Midlands
Environmental
Consultants, Inc.

February 2, 2009

Mr. Joel P. Padgett, P.G., Hydrogeologist
Southwestern SC Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

FEB 03 2009

UNDERGROUND STORAGE
TANK PROGRAM

Subject: Aggressive Fluid Vapor Recovery Report
Nicklepumper #235
Estill, South Carolina
SCDHEC Site ID # 04877; CA #34810
MECI Project Number 09-2105A

Dear Mr. Padgett,

Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

AGGRESSIVE FLUID VAPOR RECOVERY

On January 8, 2009, MECI personnel conducted a site visit at Nicklepumper#235 to locate/gauge monitoring wells and to evaluate current site conditions. MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Nicklepumper #235 on January 19, 2009. The event was conducted on monitoring well MW-32 to remove free phase petroleum product. Free phase petroleum product was detected in monitoring well MW-32 prior to the AFVR event at a thickness of 0.02 feet. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was not detected in the well immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 0.36 pounds or approximately 0.06 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 0.05 pounds per hour. Concentrations of off gas produced during the event were recorded from 4.2 parts per million by volume (PPM) to 96.3 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 13.0 to 14.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1A.

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Itch

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Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2A. Monitoring well locations are depicted on attached Figure 1.

A total of 150 gallons of liquid was removed from MW-32 during this event. Free phase petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to Crandall Corporation of Lexington, S.C. for disposal. A disposal manifest for these fluids is attached at the end of this report.

QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

William R. Owen
Staff Scientist

Jeff L. Coleman
Project Scientist

Attachments:

TABLE 1A
AFVR MONITORING DATA
NICKLEPUMPER #235
ESTILL, SOUTH CAROLINA
MECI PROJECT NUMBER 09-2105A
SCDHEC SITE ID NUMBER 04877

Extraction Well	Date	Time (hh:mm)	Differential Time (hr)	Extraction Well Head Vacuum (in. Hg)	Off Gas Measurements				
					Concentration (PPM)	Offgas Velocity Ft/Min	Flow Rate CFM	Removal Rate Lbs/Hr	Interval Removal Lbs
MW-32	01/19/09	10:30	0.50	14.0	96.3	1200	108.00	0.12	0.06
	01/19/09	11:00	0.50	14.0	54.6	1200	108.00	0.07	0.04
	01/19/09	11:30	0.50	14.0	49.4	1210	108.90	0.06	0.03
	01/19/09	12:00	0.50	14.0	43.7	1230	110.70	0.06	0.03
	01/19/09	12:30	0.50	14.0	38.3	1260	113.40	0.05	0.03
	01/19/09	13:00	0.50	14.0	36.1	1330	119.70	0.05	0.03
	01/19/09	13:30	0.50	14.0	34.5	1230	110.70	0.05	0.02
	01/19/09	14:00	0.50	14.0	31.2	1240	111.60	0.04	0.02
	01/19/09	14:30	0.50	14.0	31.6	1220	109.80	0.04	0.02
	01/19/09	15:00	0.50	14.0	30.9	1210	108.90	0.04	0.02
	01/19/09	15:30	0.50	13.0	22.6	1350	121.50	0.03	0.02
	01/19/09	16:00	0.50	13.0	16.3	1410	126.90	0.02	0.01
	01/19/09	16:30	0.50	13.0	12.4	1530	137.70	0.02	0.01
	01/19/09	17:00	0.50	13.0	10.4	1520	136.80	0.02	0.01
	01/19/09	17:30	0.50	13.0	8.3	1520	136.80	0.01	0.01
	01/19/09	18:00	0.50	13.0	5.5	1510	135.90	0.01	0.00
	01/19/09	18:30	0.50	13.0	4.2	1510	135.90	0.01	0.00
									TOTAL **0.36**

Well Data:			Pre AFVR Event			Post AFVR Event			Corrected Depth to Water Change (ft)
Well No.	Diameter (in)	Screened Interval (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	
MW-32	2"	5-20	5.95	5.97	0.02	***	6.32	***	0.37

Vacuum Truck Information		Well ID	Stinger Depth
Subcontractor:	MECI	MW-32	6.00
Truck Operator:	R. Owen		
Stack I.D. (feet)	0.33 feet		
Corrected depth to water before AFVR Event in MW-32 =			5.95

Recovery / Disposal Information		
Hydro carbons Removed (vapor):	0.36	Pounds
Hydro carbons Removed (liquid):	0	Gallons
Total Hydrocarbons Removed:	0.06	Equivilant Gallons
Molecular Weight Utilized:	75	g / mole
Disposal Facility	Crandall Corporation	
Total Liquids Removed:	150	Gallons

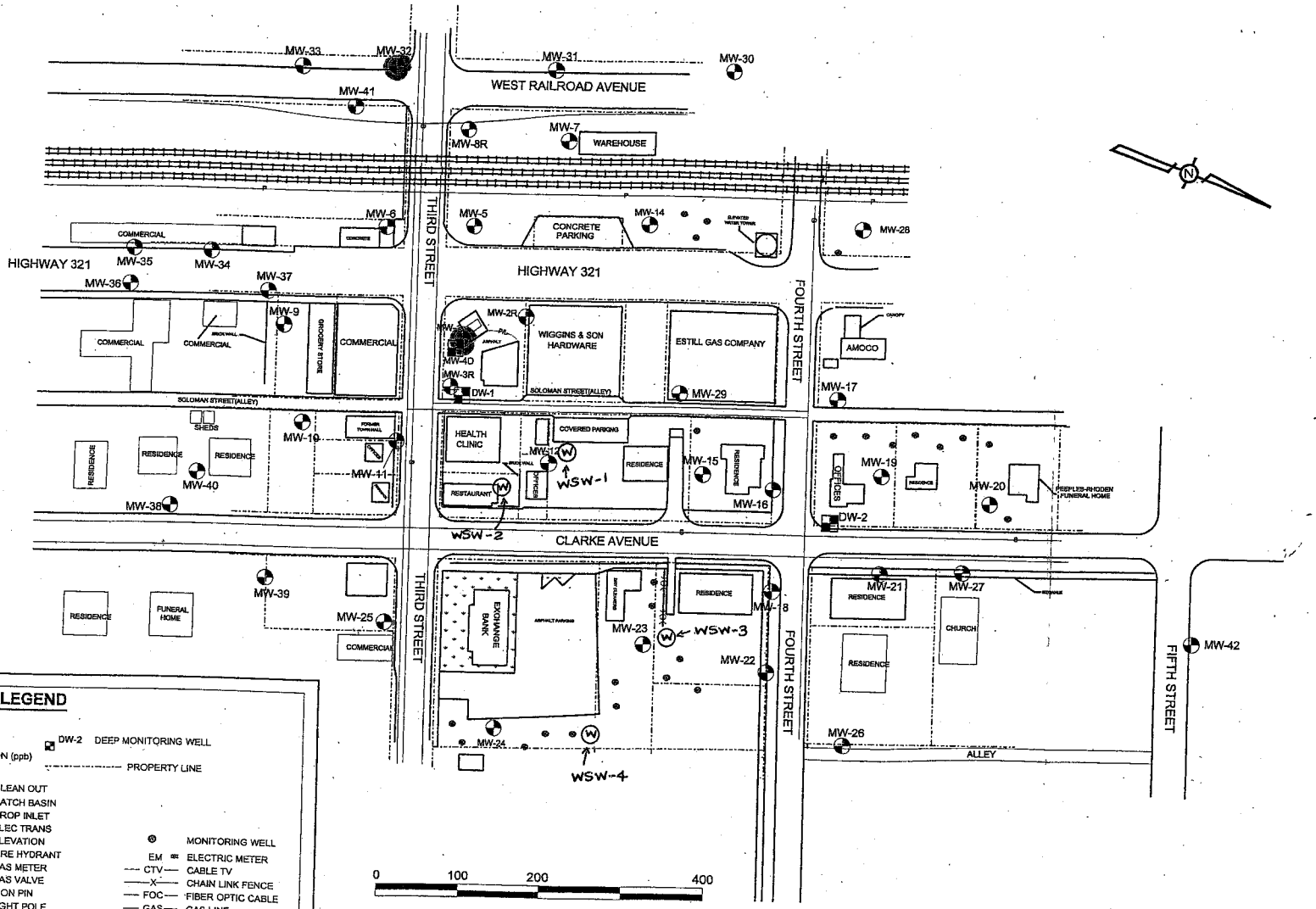
TABLE 2A
DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
NICKLEPUMPER #235
ESTILL, SOUTH CAROLINA
MECI PROJECT NUMBER 09-2105A
SCDHEC SITE ID NUMBER 04877

DIFFERENTIAL PRESSURE DATA

		Well Designation:		
		MW-8R	**MW-41**	**MW-33**
Nearest Extraction Well:		MW-32	MW-32	MW-32
Approximate Distance:		116 ft	36 ft	113 ft
Time	**Elapsed Time**	**Differential Pressure Readings (inches of water)**		
10:30	0.0	0	0	0
11:00	0.5	0	0	0
11:30	1.0	0	0	0
12:00	1.5	0	0	0
12:30	2.0	0	0	0
13:00	2.5	0	0	0
13:30	3.0	0	0	0
14:00	3.5	0	0	0
14:30	4.0	0	0	0
15:00	4.5	0	0	0
15:30	5.0	0	0	0
16:00	5.5	0	0	0
16:30	6.0	0	0	0
17:00	6.5	0	0	0
17:30	7.0	0	0	0
18:00	7.5	0	0	0
18:30	8.0	0	0	0
Maximum Change:		**0**	**0**	**0**

GROUNDWATER DRAWDOWN DATA

		Well Designation:		
		MW-8R	**MW-41**	**MW-33**
Nearest Extraction Well:		MW-32	MW-32	MW-32
Approximate Distance:		116 ft	36 ft	113 ft
Time	**Elapsed Time**	**Depth to Liquid (feet below of casing):**		
Prior to AFVR		6.78	5.48	6.23
14:30	4 hours	6.80	5.42	5.87
18:30	8 hours	6.76	5.45	5.51
Maximum Change:		0.04	0.06	0.72



LEGEND

MW-12 MONITORING WELL
CONTAMINANT CONCENTRATION (ppb)
DW-2 DEEP MONITORING WELL
PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	960	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD	GM	GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	GV	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE		

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Delivering innovative solutions to today's environmental concerns

DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

Crandall

C 149018

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. . . . . | Manifest Document No. 24913 | 2. Page 1 of 1

GENERATOR

3. Generator's Name and Mailing Address: Midlands Environmental
1144 Old Two Notch
Lexington, SC 29073

4. Generator's Phone ( ) (803) 808-2043

5. Transporter 1 Company Name: Crandall Corporation | 6. US EPA ID Number: SCD981864499 | A. Transporter's Phone: (803) 791-4800

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address:
Crandall Corporation
100 Rich-Lex Drive
Lexington, SC 29072

10. US EPA ID Number: SCD981864499 | C. Facility's Phone: (803) 791-4800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non - Hazardous Waste, Waste Water	01	TT	2360	G
b.				
c.				
d. • Brown Bros-04145-100gals. • Bumens-15724-175gals. • Southern gas-03913-40gals. • Stonewall Jackson-15581-150gals. • Null's exxon-12194-175gals • Pantry 329-03489-200gals.				

