROM: Dave Blaushild, ADQM

RE: Analytical Data for Cape Fear, NC – Landfill Annual Sampling 2009

Enclosed please find the report for the groundwater samples collected May 19 – 21, 2009 at the Cape Fear Landfill site.

Please call or e-mail me with any questions.

Thanks
Dave

LANDFILL – ANNUAL09

DuPont Cape Fear, North Carolina

July 7, 2009

Prepared for

James K. Henderson

Prepared by

URS Corp.
Laboratory Services – Dave Blaushild
Barley Mill Plaza, Building 19
P.O. Box 80027
Wilmington, DE 19880-0027

**ADQM FINAL DATA REPORT
NARRATIVE**

Site **Cape Fear**

Project **LANDFILL – Annual09**

Sampling Dates **May 19, 20, 21, 2009**

Laboratory **Test America
Austin, Texas**

Analytical Protocol

Parameter	Analytical Method	Laboratory
Semivolatile Organic Compounds	SW846 8270C	Test America, Austin, Texas
Teraphthalic Acid	MCAWW 300.0	Test America, Austin, Texas
Chloride, fluoride, sulfate	MCAWW 300.0	Test America, Austin, Texas
Metals	SW846 6010B	Test America, Austin, Texas
Mercury	SW846 7470B	Test America, Austin, Texas
Volatile Organic Compounds	SW846 8260B	Test America, Austin, Texas
Glycols and Methanol	SW846 8015M	Test America, Austin, Texas
Total Dissolved Solids	SM 2540C	Test America, Austin, Texas

Sample Arrival & Receipt

The samples arrived at the laboratory intact and within the correct temperature range (4±2°C).

Significant QC Findings/Comments

Overall these data are acceptable and usable for determining the impacts to groundwater from chemicals of concern at the site. Some of the data is estimated or unusable due to samples prepared past the holding time, blank contamination, low matrix spike/matrix spike duplicate recoveries, high LCS recoveries, and results reported between the method detection limit (MDL) and the practical quantitation limit (PQL).

Several undetected results for acrylonitrile were considered unusable because the analysis was conducted past the holding time. Undetected results for metals also were considered estimated because the holding time for the sample preparation method required by North Carolina was exceeded. Undetected results for hexachlorocyclopentadiene were considered unusable because LCS/LCSD criteria fell outside of QC criteria. Chloride was detected in the equipment blank associated with two samples. Results for chloride in these samples were considered undetected. Bis(2-ethylhexyl)phthalate and acetone were detected in the laboratory blank associated with one samples. Results for these compounds were considered undetected. Results for several analytes were considered estimated because they were detected between the MDL and PQL. Chloride and sulfate in several samples were considered estimated values because the MS/MSD RPDs fell outside QC criteria. Undetected results for 4,6-dinitro-2-methylphenol were considered estimated because the LCS/LCSD criteria was exceeded.

The DDR Narrative Report lists the samples qualified and the reasons for qualification

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.

TestAmerica, Inc. Qualifiers

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

U	Not detected.
DIL	The concentration is estimated or not reported due to dilution or to the presence of interfering analytes.
H	Sample was prepared or analyzed after the EPA recommended holding time.
G	The reporting limit is elevated due to matrix interference.
NC	The recovery and or RPD were not calculated.
B	The analyte is present in the associated method blank at a reportable level.
J	Estimated value. The amount reported is below the Minimum Level (ML). ML is the lowest level at which the analytical system must give a reliable signal and an acceptable calibration point.
* (Organic)	Surrogate recovery is outside stated control limits.
* (Inorganic)	Relative percent difference (RPD) is outside stated control limits.
E	The reported result is an estimate. The amount reported is above the calibration range of the instrument.
S	Ion suppression evident
C	Co eluting isomer
X	Values obtained from a reanalysis.
Q	Estimated maximum possible concentration. This qualifier is used when the result is generated from chromatographic data that does not meet all the qualitative criteria for a positive identification given in the method.
L	Serial dilution of a digestate in the analytical batch indicates that physical and chemical interferences are present.
N	Spiked analyte recovery is outside stated control limits.
W	Post digestion spike recovery is outside control limits.

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

**Corporate Environmental Database
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Reporting Limit: MDL

Analyte/Parameter	Result	Qualifiers		Unit	Detection Limit		Analytical Methods		
		LAB	DDR		MDL	PQL	Analysis	Preprep-	Prep-
Sampling Point: EQBLK-LANDFILL		Sampleno:		CAP-K-EQBLK-LANDFILL					
Date sampled: May 21, 2009		Sample type:		Blank Water					
CHLORIDE	48.3		J	MG/L	0.462	10.0	300.0A		METHOD
FLUORIDE	0.245	J	J	MG/L	0.0780	1.00	300.0A		METHOD
DIETHYLENE GLYCOL	5.02	J	J	MG/L	4.64	25.0	8015B		METHOD
BUTYL BENZYL PHTHALATE	1.92	J	J	UG/L	0.949	9.62	8270C		3520C
BIS(2-ETHYLHEXYL) PHTHALATE	6.59	J. B	J	UG/L	2.63	9.62	8270C		3520C