D. Additional Descriptions for Materials Listed Above
• Nickelpumper-04877-150gals. • Mynicks-07967-100gals. • Baycreek-18662-175gals.
• Nickelpumper 04877-125gals.
• Fm. Ford-00487-0gals.
• Pelzer one mart-00480-80gals. • Johnnies Market-08982-50gals. • Fm. carters-01349-160gals.

E. Handling Codes for Wastes Listed Above

FIELD SERVICE

15. Special Handling Instructions and Additional Information
• Shelton food-00877-50gals.
Service Call ID: GM0134913
• Pantry 3242-10gals.
• R+S Grocery-12342-180gals.
• Ridgeway section-03144-100gals.
• Two way mart-12708-150gals.
• Newberry Co. airport-15590-150gals.
• Wallons-12814-40gals.
Emergency Response: Infotrac - 800-535-5053
Caller must ID Crandall as registrant

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name | Signature | Month | Day | Year

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Chad Justice | Signature: Chad Justice | Month: 01 | Day: 30 | Year: 09

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month | Day | Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in item 19.

Printed/Typed Name | Signature | Month | Day | Year

GENERATOR COPY

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

UST DOCKET 8tech

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

APR 13 2010

Re: **Notice to Proceed-Groundwater Sampling**
Bid # IFB-33335-3/11/08-EMW; PO# 719459

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct twenty (20) groundwater-sampling events. The packets contain all necessary information for work to begin. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order # 719459 on the appropriate invoice submitted for payment against the facility.

UST Permit #	Facility	County	# wells	UST Project Manager	Sampling Due Date	Parameters-Groundwater	PACE CA#	MECI CA#
15971	Nesmith Well	Williamsburg	9	A. Smith	05/15/10	BTEXMN, DCA, & EDB	38247	38246
16263	Value Mart 1	Georgetown	14	D. Thoma	05/15/10	BTEXMN & DCA	38149	38150
13997	D&L Country Store	Georgetown	20	D. Thoma	05/15/10	BTEXMN & DCA	38147	38148
14541	Neely's Store	York	36	D. Thoma	05/15/10	BTEXMN, DCA, & EDB	38683	38684
09322	Smith's Grocery	York	29	D. Thoma	05/15/10	BTEXMN, DCA & EDB	38681	38682
15170	Silken Webb	Beaufort	10	J. Koon	05/15/10	BTEXMN, DCA, EDB, & Oxygenates	38550	38549
10917	Kathy's Grocery	Greenville	21	A. Smith	05/15/10	BTEXMN, DCA, & EDB	38592	38591
04735	Pavan Food Store	Greenville	5	A. Smith	05/15/10	BTEXMN, DCA, EDB, & total lead	29473	29474
09372	Handy Pantry 44	York	20	D. Thoma	05/15/10	BTEXMN, DCA, EDB, & Oxygenates	38663	38664
15385	Squire Village Store	York	22	A. Smith	05/15/10	BTEXMN, DCA, & EDB	38032	38033
15222	Sweatman Grocery	Dorchester	14	J. Padgett	05/15/10	BTEXMN, EDB, & Oxygenates	38562	38561
04877	Nicklepumper 235	Hampton	46	J. Padgett	05/15/10	BTEXMN, DCA, EDB, & total Lead	38600	38599
14793	Nik's Service Station	Hampton	32	J. Padgett	05/15/10	BTEXMN, DCA, EDB, & Oxygenates	38602	38601
03215	Florence Maint.	Florence	5	M. Rivers	05/15/10	BTEXMN	38677	38676
18231	Frm Hook's East	Horry	18	J. Martin	05/15/10	BTEXMN & DCA	38598	38596
09160	Rock Hill Maint.	York	15	D. Thoma	05/15/10	BTEXMN & DCA	38151	38152
09325	Hershman Gulf	York	13	D. Thoma	05/15/10	BTEXMN, DCA, & EDB	38159	38160

15866	Jennins Grocery	Greenville	17	S. Briney	05/15/10	BTEXMN	38765	38764
18876	Frm Reaves Station	Pickens	6	A. Smith	05/15/10	BTEXMN, DCA, EDB, & Oxygenates	38266	38265
19190	Bank of America	Spartanburg	11	A. Smith	05/15/10	BTEXMN, DCA, & EDB	38259	38258

MECI will perform services at the sites on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. Contact information has been provided in the information packet. The Department grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

Please contact me with the sampling schedule before commencing work at these facilities. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Information Packets
Approved Cost Agreements

cc: Renee Spencer, PACE Analytical, 9800 Kincey Ave. Ste. 100, Huntersville, NC, 28078 (w/ Approved CAs)
Technical Files (w/o. enc.)

Midlands Environmental Consultants, Inc.

August 9, 2010

UST
AUG 1 1 2010
PROGRAM

Mr. Joel Padgett, P.G.
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Groundwater Sampling
Nicklepumper #235
Estill, South Carolina
SCDHEC Site ID Number 04877, CA # 38599
MECI Project Number 10-2823
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Padgett,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Sampling for the referenced site.

On August 4, 2010, thirty-five monitoring wells and two water supply wells (WSW-1 and WSW-2) were sampled. Seventeen monitoring wells (MW-4D, MW-5, MW-7, MW-8R, MW-10, MW-11, MW-14 through MW-22, DW-1 and DW-2) were purged prior to sampling. Monitoring well MW-37 was gauged and contained 0.05 feet of free phase petroleum product. Six monitoring wells (MW-6, MW-9, MW-12, MW-23, MW-24 and MW-29) were not located. Monitoring well MW-1 was not sampled because it could not be opened. Two water supply wells (WSW-3 and WSW-4) were unable to be sampled because they were located behind locked gates. Groundwater samples obtained were transported to Pace Analytical Services, Inc. of Huntersville, NC for analysis.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 174.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

Brandon P. Kelly
Project Scientist

UST
DOCKET
#9

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Site Activity Summary

UST Permit #: 04877
Facility Name: Nicklepumper #235
County: Hampton
Field Personnel: Logan M., Alex W., John W., Kyle P.

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
MW-1	N	8/4/10	***	***	***	***	***	***	Could not open well, Nut in the middle of well lid shaped like a pentagon, Could not find anything at hardware store across the street to open well
MW-2R	Y	8/4/10	13:35	10-25	***	10.15	***	***	Odor
MW-3R	Y	8/4/10	13:50	10-25	***	10.02	***	***	Odor
MW-4D	Y	8/4/10	14:20	80-85	***	27.19	***	28.5	No Odor
MW-5	Y	8/4/10	10:35	15-25	***	9.02	***	8.0	Odor
MW-6	N	8/4/10	***	15-25	***	***	***	***	Not Located, Possibly under peanut stand
MW-7	Y	8/4/10	11:13	15-25	***	8.81	***	8.0	No Odor
MW-8R	Y	8/4/10	11:30	10-25	***	8.80	***	8.0	Odor
MW-9	N	8/4/10	***	15-25	***	***	***	***	Not Located
MW-10	Y	8/4/10	11:50	15-25	***	7.44	***	6.0	Odor
MW-11	Y	8/4/10	12:00	15-25	***	8.97	***	3.0	Slight Odor
MW-12	N	8/4/10	***	15-25	***	***	***	***	Not Located
MW-14	Y	8/4/10	10:53	15-25	***	9.41	***	8.0	No Odor
MW-15	Y	8/4/10	14:50	15-25	***	9.81	***	5.0	Odor
MW-16	Y	8/4/10	14:32	15-25	***	9.92	***	5.0	No Odor
								79.5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nicklepumper #235
County: Hampton
Field Personnel: Logan M., Alex W., John W., Kyle P.

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
MW-17	Y	8/4/10	16:10	15-25	***	9.62	***	5.5	No Odor
MW-18	Y	8/4/10	12:26	15-25	***	9.45	***	5.5	No Odor
MW-19	Y	8/4/10	15:23	15-25	***	9.61	***	5.5	No Odor
MW-20	Y	8/4/10	15:05	15-25	***	9.72	***	3.0	No Odor
MW-21	Y	8/4/10	15:38	15-25	***	9.31	***	5.5	No Odor
MW-22	Y	8/4/10	15:50	15-25	***	8.99	***	5.5	No Odor
MW-23	N	8/4/10	***	15-25	***	***	***	***	Not Located, Used metal detector
MW-24	N	8/4/10	***	15-25	***	***	***	***	Not Located, Used Metal Detector
MW-25	Y	8/4/10	11:50	5-20	***	8.36	***	***	No Odor
MW-26	Y	8/4/10	13:42	5-20	***	8.13	***	***	No Odor
MW-27	Y	8/4/10	13:47	5-20	***	9.18	***	***	No Odor
MW-28	Y	8/4/10	11:03	5-20	***	10.21	***	***	No Odor
MW-29	N	8/4/10	***	5-20	***	***	***	***	Not Located, Used metal detector
MW-30	Y	8/4/10	10:55	5-20	***	10.44	***	***	No Odor
MW-31	Y	8/4/10	10:48	5-20	***	9.75	***	***	No Odor
								110.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nicklepumper #235
County: Hampton
Field Personnel: Logan M., Alex W., John W., Kyle P.

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
MW-32	Y	8/4/10	10:35	5-20	***	7.90	***	***	Odor
MW-33	Y	8/4/10	10:41	5-20	***	7.53	***	***	No Odor
MW-34	Y	8/4/10	12:20	5-20	***	7.85	***	***	Strong Odor
MW-35	Y	8/4/10	12:15	5-20	***	7.35	***	***	No Odor
MW-36	Y	8/4/10	12:10	5-20	***	6.03	***	***	No Odor
MW-37	N	8/4/10	***	5-20	7.85	7.90	0.05	***	Product
MW-38	Y	8/4/10	11:58	5-20	***	6.75	***	***	No Odor
MW-39	Y	8/4/10	11:44	5-20	***	7.61	***	***	No Odor
MW-40	Y	8/4/10	12:02	5-20	***	6.41	***	***	No Odor
MW-41	Y	8/4/10	10:25	5-20	***	8.00	***	***	Slight Odor (Organic)
MW-42	Y	8/4/10	13:34	5-20	***	9.47	***	***	No Odor
DW-1	Y	8/4/10	15:25	90-95	***	32.25	***	32.0	No Odor
DW-2	Y	8/4/10	16:07	90-95	***	31.96	***	32.0	No Odor
WSW-1	Y	8/4/10	14:20	***	***	***	***	***	No Odor
WSW-2	Y	8/4/10	14:00	***	***	***	***	***	No Odor
								174.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nicklepumper #235
County: Hampton
Field Personnel: Logan M., Alex W., John W., Kyle P.

Midlands Environmental Consultants, Inc.
235-B Dooley Road, Lexington, SC 29073
(803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	# Gals. Purged	Comments
WSW-3	N	8/4/10	***	***	***	***	***	***	Not Sampled, Gate Locked, No One Home
WSW-4	N	8/4/10	***	***	***	***	***	***	Not Sampled, Well House Locked, No One Home
								174.0	**TOTAL GALLONS PURGED**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-4D

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	27.19		feet
Total Well Depth (TWD)	85		feet
Length of the water column (LWC=TWD-DGW)		57.81	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	9.42	gallons
3 casing volume (3 X CV)=	3	28.27	gallons

Total Volume of Water Purged Before Sampling 28.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:55	14:06	14:14	14:20				
pH (s.u.)	5.55	5.49	5.99	6.46				
Specific Conductivity (µmhos/cm)	175.2	180.3	163.8	166.4				
Water Temperature (°C)	25.4	24.7	23.9	23.5				
Dissolved Oxygen	0.84	0.71	0.58	0.52				
PID readings, if required								

Remarks: Sample Time: 14:20

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-5

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.05		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.95	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	2.60	gallons
3 casing volume (3 X CV)=	3	7.80	gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:25	10:28	10:32	10:35				
pH (s.u.)	5.76	5.81	5.80	7.35				
Specific Conductivity (µmhos/cm)	74.0	80.0	81.0	119.2				
Water Temperature (°C)	25.3	23.7	23.0	25.9				
Dissolved Oxygen	6.00	10.20	5.70	1.01				
PID readings, if required								

Remarks: Sample Time: 10:35

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-7

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	8.81			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			16.19	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	2.64	gallons
3 casing volume (3 X CV)=		3	7.92	gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:00	11:05	11:10	11:13				
pH (s.u.)	5.52	5.15	5.10	5.07				
Specific Conductivity (µmhos/cm)	171.2	179.8	176.7	175.5				
Water Temperature (°C)	25.0	24.0	23.5	23.4				
Dissolved Oxygen	0.87	0.90	0.94	0.92				
PID readings, if required								

Remarks: Sample Time: 11:13

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time

Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-8R

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	8.80		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		16.2	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.64	gallons
3 casing volume (3 X CV)=	3	7.92	gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:20	11:24	11:27	11:30				
pH (s.u.)	5.27	5.58	5.62	5.61				
Specific Conductivity (µmhos/cm)	71.5	70.9	67.8	69.8				
Water Temperature (°C)	25.6	25.0	24.2	24.0				
Dissolved Oxygen	0.66	0.50	0.51	0.56				
PID readings, if required								

Remarks: Sample Time: 11:30

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-10

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	7.44		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		17.56	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	2.86	gallons
3 casing volume (3 X CV)=	3	8.59	gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:40	11:44	11:50					
pH (s.u.)	6.15	6.30	6.34					
Specific Conductivity (µmhos/cm)	250.2	268.5	271.8					
Water Temperature (°C)	24.6	22.2	21.9					
Dissolved Oxygen	0.81	0.85	0.87					
PID readings, if required								

Remarks: Sample Time: 11:50 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-11

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	8.97		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		16.03	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.61	gallons
3 casing volume (3 X CV)=	3	7.84	gallons

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:55	12:00						
pH (s.u.)	6.01	6.13						
Specific Conductivity (µmhos/cm)	86.7	87.2						
Water Temperature (°C)	24.2	23.6						
Dissolved Oxygen	0.80	0.74						
PID readings, if required								

Remarks: Sample Time: 12:00 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-14

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.41		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.59	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.54	gallons
3 casing volume (3 X CV)=	3	7.62	gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:45	10:48	10:51	10:53				
pH (s.u.)	5.27	5.32	4.98	4.95				
Specific Conductivity (µmhos/cm)	84.5	81.0	79.7	77.0				
Water Temperature (°C)	23.4	22.1	21.9	21.8				
Dissolved Oxygen	0.98	1.05	0.99	1.05				
PID readings, if required								

Remarks: Sample Time: 10:53

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-15

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.81		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.19	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.48	gallons
3 casing volume (3 X CV)=	3	7.43	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:40	14:44	14:50					
pH (s.u.)	5.61	6.00	6.10					
Specific Conductivity (µmhos/cm)	170.8	170.7	170.2					
Water Temperature (°C)	21.9	20.9	20.8					
Dissolved Oxygen	0.68	0.57	0.52					
PID readings, if required								

Remarks: Sample Time: 14:50 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-16

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.92		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.08	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.46	gallons
3 casing volume (3 X CV)=	3	7.37	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:25	14:29	14:32					
pH (s.u.)	6.10	6.09	6.04					
Specific Conductivity (µmhos/cm)	92.5	100.8	107.5					
Water Temperature (°C)	22.2	20.9	20.7					
Dissolved Oxygen	0.51	0.52	0.55					
PID readings, if required								

Remarks: Sample Time: 14:32 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-17

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.62		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.38	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	2.51	gallons
3 casing volume (3 X CV)=	3	7.52	gallons

Total Volume of Water Purged Before Sampling 5.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	16:00	16:05	16:10					
pH (s.u.)	5.00	4.97	4.99					
Specific Conductivity (µmhos/cm)	65.0	65.0	64.0					
Water Temperature (°C)	26.6	25.4	25.2					
Dissolved Oxygen	15.30	14.80	14.70					
PID readings, if required								

Remarks: Sample Time: 16:10 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time

Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-18

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.45		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.55	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	2.53	gallons
3 casing volume (3 X CV)=	3	7.60	gallons

Total Volume of Water Purged Before Sampling 5.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:20	12:24	12:26					
pH (s.u.)	5.24	5.40	5.44					
Specific Conductivity (µmhos/cm)	50.3	56.2	59.1					
Water Temperature (°C)	24.7	23.4	23.0					
Dissolved Oxygen	0.92	0.87	0.84					
PID readings, if required								

Remarks: Sample Time: 12:26 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-19

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	9.61			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			15.39	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	2.51	gallons
3 casing volume (3 X CV)=		3	7.53	gallons

Total Volume of Water Purged Before Sampling 5.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:15	15:19	15:23					
pH (s.u.)	4.82	4.88	4.87					
Specific Conductivity (µmhos/cm)	54.0	58.0	59.0					
Water Temperature (°C)	22.7	22.3	22.1					
Dissolved Oxygen	8.50	8.00	8.00					
PID readings, if required								

Remarks: Sample Time: 15:23 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time

Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-20

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	9.72			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			15.28	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	2.49	gallons
3 casing volume (3 X CV)=		3	7.47	gallons

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:00	15:05						
pH (s.u.)	4.78	4.52						
Specific Conductivity (µmhos/cm)	63.0	67.0						
Water Temperature (°C)	23.9	23.5						
Dissolved Oxygen	7.30	7.10						
PID readings, if required								

Remarks: Sample Time: 15:05 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-21

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	9.31		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		15.69	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.56	gallons
3 casing volume (3 X CV)=	3	7.67	gallons

Total Volume of Water Purged Before Sampling 5.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:30	15:34	15:38					
pH (s.u.)	5.04	5.05	5.05					
Specific Conductivity (µmhos/cm)	46.0	50.0	54.0					
Water Temperature (°C)	25.1	23.9	23.6					
Dissolved Oxygen	8.50	6.00	5.50					
PID readings, if required								

Remarks: Sample Time: 15:38 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** MW-22

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	8.99		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		16.01	feet
1 casing volume (CV=LWC X C)= _____ X	0.163	2.61	gallons
3 casing volume (3 X CV)=	3	7.83	gallons

Total Volume of Water Purged Before Sampling 5.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:42	15:45	15:50					
pH (s.u.)	4.86	4.87	4.89					
Specific Conductivity (µmhos/cm)	54.0	54.0	52.0					
Water Temperature (°C)	23.9	22.8	22.6					
Dissolved Oxygen	14.70	15.70	15.90					
PID readings, if required								

Remarks: Sample Time: 15:50 Parameter within 10 %

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** DW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	32.25			feet
Total Well Depth (TWD)	95			feet
Length of the water column (LWC=TWD-DGW)			62.75	feet
1 casing volume (CV=LWC X C)=	X	0.163	10.23	gallons
3 casing volume (3 X CV)=		3	30.68	gallons

Total Volume of Water Purged Before Sampling 32 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:54	15:03	15:13	15:25				
pH (s.u.)	10.43	10.78	10.93	10.57				
Specific Conductivity (µmhos/cm)	619.0	647.0	664.0	701.0				
Water Temperature (°C)	24.9	24.3	22.8	22.8				
Dissolved Oxygen	0.82	1.02	0.69	0.62				
PID readings, if required								

Remarks: Sample Time: 15:25

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 8/4/2010

Field Personnel: Logan M., Alex W., John W., and Kyle P.