Sampling Point: MW-4		Sampleno:		CAP-G-MW-4					
Date sampled: May 19, 2009		Sample type:		Groundwater					
BARIUM	0.0262	J	J	MG/L	0.0005C	0.100	6010B		3030C
SULFATE	108		J	MG/L	9.58	50.0	300.0A		METHOD
CHLORIDE	6.18		J	MG/L	0.0462	1.00	300.0A		METHOD
FLUORIDE	0.275	J	J	MG/L	0.0780	1.00	300.0A		METHOD
DIETHYLENE GLYCOL	7.13	J	J	MG/L	4.64	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	290			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-7		Sampleno:		CAP-G-MW-7					
Date sampled: May 20, 2009		Sample type:		Groundwater					
BARIUM	0.0465	SD1, J	J	MG/L	0.0005C	0.100	6010B		3030C
CADMIUM	0.000330	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	21.2		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	11.8		J	MG/L	0.231	5.00	300.0A		METHOD
CHROMIUM	0.00117	J	J	MG/L	0.00094	0.0100	6010B		3030C
DI-N-BUTYL PHTHALATE	2.01	J	J	UG/L	1.09	9.62	8270C		3520C
TOTAL DISSOLVED SOLIDS	81.9			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-23		Sampleno:		CAP-G-MW-23					
Date sampled: May 21, 2009		Sample type:		Groundwater					
BARIUM	0.204		J	MG/L	0.0005C	0.100	6010B		3030C
SILVER	0.00469	J	J	MG/L	0.0021E	0.0100	6010B		3030C
CHLORIDE	106		B	MG/L	0.924	20.0	300.0A		METHOD
CHROMIUM	0.00238	J	J	MG/L	0.00094	0.0100	6010B		3030C
1,4-DIOXANE	6.47	J	J	UG/L	0.618	9.62	8270C		3520C
TRIETHYLENE GLYCOL	11.0	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	696			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-3		Sampleno:		CAP-G-MW-3					
Date sampled: May 19, 2009		Sample type:		Groundwater					
BARIUM	0.00956	J	J	MG/L	0.0005C	0.100	6010B		3030C
CADMIUM	0.000260	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	14.0		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	2.33		J	MG/L	0.0462	1.00	300.0A		METHOD
FLUORIDE	0.308	J	J	MG/L	0.0780	1.00	300.0A		METHOD
DIETHYLENE GLYCOL	7.81	J	J	MG/L	4.64	25.0	8015B		METHOD
TRIETHYLENE GLYCOL	13.3	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	279			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-6		Sampleno:		CAP-G-MW-6					
Date sampled: May 20, 2009		Sample type:		Groundwater					
BARIUM	0.0304	J	J	MG/L	0.0005C	0.100	6010B		3030C
SULFATE	16.6		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	31.3		J	MG/L	0.231	5.00	300.0A		METHOD
FLUORIDE	0.321	J	J	MG/L	0.0780	1.00	300.0A		METHOD
DIETHYLENE GLYCOL	5.54	J	J	MG/L	4.64	25.0	8015B		METHOD
TEREPHTHALIC ACID	4.38	J	J	MG/L	0.109	5.00	300.0A MOD		METHOD
TRIETHYLENE GLYCOL	12.5	J	J	MG/L	5.89	25.0	8015B		METHOD