General Weather Conditions: Sunny

Ambient Air Temperature: 28.0 °C

Quality Assurance

pH Meter	YSI Model 550A	Conductivity Meter	
serial no.	02A0831	serial no.	02A0831
pH=4.0		standard	X
pH=7.0	X	standard	
pH=10.0		standard	

Chain of Custody

Relinquished by Date/Time

Received by Date/Time

Facility Name: Nicklepumper 235

Site ID#: 04877 **Monitoring Well #** DW-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

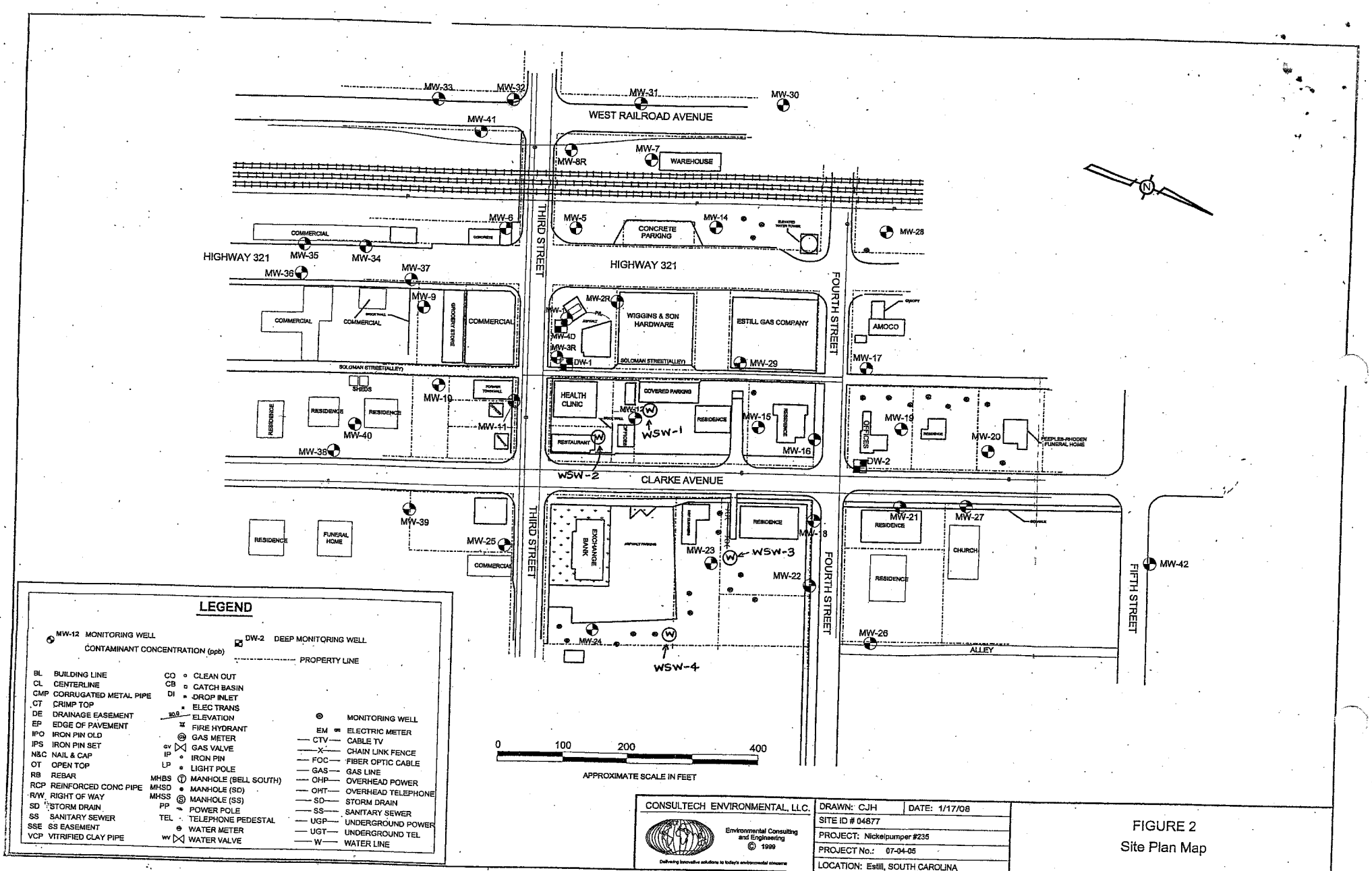
* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	31.96			feet
Total Well Depth (TWD)	95			feet
Length of the water column (LWC=TWD-DGW)			63.04	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	10.28	gallons
3 casing volume (3 X CV)=		3	30.83	gallons

Total Volume of Water Purged Before Sampling 32 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:38	15:48	15:57	16:07				
pH (s.u.)	11.14	11.23	11.33	11.30				
Specific Conductivity (µmhos/cm)	2061	2127	2096	2102				
Water Temperature (°C)	24.2	22.8	21.7	21.8				
Dissolved Oxygen	0.86	1.02	0.93	0.94				
PID readings, if required								

Remarks: Sample Time: 16:07



LEGEND

MW-12 MONITORING WELL
CONTAMINANT CONCENTRATION (ppb)
DW-2 DEEP MONITORING WELL
PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	90.0	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD	GM	GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	GV	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE		

CONSULTECH ENVIRONMENTAL, LLC.
Environmental Consulting and Engineering
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Delivering innovative solutions to today's environmental concerns

DRAWN: CJH	DATE: 1/17/08
SITE ID # 04677	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

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Page: 1 of 4

1381294

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia SC 29201
Email To:
Phone: ( ) Fax: ( )
Requested Due Date/TAT:

Section B Required Project Information:

Report To: Tommie
Copy To:
Purchase Order No.:
Project Name: Hi Point #Pur 737
Project Number: 04877/CA 38600

Section C Invoice Information:

Attention: Finance (D. Tomal)
Company Name: SCDHEC-UST
Address:
Pace Quote Reference:
Pace Project Manager: K Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, MTBE, Naphthalene (8260B)	1,2 DCA	EDB (504.1)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-1~~																							Could not open
2	MW-2R	WT	G			8/4	1:35		7			1	6						X	X	X	X		odor
3	MW-3R						1:50																	Odor
4	MW-4D						2:20																	no odor
5	MW-5						10:35																	odor
6	~~MW-6~~																							Not located
7	MW-7						11:13																	no odor
8	MW-8R						11:30																	odor
9	~~MW-9~~																							Not located
10	MW-10						11:50																	odor
11	MW-11	WT	G			8/4	12:00		7			1	6						X	X	X	X		slight odor
12	~~MW-12~~																							Not located

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report to J. Kolnar		8-16-10	10:14		8/16/10	10:14	

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pulsinger
SIGNATURE of SAMPLER:
DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 2 of 4

1381293

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC - UST	Report To:	Attention:
Address: 2600 Bull Street Columbia, SC	Copy To:	Company Name: SCDHEC - UST
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: Multiple Sites	Pace Project Manager:
Requested Due Date/TAT:	Project Number: 04277 / CA 38600	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information (SAMPLE ID)	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	EDB (8011)	1,2 DCA	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-14	WT	G			8/4	10:53		7			1	6						X	X	X		
2	MW-15						14:54																	no odor
3	MW-16						14:32																	odor
4	MW-17						16:10																	no odor
5	MW-18						12:26																	no odor
6	MW-19						15:23																	no odor
7	MW-20						15:05																	no odor
8	MW-21						15:38																	no odor
9	MW-22						15:50																	no odor
10	~~MW-23~~																							Not Located
11	~~MW-24~~																							Not Located
12	MW-25	WT	G			8/4	11:50		7			1	6						X	X	X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
		8/6/10	10:41		8/6/10	1014	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Ludwig

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

2

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 3 of 4

1381296

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC - UST	Report To:	Attention:
Address:	Copy To:	Company Name: SCDHEC - UST
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name:	Pace Project Manager:
Requested Due Date/TAT:	Project Number: CH2TTCH 36000	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	PIX, Naph, MTBE (8260B)	1,2 DCA	EDB (8011)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-26	WT	G			8/4	13:42		7			1	6						X	X	X	X		No odor
2	MW-27						12:42																		No odor
3	MW-28						11:09																		No odor
4	~~MW-29~~																								Not located
5	MW-30						10:55																		No odor
6	MW-31						11:44																		No odor
7	MW-32						10:35																		odor
8	MW-33						10:41																		No odor
9	MW-34						12:20																		Strong odor
10	MW-35						12:15																		no odor
11	MW-36	WT	G			8/4	12:16		7			1	6						X	X	X	X			no odor
12	~~MW-37~~																								Product

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Follow FAX		8/4/10	1011		8/4/10	1017
VOCs						

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Rudy

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

2

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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Page: 4 of 4

1381295

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC - UST	Report To: P Thorn	Attention: Shanae (D. Thorn)
Address: 2[illegible] East [illegible]	Copy To:	Company Name: [illegible]
[illegible] SC 2[illegible]		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: [illegible] Fax: [illegible]	Project Name: Michelin Paper 225	Pace Project Manager: K Spencer
Requested Due Date/TAT:	Project Number: 04-77/CA 38600	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information — SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-38	WT	G			8/4	11:56		7			1	6					X		no odor
2	MW-39						11:44													no odor
3	MW-40						12:03													no odor
4	MW-41						10:25													slight odor (organic)
5	MW-42						13:34													No odor
6	DW-1						12:35													No odor
7	PW-2						16:07		7			1	6					X		No odor
8	PWSW-1						14:24		6				6					X		No odor
9	WSW-2	WT	G			8/4	14:20		6				6					X		No odor
10	~~WSW-3~~																			Not functioning
11	~~WSW-4~~																			Not functioning
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please Relinquish	[signature]	8/6/10	10:11	[signature] / Pace	8/6/10	1014	
Various							

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Midlands
Environmental
Consultants, Inc.

August 9, 2010

Re: Treatment of Purge Water
Nicklepumper #235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 10-2823

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 174.0 gallons were treated on August 4, 2010 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
2225 Riverside Dr.
Asheville, NC 28804
(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 13, 2010



Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Dear Ms. Thoma:
Enclosed are the analytical results for sample(s) received by the laboratory on August 06, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Renee Spencer

Renee Spencer

renee.spencer@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/LELAP Certification #: 04034
New Jersey Certification #: NC012
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
Pennsylvania Certification #: 68-00784
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031

Asheville Certification IDs
2225 Riverside Dr., Asheville, NC 28804
Connecticut Certification #: PH-0106
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
New Jersey Certification #: NC011
North Carolina Bioassay Certification #: 9
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
Pennsylvania Certification #: 68-03578
South Carolina Bioassay Certification #: 99030002
South Carolina Certification #: 99030001
Virginia Certification #: 00072

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SAMPLE SUMMARY

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9275072001	MW-2R	Water	08/05/10 13:35	08/06/10 15:45
9275072002	MW-3R	Water	08/05/10 13:50	08/06/10 15:45
9275072003	MW-4D	Water	08/05/10 14:20	08/06/10 15:45
9275072004	MW-5	Water	08/05/10 10:35	08/06/10 15:45
9275072005	MW-7	Water	08/05/10 11:13	08/06/10 15:45
9275072006	MW-8R	Water	08/05/10 11:30	08/06/10 15:45
9275072007	MW-10	Water	08/05/10 11:50	08/06/10 15:45
9275072008	MW-11	Water	08/05/10 12:00	08/06/10 15:45
9275072009	MW-14	Water	08/04/10 10:53	08/06/10 15:45
9275072010	MW-15	Water	08/04/10 14:50	08/06/10 15:45
9275072011	MW-16	Water	08/04/10 14:32	08/06/10 15:45
9275072012	MW-17	Water	08/04/10 16:10	08/06/10 15:45
9275072013	MW-18	Water	08/04/10 12:26	08/06/10 15:45
9275072014	MW-19	Water	08/04/10 15:23	08/06/10 15:45
9275072015	MW-20	Water	08/04/10 15:05	08/06/10 15:45
9275072016	MW-21	Water	08/04/10 15:38	08/06/10 15:45
9275072017	MW-22	Water	08/04/10 15:50	08/06/10 15:45
9275072018	MW-25	Water	08/04/10 11:50	08/06/10 15:45
9275072019	MW-26	Water	08/04/10 13:42	08/06/10 15:45
9275072020	MW-27	Water	08/04/10 13:47	08/06/10 15:45
9275072021	MW-28	Water	08/04/10 11:03	08/06/10 15:45
9275072022	MW-30	Water	08/04/10 10:55	08/06/10 15:45
9275072023	MW-31	Water	08/04/10 10:48	08/06/10 15:45
9275072024	MW-32	Water	08/04/10 10:35	08/06/10 15:45
9275072025	MW-33	Water	08/04/10 10:41	08/06/10 15:45
9275072026	MW-34	Water	08/04/10 12:20	08/06/10 15:45
9275072027	MW-35	Water	08/04/10 12:15	08/06/10 15:45
9275072028	MW-36	Water	08/04/10 12:10	08/06/10 15:45
9275072029	MW-38	Water	08/04/10 11:56	08/06/10 15:45
9275072030	MW-39	Water	08/04/10 11:44	08/06/10 15:45
9275072031	MW-40	Water	08/04/10 12:02	08/06/10 15:45
9275072032	MW-41	Water	08/04/10 10:25	08/06/10 15:45
9275072033	MW-42	Water	08/04/10 13:34	08/06/10 15:45
9275072034	DW-1	Water	08/04/10 15:25	08/06/10 15:45
9275072035	DW-2	Water	08/04/10 16:07	08/06/10 15:45
9275072036	WSW-1	Water	08/04/10 14:20	08/06/10 15:45
9275072037	WSW-2	Water	08/04/10 14:00	08/06/10 15:45

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9275072001	MW-2R	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072002	MW-3R	EPA 8011	CAH	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072003	MW-4D	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072004	MW-5	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072005	MW-7	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072006	MW-8R	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072007	MW-10	EPA 8011	CAH	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072008	MW-11	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	BLC, MCK	13
9275072009	MW-14	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072010	MW-15	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072011	MW-16	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072012	MW-17	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072013	MW-18	EPA 8011	RES	2

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 6010	JMW	1
		EPA 8260	BLC, MCK	13
9275072014	MW-19	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072015	MW-20	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072016	MW-21	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	BLC, MCK	13
9275072017	MW-22	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072018	MW-25	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072019	MW-26	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072020	MW-27	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072021	MW-28	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072022	MW-30	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072023	MW-31	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072024	MW-32	EPA 8011	CAH	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072025	MW-33	EPA 8011	RES	2
		EPA 6010	JMW	1

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 8260	MCK	13
9275072026	MW-34	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072027	MW-35	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072028	MW-36	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072029	MW-38	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072030	MW-39	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072031	MW-40	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072032	MW-41	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072033	MW-42	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072034	DW-1	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072035	DW-2	EPA 8011	RES	2
		EPA 6010	JMW	1
		EPA 8260	MCK	13
9275072036	WSW-1	EPA 8011	RES	2
		EPA 8260	MCK	13
9275072037	WSW-2	EPA 8011	RES	2
		EPA 8260	MCK	13