**Corporate Environmental Database
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Reporting Limit: MDL

Analyte/Parameter	Result	Qualifiers		Unit	Detection Limit		Analytical Methods		
		LAB	DDR		MDL	PQL	Analysis	Preprep-	Prep-
Sampling Point: MW-6				Sampleno:	CAP-G-MW-6				
Date sampled: May 20, 2009				Sample type:	Groundwater				
TOTAL DISSOLVED SOLIDS	510			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-6				Sampleno:	CAP-G-MW-6-DUP				
Date sampled: May 20, 2009				Sample type:	Groundwater				
BARIUM	0.0323	J	J	MG/L	0.0005C	0.100	6010B		3030C
CADMIUM	0.000260	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	23.4		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	30.5		J	MG/L	0.231	5.00	300.0A		METHOD
FLUORIDE	0.284	J	J	MG/L	0.0780	1.00	300.0A		METHOD
TEREPHTHALIC ACID	4.35	J	J	MG/L	0.109	5.00	300.0A MOD		METHOD
TRIETHYLENE GLYCOL	10.6	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	508			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-24				Sampleno:	CAP-G-MW-24				
Date sampled: May 21, 2009				Sample type:	Groundwater				
BARIUM	0.195		J	MG/L	0.0005C	0.100	6010B		3030C
SILVER	0.00459	J	J	MG/L	0.0021E	0.0100	6010B		3030C
ACETONE	0.868	B, J	B	UG/L	0.819	100	8260B		5030B
CHLORIDE	0.218	J	B	MG/L	0.0462	1.00	300.0A		METHOD
CHROMIUM	0.00341	J	J	MG/L	0.00094	0.0100	6010B		3030C
1,4-DIOXANE	1.71	J	J	UG/L	0.618	9.62	8270C		3520C
TRIETHYLENE GLYCOL	10.4	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	443			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-1				Sampleno:	CAP-G-MW-1				
Date sampled: May 19, 2009				Sample type:	Groundwater				
LEAD	0.00310	J	J	MG/L	0.0014C	0.0100	6010B		3030C
BARIUM	0.0135	J	J	MG/L	0.0005C	0.100	6010B		3030C
CADMIUM	0.00206	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	11.7		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	3.41		J	MG/L	0.0462	1.00	300.0A		METHOD
CHROMIUM	0.00276	J	J	MG/L	0.00094	0.0100	6010B		3030C
FLUORIDE	0.286	J	J	MG/L	0.0780	1.00	300.0A		METHOD
SELENIUM	0.00430	J	J	MG/L	0.00261	0.0100	6010B		3030C
DIETHYLENE GLYCOL	13.1	J	J	MG/L	4.64	25.0	8015B		METHOD
TRIETHYLENE GLYCOL	16.9	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	125			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-2				Sampleno:	CAP-G-MW-2				
Date sampled: May 19, 2009				Sample type:	Groundwater				
LEAD	0.00176	J	J	MG/L	0.0014C	0.0100	6010B		3030C
BARIUM	0.0160	J	J	MG/L	0.0005C	0.100	6010B		3030C
ARSENIC	0.00551	J	J	MG/L	0.00267	0.0100	6010B		3030C
CADMIUM	0.000470	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	33.8		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	13.8		J	MG/L	0.231	5.00	300.0A		METHOD
FLUORIDE	0.239	J	J	MG/L	0.0780	1.00	300.0A		METHOD
1,4-DIOXANE	21.5			UG/L	0.630	9.80	8270C		3520C
DIETHYLENE GLYCOL	9.78	J	J	MG/L	4.64	25.0	8015B		METHOD
TRIETHYLENE GLYCOL	16.1	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	449			MG/L	11.4	40.0	2540C		METHOD

Sampling Point: MW-22				Sampleno:	CAP-G-MW-22				
Date sampled: May 20, 2009				Sample type:	Groundwater				
BARIUM	0.00784	J	J	MG/L	0.0005C	0.100	6010B		3030C
SILVER	0.00320	J	J	MG/L	0.0021E	0.0100	6010B		3030C
CADMIUM	0.000580	J	J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	19.5		J	MG/L	0.958	5.00	300.0A		METHOD
CHLORIDE	8.11		J	MG/L	0.0462	1.00	300.0A		METHOD
CHROMIUM	0.00191	J	J	MG/L	0.00094	0.0100	6010B		3030C

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Reporting Limit: MDL

Analyte/Parameter	Result	Qualifiers		Unit	Detection Limit		Analytical Methods		
		LAB	DDR		MDL	PQL	Analysis	Preprep-	Prep-
Sampling Point: MW-22		Sampleno:		CAP-G-MW-22					
Date sampled: May 20, 2009		Sample type:		Groundwater					
FLUORIDE	0.281	J	J	MG/L	0.0780	1.00	300.0A		METHOD
1,4-DIOXANE	2.91	J	J	UG/L	0.618	9.62	8270C		3520C
DIETHYLENE GLYCOL	6.16	J	J	MG/L	4.64	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	186			MG/L	11.4	40.0	2540C		METHOD
BIS(2-ETHYLHEXYL) PHTHALATE	2.91	J, B	B	UG/L	2.63	9.62	8270C		3520C

Sampling Point: MW-9		Sampleno:		CAP-G-MW-9					
Date sampled: May 20, 2009		Sample type:		Groundwater					
LEAD	0.00317	J	J	MG/L	0.0014C	0.0100	6010B		3030C
BARIUM	0.0304	J	J	MG/L	0.0005C	0.100	6010B		3030C
SILVER	0.00425	J	J	MG/L	0.0021E	0.0100	6010B		3030C
ARSENIC	0.00514	J	J	MG/L	0.00267	0.0100	6010B		3030C
CADMIUM	0.00226		J	MG/L	0.00022	0.0010C	6010B		3030C
SULFATE	2.02		J	MG/L	0.192	1.00	300.0A		METHOD
CHLORIDE	10.7		J	MG/L	0.0462	1.00	300.0A		METHOD
CHROMIUM	0.00437	J	J	MG/L	0.00094	0.0100	6010B		3030C
FLUORIDE	0.284	J	J	MG/L	0.0780	1.00	300.0A		METHOD
1,4-DIOXANE	75.1			UG/L	0.618	9.62	8270C		3520C
DIETHYLENE GLYCOL	5.54	J	J	MG/L	4.64	25.0	8015B		METHOD
TRIETHYLENE GLYCOL	11.1	J	J	MG/L	5.89	25.0	8015B		METHOD
TOTAL DISSOLVED SOLIDS	445			MG/L	11.4	40.0	2540C		METHOD