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-2R **Lab ID: 9275072001** Collected: 08/05/10 13:35 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:42	08/10/10 11:23	106-93-4	
1-Chloro-2-bromopropane (S)	91	%	60-140		1	08/09/10 15:42	08/10/10 11:23	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 18:35	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 00:28	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 00:28	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 00:28	100-41-4	
Methyl-tert-butyl ether	**2.2J**	ug/L	5.0	2.0	1		08/11/10 00:28	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 00:28	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 00:28	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 00:28	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 00:28	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 00:28	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		08/11/10 00:28	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		08/11/10 00:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		08/11/10 00:28	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/11/10 00:28	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-3R **Lab ID: 9275072002** Collected: 08/05/10 13:50 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**2.4**	ug/L	0.098	0.098	5	08/09/10 15:42	08/10/10 14:02	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		5	08/09/10 15:42	08/10/10 14:02	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 18:38	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**8570**	ug/L	500	120	100		08/09/10 21:24	71-43-2	
1,2-Dichloroethane	ND	ug/L	500	130	100		08/09/10 21:24	107-06-2	
Ethylbenzene	**1180**	ug/L	500	110	100		08/09/10 21:24	100-41-4	
Methyl-tert-butyl ether	**348J**	ug/L	500	200	100		08/09/10 21:24	1634-04-4	
Naphthalene	**415J**	ug/L	500	290	100		08/09/10 21:24	91-20-3	
Toluene	**241J**	ug/L	500	180	100		08/09/10 21:24	108-88-3	
Xylene (Total)	**975J**	ug/L	1000	270	100		08/09/10 21:24	1330-20-7	
m&p-Xylene	**916J**	ug/L	1000	270	100		08/09/10 21:24	179601-23-1	
o-Xylene	ND	ug/L	500	170	100		08/09/10 21:24	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		100		08/09/10 21:24	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		100		08/09/10 21:24	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	70-130		100		08/09/10 21:24	17060-07-0	
Toluene-d8 (S)	98	%	70-130		100		08/09/10 21:24	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-4D **Lab ID: 9275072003** Collected: 08/05/10 14:20 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:42	08/10/10 12:25	106-93-4	
1-Chloro-2-bromopropane (S)	96	%	60-140		1	08/09/10 15:42	08/10/10 12:25	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 18:49	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/09/10 21:50	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/09/10 21:50	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/09/10 21:50	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/09/10 21:50	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/09/10 21:50	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/09/10 21:50	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/09/10 21:50	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/09/10 21:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/09/10 21:50	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		08/09/10 21:50	460-00-4	
Dibromofluoromethane (S)	117	%	70-130		1		08/09/10 21:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	122	%	70-130		1		08/09/10 21:50	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/09/10 21:50	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-5 **Lab ID: 9275072004** Collected: 08/05/10 10:35 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:42	08/10/10 12:45	106-93-4	
1-Chloro-2-bromopropane (S)	83	%	60-140		1	08/09/10 15:42	08/10/10 12:45	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 18:56	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	25.0	6.0	5		08/09/10 23:34	71-43-2	
1,2-Dichloroethane	ND	ug/L	25.0	6.5	5		08/09/10 23:34	107-06-2	
Ethylbenzene	**841**	ug/L	25.0	5.5	5		08/09/10 23:34	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	10.0	5		08/09/10 23:34	1634-04-4	
Naphthalene	**321**	ug/L	25.0	14.5	5		08/09/10 23:34	91-20-3	
Toluene	**107**	ug/L	25.0	9.0	5		08/09/10 23:34	108-88-3	
Xylene (Total)	**1190**	ug/L	50.0	13.5	5		08/09/10 23:34	1330-20-7	
m&p-Xylene	**785**	ug/L	50.0	13.5	5		08/09/10 23:34	179601-23-1	
o-Xylene	**409**	ug/L	25.0	8.5	5		08/09/10 23:34	95-47-6	
4-Bromofluorobenzene (S)	112	%	70-130		5		08/09/10 23:34	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		5		08/09/10 23:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		5		08/09/10 23:34	17060-07-0	
Toluene-d8 (S)	100	%	70-130		5		08/09/10 23:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-7 **Lab ID: 9275072005** Collected: 08/05/10 11:13 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:42	08/10/10 13:06	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	08/09/10 15:42	08/10/10 13:06	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:13	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/09/10 22:15	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/09/10 22:15	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/09/10 22:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/09/10 22:15	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/09/10 22:15	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/09/10 22:15	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/09/10 22:15	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/09/10 22:15	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/09/10 22:15	95-47-6	
4-Bromofluorobenzene (S)	104	%	70-130		1		08/09/10 22:15	460-00-4	
Dibromofluoromethane (S)	112	%	70-130		1		08/09/10 22:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	118	%	70-130		1		08/09/10 22:15	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		08/09/10 22:15	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-8R **Lab ID: 9275072006** Collected: 08/05/10 11:30 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:42	08/10/10 13:27	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	08/09/10 15:42	08/10/10 13:27	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:16	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	10.0	2.4	2		08/10/10 00:30	71-43-2	D3
1,2-Dichloroethane	ND	ug/L	10.0	2.6	2		08/10/10 00:30	107-06-2	
Ethylbenzene	**37.7**	ug/L	10.0	2.2	2		08/10/10 00:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	4.0	2		08/10/10 00:30	1634-04-4	
Naphthalene	**129**	ug/L	10.0	5.8	2		08/10/10 00:30	91-20-3	
Toluene	ND	ug/L	10.0	3.6	2		08/10/10 00:30	108-88-3	
Xylene (Total)	ND	ug/L	20.0	5.4	2		08/10/10 00:30	1330-20-7	
m&p-Xylene	ND	ug/L	20.0	5.4	2		08/10/10 00:30	179601-23-1	
o-Xylene	ND	ug/L	10.0	3.4	2		08/10/10 00:30	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		2		08/10/10 00:30	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		2		08/10/10 00:30	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	70-130		2		08/10/10 00:30	17060-07-0	
Toluene-d8 (S)	99	%	70-130		2		08/10/10 00:30	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-10 **Lab ID: 9275072007** Collected: 08/05/10 11:50 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**4.7**	ug/L	0.19	0.19	10	08/09/10 15:42	08/10/10 14:53	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		10	08/09/10 15:42	08/10/10 14:53	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:20	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**8400**	ug/L	500	120	100		08/09/10 22:41	71-43-2	
1,2-Dichloroethane	ND	ug/L	500	130	100		08/09/10 22:41	107-06-2	
Ethylbenzene	**1370**	ug/L	500	110	100		08/09/10 22:41	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	500	200	100		08/09/10 22:41	1634-04-4	
Naphthalene	**429J**	ug/L	500	290	100		08/09/10 22:41	91-20-3	
Toluene	**3400**	ug/L	500	180	100		08/09/10 22:41	108-88-3	
Xylene (Total)	**4360**	ug/L	1000	270	100		08/09/10 22:41	1330-20-7	
m&p-Xylene	**3090**	ug/L	1000	270	100		08/09/10 22:41	179601-23-1	
o-Xylene	**1270**	ug/L	500	170	100		08/09/10 22:41	95-47-6	
4-Bromofluorobenzene (S)	108	%	70-130		100		08/09/10 22:41	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		100		08/09/10 22:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		100		08/09/10 22:41	17060-07-0	
Toluene-d8 (S)	99	%	70-130		100		08/09/10 22:41	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-11 **Lab ID: 9275072008** Collected: 08/05/10 12:00 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:42	08/10/10 14:09	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	08/09/10 15:42	08/10/10 14:09	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:23	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**702**	ug/L	50.0	12.0	10		08/11/10 14:27	71-43-2	
1,2-Dichloroethane	**2.7J**	ug/L	5.0	1.3	1		08/11/10 00:46	107-06-2	
Ethylbenzene	**26.3**	ug/L	5.0	1.1	1		08/11/10 00:46	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 00:46	1634-04-4	
Naphthalene	**27.5**	ug/L	5.0	2.9	1		08/11/10 00:46	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 00:46	108-88-3	
Xylene (Total)	**3.2J**	ug/L	10.0	2.7	1		08/11/10 00:46	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 00:46	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 00:46	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/11/10 00:46	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		08/11/10 00:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		08/11/10 00:46	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/11/10 00:46	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-14 **Lab ID: 9275072009** Collected: 08/04/10 10:53 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:42	08/10/10 14:29	106-93-4	
1-Chloro-2-bromopropane (S)	90	%	60-140		1	08/09/10 15:42	08/10/10 14:29	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:27	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/09/10 23:06	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/09/10 23:06	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/09/10 23:06	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/09/10 23:06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/09/10 23:06	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/09/10 23:06	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/09/10 23:06	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/09/10 23:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/09/10 23:06	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		08/09/10 23:06	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		08/09/10 23:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		08/09/10 23:06	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		08/09/10 23:06	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-15 **Lab ID: 9275072010** Collected: 08/04/10 14:50 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.13**	ug/L	0.019	0.019	1	08/09/10 14:28	08/09/10 21:47	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	08/09/10 14:28	08/09/10 21:47	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:30	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**635**	ug/L	25.0	6.0	5		08/10/10 21:38	71-43-2	
1,2-Dichloroethane	**11.3J**	ug/L	25.0	6.5	5		08/10/10 21:38	107-06-2	
Ethylbenzene	**214**	ug/L	25.0	5.5	5		08/10/10 21:38	100-41-4	
Methyl-tert-butyl ether	**110**	ug/L	25.0	10.0	5		08/10/10 21:38	1634-04-4	
Naphthalene	**169**	ug/L	25.0	14.5	5		08/10/10 21:38	91-20-3	
Toluene	**13.8J**	ug/L	25.0	9.0	5		08/10/10 21:38	108-88-3	
Xylene (Total)	**157**	ug/L	50.0	13.5	5		08/10/10 21:38	1330-20-7	
m&p-Xylene	**42.5J**	ug/L	50.0	13.5	5		08/10/10 21:38	179601-23-1	
o-Xylene	**114**	ug/L	25.0	8.5	5		08/10/10 21:38	95-47-6	
4-Bromofluorobenzene (S)	100	%	70-130		5		08/10/10 21:38	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		5		08/10/10 21:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	70-130		5		08/10/10 21:38	17060-07-0	
Toluene-d8 (S)	100	%	70-130		5		08/10/10 21:38	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-16 **Lab ID: 9275072011** Collected: 08/04/10 14:32 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.17**	ug/L	0.020	0.020	1	08/09/10 14:29	08/09/10 22:08	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	08/09/10 14:29	08/09/10 22:08	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:34	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**1080**	ug/L	50.0	12.0	10		08/11/10 11:07	71-43-2	
1,2-Dichloroethane	**35.9J**	ug/L	50.0	13.0	10		08/11/10 11:07	107-06-2	
Ethylbenzene	**49.9J**	ug/L	50.0	11.0	10		08/11/10 11:07	100-41-4	
Methyl-tert-butyl ether	**678**	ug/L	50.0	20.0	10		08/11/10 11:07	1634-04-4	
Naphthalene	**77.0**	ug/L	50.0	29.0	10		08/11/10 11:07	91-20-3	
Toluene	ND	ug/L	50.0	18.0	10		08/11/10 11:07	108-88-3	
Xylene (Total)	ND	ug/L	100	27.0	10		08/11/10 11:07	1330-20-7	
m&p-Xylene	ND	ug/L	100	27.0	10		08/11/10 11:07	179601-23-1	
o-Xylene	ND	ug/L	50.0	17.0	10		08/11/10 11:07	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		10		08/11/10 11:07	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		10		08/11/10 11:07	1868-53-7	
1,2-Dichloroethane-d4 (S)	105	%	70-130		10		08/11/10 11:07	17060-07-0	
Toluene-d8 (S)	104	%	70-130		10		08/11/10 11:07	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-17 **Lab ID: 9275072012** Collected: 08/04/10 16:10 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 14:29	08/09/10 22:28	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	08/09/10 14:29	08/09/10 22:28	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:37	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 01:04	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 01:04	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 01:04	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 01:04	1634-04-4	
Naphthalene	**3.6J**	ug/L	5.0	2.9	1		08/11/10 01:04	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 01:04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 01:04	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 01:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 01:04	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/11/10 01:04	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		08/11/10 01:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		08/11/10 01:04	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/11/10 01:04	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-18 **Lab ID: 9275072013** Collected: 08/04/10 12:26 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/11/10 12:22	08/11/10 18:51	106-93-4	
1-Chloro-2-bromopropane (S)	81	%	60-140		1	08/11/10 12:22	08/11/10 18:51	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:40	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**330**	ug/L	50.0	12.0	10		08/11/10 14:45	71-43-2	
1,2-Dichloroethane	**20.0**	ug/L	5.0	1.3	1		08/11/10 01:23	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 01:23	100-41-4	
Methyl-tert-butyl ether	**79.4**	ug/L	5.0	2.0	1		08/11/10 01:23	1634-04-4	
Naphthalene	**7.2**	ug/L	5.0	2.9	1		08/11/10 01:23	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 01:23	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 01:23	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 01:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 01:23	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		08/11/10 01:23	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		08/11/10 01:23	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		08/11/10 01:23	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/11/10 01:23	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-19 **Lab ID: 9275072014** Collected: 08/04/10 15:23 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 14:29	08/10/10 00:11	106-93-4	
1-Chloro-2-bromopropane (S)	86	%	60-140		1	08/09/10 14:29	08/10/10 00:11	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:43	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 01:41	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 01:41	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 01:41	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 01:41	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 01:41	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 01:41	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 01:41	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 01:41	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 01:41	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/11/10 01:41	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		08/11/10 01:41	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		08/11/10 01:41	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/11/10 01:41	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-20 **Lab ID: 9275072015** Collected: 08/04/10 15:05 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 00:31	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	08/09/10 14:29	08/10/10 00:31	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 19:57	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 02:00	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 02:00	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 02:00	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 02:00	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 02:00	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 02:00	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 02:00	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 02:00	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 02:00	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		08/11/10 02:00	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		08/11/10 02:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		08/11/10 02:00	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 02:00	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-21 **Lab ID: 9275072016** Collected: 08/04/10 15:38 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.57**	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 00:52	106-93-4	
1-Chloro-2-bromopropane (S)	96	%	60-140		1	08/09/10 14:29	08/10/10 00:52	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:00	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**2000**	ug/L	100	24.0	20		08/11/10 15:03	71-43-2	
1,2-Dichloroethane	**76.3**	ug/L	5.0	1.3	1		08/11/10 02:18	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 02:18	100-41-4	
Methyl-tert-butyl ether	**671**	ug/L	100	40.0	20		08/11/10 15:03	1634-04-4	
Naphthalene	**30.6**	ug/L	5.0	2.9	1		08/11/10 02:18	91-20-3	
Toluene	**1.9J**	ug/L	5.0	1.8	1		08/11/10 02:18	108-88-3	
Xylene (Total)	**22.1**	ug/L	10.0	2.7	1		08/11/10 02:18	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 02:18	179601-23-1	
o-Xylene	**21.8**	ug/L	5.0	1.7	1		08/11/10 02:18	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		08/11/10 02:18	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		08/11/10 02:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		08/11/10 02:18	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/11/10 02:18	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-22 **Lab ID: 9275072017** Collected: 08/04/10 15:50 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 01:12	106-93-4	
1-Chloro-2-bromopropane (S)	102	%	60-140		1	08/09/10 14:29	08/10/10 01:12	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:03	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 02:36	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 02:36	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 02:36	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 02:36	1634-04-4	
Naphthalene	**3.8J**	ug/L	5.0	2.9	1		08/11/10 02:36	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 02:36	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 02:36	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 02:36	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 02:36	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/11/10 02:36	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		08/11/10 02:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		08/11/10 02:36	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 02:36	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-25 **Lab ID: 9275072018** Collected: 08/04/10 11:50 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 01:33	106-93-4	
1-Chloro-2-bromopropane (S)	98	%	60-140		1	08/09/10 14:29	08/10/10 01:33	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**4.4J**	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:07	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 02:55	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 02:55	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 02:55	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 02:55	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 02:55	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 02:55	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 02:55	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 02:55	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 02:55	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		08/11/10 02:55	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		08/11/10 02:55	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	70-130		1		08/11/10 02:55	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 02:55	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-26 **Lab ID: 9275072019** Collected: 08/04/10 13:42 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 01:53	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	08/09/10 14:29	08/10/10 01:53	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**33.1**	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:10	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 03:13	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 03:13	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 03:13	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 03:13	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 03:13	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 03:13	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 03:13	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 03:13	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 03:13	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/11/10 03:13	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		08/11/10 03:13	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		08/11/10 03:13	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 03:13	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-27 **Lab ID: 9275072020** Collected: 08/04/10 13:47 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:29	08/10/10 02:14	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	08/09/10 14:29	08/10/10 02:14	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:14	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 03:32	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 03:32	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 03:32	100-41-4	
Methyl-tert-butyl ether	**27.2**	ug/L	5.0	2.0	1		08/11/10 03:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 03:32	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 03:32	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 03:32	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 03:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 03:32	95-47-6	
4-Bromofluorobenzene (S)	92	%	70-130		1		08/11/10 03:32	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		08/11/10 03:32	1868-53-7	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		08/11/10 03:32	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 03:32	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-28 **Lab ID: 9275072021** Collected: 08/04/10 11:03 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 14:30	08/10/10 02:34	106-93-4	
1-Chloro-2-bromopropane (S)	88	%	60-140		1	08/09/10 14:30	08/10/10 02:34	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:18	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 03:50	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 03:50	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 03:50	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 03:50	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 03:50	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 03:50	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 03:50	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 03:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 03:50	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/11/10 03:50	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		08/11/10 03:50	1868-53-7	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		08/11/10 03:50	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/11/10 03:50	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-30 **Lab ID: 9275072022** Collected: 08/04/10 10:55 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 02:55	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	08/09/10 14:30	08/10/10 02:55	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**7.4**	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:21	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 04:08	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 04:08	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 04:08	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 04:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 04:08	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 04:08	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 04:08	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 04:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 04:08	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/11/10 04:08	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		08/11/10 04:08	1868-53-7	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		08/11/10 04:08	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/11/10 04:08	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-31 **Lab ID: 9275072023** Collected: 08/04/10 10:48 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 03:15	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	08/09/10 14:30	08/10/10 03:15	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**4.5J**	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:41	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 04:27	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 04:27	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 04:27	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 04:27	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 04:27	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 04:27	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 04:27	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 04:27	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 04:27	95-47-6	
4-Bromofluorobenzene (S)	97	%	70-130		1		08/11/10 04:27	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		08/11/10 04:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		08/11/10 04:27	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		08/11/10 04:27	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-32 **Lab ID: 9275072024** Collected: 08/04/10 10:35 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**2.5**	ug/L	0.095	0.095	5	08/09/10 14:30	08/10/10 14:21	106-93-4	
1-Chloro-2-bromopropane (S)	0	%	60-140		5	08/09/10 14:30	08/10/10 14:21	301-79-56	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:49	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**2770**	ug/L	2500	600	500		08/11/10 04:45	71-43-2	
1,2-Dichloroethane	ND	ug/L	2500	650	500		08/11/10 04:45	107-06-2	
Ethylbenzene	**2780**	ug/L	2500	550	500		08/11/10 04:45	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	2500	1000	500		08/11/10 04:45	1634-04-4	
Naphthalene	ND	ug/L	2500	1450	500		08/11/10 04:45	91-20-3	
Toluene	**86300**	ug/L	2500	900	500		08/11/10 04:45	108-88-3	
Xylene (Total)	**14500**	ug/L	5000	1350	500		08/11/10 04:45	1330-20-7	
m&p-Xylene	**9960**	ug/L	5000	1350	500		08/11/10 04:45	179601-23-1	
o-Xylene	**4490**	ug/L	2500	850	500		08/11/10 04:45	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130		500		08/11/10 04:45	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		500		08/11/10 04:45	1868-53-7	
1,2-Dichloroethane-d4 (S)	111	%	70-130		500		08/11/10 04:45	17060-07-0	
Toluene-d8 (S)	100	%	70-130		500		08/11/10 04:45	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-33 **Lab ID: 9275072025** Collected: 08/04/10 10:41 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 14:30	08/10/10 03:56	106-93-4	
1-Chloro-2-bromopropane (S)	100	%	60-140		1	08/09/10 14:30	08/10/10 03:56	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:55	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 05:04	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 05:04	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 05:04	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 05:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 05:04	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 05:04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 05:04	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 05:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 05:04	95-47-6	
4-Bromofluorobenzene (S)	91	%	70-130		1		08/11/10 05:04	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		08/11/10 05:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		08/11/10 05:04	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/11/10 05:04	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-34 **Lab ID: 9275072026** Collected: 08/04/10 12:20 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 04:16	106-93-4	
1-Chloro-2-bromopropane (S)	106	%	60-140		1	08/09/10 14:30	08/10/10 04:16	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 20:59	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**300**	ug/L	100	24.0	20		08/10/10 22:34	71-43-2	
1,2-Dichloroethane	ND	ug/L	100	26.0	20		08/10/10 22:34	107-06-2	
Ethylbenzene	**3320**	ug/L	100	22.0	20		08/10/10 22:34	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	100	40.0	20		08/10/10 22:34	1634-04-4	
Naphthalene	**1080**	ug/L	100	58.0	20		08/10/10 22:34	91-20-3	
Toluene	**165**	ug/L	100	36.0	20		08/10/10 22:34	108-88-3	
Xylene (Total)	**6560**	ug/L	200	54.0	20		08/10/10 22:34	1330-20-7	
m&p-Xylene	**5160**	ug/L	200	54.0	20		08/10/10 22:34	179601-23-1	
o-Xylene	**1400**	ug/L	100	34.0	20		08/10/10 22:34	95-47-6	
4-Bromofluorobenzene (S)	99	%	70-130		20		08/10/10 22:34	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		20		08/10/10 22:34	1868-53-7	
1,2-Dichloroethane-d4 (S)	103	%	70-130		20		08/10/10 22:34	17060-07-0	
Toluene-d8 (S)	101	%	70-130		20		08/10/10 22:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-35 **Lab ID: 9275072027** Collected: 08/04/10 12:15 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 04:37	106-93-4	
1-Chloro-2-bromopropane (S)	95	%	60-140		1	08/09/10 14:30	08/10/10 04:37	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:02	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 05:22	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 05:22	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 05:22	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 05:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 05:22	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 05:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 05:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 05:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 05:22	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/11/10 05:22	460-00-4	
Dibromofluoromethane (S)	110	%	70-130		1		08/11/10 05:22	1868-53-7	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		08/11/10 05:22	17060-07-0	
Toluene-d8 (S)	101	%	70-130		1		08/11/10 05:22	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-36 **Lab ID: 9275072028** Collected: 08/04/10 12:10 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 04:57	106-93-4	
1-Chloro-2-bromopropane (S)	97	%	60-140		1	08/09/10 14:30	08/10/10 04:57	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:05	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 05:40	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 05:40	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 05:40	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 05:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 05:40	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 05:40	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 05:40	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 05:40	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 05:40	95-47-6	
4-Bromofluorobenzene (S)	94	%	70-130		1		08/11/10 05:40	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		08/11/10 05:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		08/11/10 05:40	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		08/11/10 05:40	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-38 **Lab ID: 9275072029** Collected: 08/04/10 11:56 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:30	08/10/10 05:17	106-93-4	
1-Chloro-2-bromopropane (S)	94	%	60-140		1	08/09/10 14:30	08/10/10 05:17	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:09	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**4.0J**	ug/L	5.0	1.2	1		08/11/10 05:59	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 05:59	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 05:59	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 05:59	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 05:59	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 05:59	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 05:59	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 05:59	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 05:59	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/11/10 05:59	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		08/11/10 05:59	1868-53-7	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		08/11/10 05:59	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/11/10 05:59	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-39 **Lab ID: 9275072030** Collected: 08/04/10 11:44 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 14:59	08/10/10 20:49	106-93-4	
1-Chloro-2-bromopropane (S)	94	%	60-140		1	08/09/10 14:59	08/10/10 20:49	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:12	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/11/10 06:17	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/11/10 06:17	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/11/10 06:17	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/11/10 06:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/11/10 06:17	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/11/10 06:17	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/11/10 06:17	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/11/10 06:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/11/10 06:17	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		08/11/10 06:17	460-00-4	
Dibromofluoromethane (S)	109	%	70-130		1		08/11/10 06:17	1868-53-7	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		08/11/10 06:17	17060-07-0	
Toluene-d8 (S)	100	%	70-130		1		08/11/10 06:17	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-40 **Lab ID: 9275072031** Collected: 08/04/10 12:02 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/10/10 21:51	106-93-4	
1-Chloro-2-bromopropane (S)	96	%	60-140		1	08/09/10 15:00	08/10/10 21:51	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	**21.7**	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:26	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/10/10 15:51	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/10/10 15:51	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/10/10 15:51	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/10/10 15:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/10/10 15:51	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/10/10 15:51	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/10/10 15:51	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/10/10 15:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/10/10 15:51	95-47-6	
4-Bromofluorobenzene (S)	93	%	70-130		1		08/10/10 15:51	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		08/10/10 15:51	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		08/10/10 15:51	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		08/10/10 15:51	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-41 **Lab ID: 9275072032** Collected: 08/04/10 10:25 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	08/09/10 15:00	08/10/10 22:11	106-93-4	
1-Chloro-2-bromopropane (S)	94	%	60-140		1	08/09/10 15:00	08/10/10 22:11	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:30	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**4.2J**	ug/L	5.0	1.2	1		08/10/10 16:09	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/10/10 16:09	107-06-2	
Ethylbenzene	**18.1**	ug/L	5.0	1.1	1		08/10/10 16:09	100-41-4	
Methyl-tert-butyl ether	**3.0J**	ug/L	5.0	2.0	1		08/10/10 16:09	1634-04-4	
Naphthalene	**19.8**	ug/L	5.0	2.9	1		08/10/10 16:09	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/10/10 16:09	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/10/10 16:09	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/10/10 16:09	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/10/10 16:09	95-47-6	
4-Bromofluorobenzene (S)	98	%	70-130		1		08/10/10 16:09	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		08/10/10 16:09	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/10/10 16:09	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/10/10 16:09	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: MW-42 **Lab ID: 9275072033** Collected: 08/04/10 13:34 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/10/10 22:53	106-93-4	
1-Chloro-2-bromopropane (S)	99	%	60-140		1	08/09/10 15:00	08/10/10 22:53	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:33	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	ND	ug/L	5.0	1.2	1		08/10/10 16:28	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/10/10 16:28	107-06-2	
Ethylbenzene	ND	ug/L	5.0	1.1	1		08/10/10 16:28	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/10/10 16:28	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/10/10 16:28	91-20-3	
Toluene	ND	ug/L	5.0	1.8	1		08/10/10 16:28	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		08/10/10 16:28	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	2.7	1		08/10/10 16:28	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.7	1		08/10/10 16:28	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/10/10 16:28	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		08/10/10 16:28	1868-53-7	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		08/10/10 16:28	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/10/10 16:28	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: DW-1 **Lab ID: 9275072034** Collected: 08/04/10 15:25 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/10/10 23:13	106-93-4	
1-Chloro-2-bromopropane (S)	96	%	60-140		1	08/09/10 15:00	08/10/10 23:13	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:37	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**2.5J**	ug/L	5.0	1.2	1		08/10/10 16:46	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/10/10 16:46	107-06-2	
Ethylbenzene	**2.0J**	ug/L	5.0	1.1	1		08/10/10 16:46	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	2.0	1		08/10/10 16:46	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/10/10 16:46	91-20-3	
Toluene	**5.1**	ug/L	5.0	1.8	1		08/10/10 16:46	108-88-3	
Xylene (Total)	**7.8J**	ug/L	10.0	2.7	1		08/10/10 16:46	1330-20-7	
m&p-Xylene	**5.5J**	ug/L	10.0	2.7	1		08/10/10 16:46	179601-23-1	
o-Xylene	**2.3J**	ug/L	5.0	1.7	1		08/10/10 16:46	95-47-6	
4-Bromofluorobenzene (S)	95	%	70-130		1		08/10/10 16:46	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		08/10/10 16:46	1868-53-7	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		08/10/10 16:46	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		08/10/10 16:46	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: DW-2 **Lab ID: 9275072035** Collected: 08/04/10 16:07 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/10/10 23:34	106-93-4	
1-Chloro-2-bromopropane (S)	87	%	60-140		1	08/09/10 15:00	08/10/10 23:34	301-79-56	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Lead	ND	ug/L	5.0	4.0	1	08/11/10 11:20	08/12/10 21:40	7439-92-1	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**4.9J**	ug/L	5.0	1.2	1		08/10/10 17:05	71-43-2	
1,2-Dichloroethane	ND	ug/L	5.0	1.3	1		08/10/10 17:05	107-06-2	
Ethylbenzene	**3.0J**	ug/L	5.0	1.1	1		08/10/10 17:05	100-41-4	
Methyl-tert-butyl ether	**4.1J**	ug/L	5.0	2.0	1		08/10/10 17:05	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.9	1		08/10/10 17:05	91-20-3	
Toluene	**5.4**	ug/L	5.0	1.8	1		08/10/10 17:05	108-88-3	
Xylene (Total)	**13.5**	ug/L	10.0	2.7	1		08/10/10 17:05	1330-20-7	
m&p-Xylene	**9.0J**	ug/L	10.0	2.7	1		08/10/10 17:05	179601-23-1	
o-Xylene	**4.5J**	ug/L	5.0	1.7	1		08/10/10 17:05	95-47-6	
4-Bromofluorobenzene (S)	96	%	70-130		1		08/10/10 17:05	460-00-4	
Dibromofluoromethane (S)	101	%	70-130		1		08/10/10 17:05	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1		08/10/10 17:05	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		08/10/10 17:05	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: WSW-1 **Lab ID: 9275072036** Collected: 08/04/10 14:20 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/10/10 23:55	106-93-4	
1-Chloro-2-bromopropane (S)	101	%	60-140		1	08/09/10 15:00	08/10/10 23:55	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.25	1		08/09/10 06:40	71-43-2	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		08/09/10 06:40	107-06-2	
Ethylbenzene	ND	ug/L	1.0	0.30	1		08/09/10 06:40	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		08/09/10 06:40	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		08/09/10 06:40	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		08/09/10 06:40	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		08/09/10 06:40	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		08/09/10 06:40	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		08/09/10 06:40	95-47-6	
4-Bromofluorobenzene (S)	102	%	70-130		1		08/09/10 06:40	460-00-4	
Dibromofluoromethane (S)	113	%	70-130		1		08/09/10 06:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	119	%	70-130		1		08/09/10 06:40	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/09/10 06:40	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

Sample: WSW-2 **Lab ID: 9275072037** Collected: 08/04/10 14:00 Received: 08/06/10 15:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	08/09/10 15:00	08/11/10 00:15	106-93-4	
1-Chloro-2-bromopropane (S)	94	%	60-140		1	08/09/10 15:00	08/11/10 00:15	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
Benzene	ND	ug/L	1.0	0.25	1		08/09/10 07:38	71-43-2	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		08/09/10 07:38	107-06-2	
Ethylbenzene	ND	ug/L	1.0	0.30	1		08/09/10 07:38	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		08/09/10 07:38	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		08/09/10 07:38	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		08/09/10 07:38	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		08/09/10 07:38	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		08/09/10 07:38	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		08/09/10 07:38	95-47-6	
4-Bromofluorobenzene (S)	103	%	70-130		1		08/09/10 07:38	460-00-4	
Dibromofluoromethane (S)	122	%	70-130		1		08/09/10 07:38	1868-53-7	
1,2-Dichloroethane-d4 (S)	121	%	70-130		1		08/09/10 07:38	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		08/09/10 07:38	2037-26-5	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: OEXT/10777 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9275072001, 9275072002, 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072008, 9275072009

METHOD BLANK: 480103 Matrix: Water
Associated Lab Samples: 9275072001, 9275072002, 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072008, 9275072009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/10/10 05:58	
1-Chloro-2-bromopropane (S)	%	99	60-140	08/10/10 05:58	

LABORATORY CONTROL SAMPLE & LCSD: 480104 480105

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.29	0.30	104	106	60-140	2	20	
1-Chloro-2-bromopropane (S)	%				103	104	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480106 480107

Parameter	Units	9275070024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.27	.27	0.28	0.28	104	104	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						96	97	60-140			

SAMPLE DUPLICATE: 480108

Parameter	Units	9275072001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	91	94	3		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: OEXT/10778 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9275072010, 9275072011, 9275072012, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022, 9275072023, 9275072024, 9275072025, 9275072026, 9275072027, 9275072028, 9275072029

METHOD BLANK: 480109 Matrix: Water
Associated Lab Samples: 9275072010, 9275072011, 9275072012, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022, 9275072023, 9275072024, 9275072025, 9275072026, 9275072027, 9275072028, 9275072029

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/09/10 20:45	
1-Chloro-2-bromopropane (S)	%	105	60-140	08/09/10 20:45	

LABORATORY CONTROL SAMPLE & LCSD: 480110 480111

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.30	0.29	108	104	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				103	103	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480112 480113

Parameter	Units	9275072012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.31	0.32	110	114	60-140	4	20	
1-Chloro-2-bromopropane (S)	%						100	103	60-140			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: OEXT/10779 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9275072030, 9275072031, 9275072032, 9275072033, 9275072034, 9275072035, 9275072036, 9275072037

METHOD BLANK: 480116 Matrix: Water
Associated Lab Samples: 9275072030, 9275072031, 9275072032, 9275072033, 9275072034, 9275072035, 9275072036, 9275072037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	08/10/10 19:46	
1-Chloro-2-bromopropane (S)	%	99	60-140	08/10/10 19:46	

LABORATORY CONTROL SAMPLE & LCSD: 480117 480118

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.27	0.29	96	102	60-140	7	20	
1-Chloro-2-bromopropane (S)	%				96	98	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480119 480120

Parameter	Units	9275072030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.28	0.28	98	100	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						96	97	60-140			

SAMPLE DUPLICATE: 480121

Parameter	Units	9275072032 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	94	97	3		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: OEXT/10795
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9275072013

METHOD BLANK: 480958 Matrix: Water
Associated Lab Samples: 9275072013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.019	08/11/10 15:20	
1-Chloro-2-bromopropane (S)	%	100	60-140	08/11/10 15:20	

LABORATORY CONTROL SAMPLE & LCSD: 480959 480960

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.26	0.26	92	94	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				90	93	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480961 480962

Parameter	Units	9274977010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0.27	0.27	96	96	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						94	95	60-140			

SAMPLE DUPLICATE: 480963

Parameter	Units	9274977017 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	72	67	6		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MPRP/6825
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Associated Lab Samples: 9275072001, 9275072002

METHOD BLANK: 480915 Matrix: Water
Associated Lab Samples: 9275072001, 9275072002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	08/12/10 16:45	

LABORATORY CONTROL SAMPLE: 480916

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	528	106	80-120	

MATRIX SPIKE SAMPLE: 480917

Parameter	Units	9274639007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	484	97	75-125	

SAMPLE DUPLICATE: 480918

Parameter	Units	9274639008 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MPRP/6826 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072008, 9275072009, 9275072010, 9275072011, 9275072012, 9275072013, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022

METHOD BLANK: 480922 Matrix: Water
Associated Lab Samples: 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072008, 9275072009, 9275072010, 9275072011, 9275072012, 9275072013, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	08/12/10 18:42	

LABORATORY CONTROL SAMPLE: 480923

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	499	100	80-120	

MATRIX SPIKE SAMPLE: 480924

Parameter	Units	9275072003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	ND	500	478	95	75-125	

SAMPLE DUPLICATE: 480925

Parameter	Units	9275072004 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MPRP/6827 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9275072023, 9275072024, 9275072025, 9275072026, 9275072027, 9275072028, 9275072029, 9275072030, 9275072031, 9275072032, 9275072033, 9275072034, 9275072035

METHOD BLANK: 480926 Matrix: Water
Associated Lab Samples: 9275072023, 9275072024, 9275072025, 9275072026, 9275072027, 9275072028, 9275072029, 9275072030, 9275072031, 9275072032, 9275072033, 9275072034, 9275072035

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	5.0	08/12/10 20:24	

LABORATORY CONTROL SAMPLE: 480927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	500	481	96	80-120	

MATRIX SPIKE SAMPLE: 480928

Parameter	Units	9275072023 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	4.5J	500	482	95	75-125	

SAMPLE DUPLICATE: 480929

Parameter	Units	9275072024 Result	Dup Result	RPD	Max RPD	Qualifiers
Lead	ug/L	ND	ND		20	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MSV/11814 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 9275072036, 9275072037

METHOD BLANK: 479981 Matrix: Water
Associated Lab Samples: 9275072036, 9275072037

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	08/09/10 03:42	
Benzene	ug/L	ND	1.0	08/09/10 03:42	
Ethylbenzene	ug/L	ND	1.0	08/09/10 03:42	
m&p-Xylene	ug/L	ND	2.0	08/09/10 03:42	
Methyl-tert-butyl ether	ug/L	ND	1.0	08/09/10 03:42	
Naphthalene	ug/L	ND	1.0	08/09/10 03:42	
o-Xylene	ug/L	ND	1.0	08/09/10 03:42	
Toluene	ug/L	ND	1.0	08/09/10 03:42	
Xylene (Total)	ug/L	ND	2.0	08/09/10 03:42	
1,2-Dichloroethane-d4 (S)	%	114	70-130	08/09/10 03:42	
4-Bromofluorobenzene (S)	%	103	70-130	08/09/10 03:42	
Dibromofluoromethane (S)	%	113	70-130	08/09/10 03:42	
Toluene-d8 (S)	%	101	70-130	08/09/10 03:42	

LABORATORY CONTROL SAMPLE: 479982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.7	99	70-130	
Benzene	ug/L	50	43.8	88	70-130	
Ethylbenzene	ug/L	50	48.2	96	70-130	
m&p-Xylene	ug/L	100	100	100	70-130	
Methyl-tert-butyl ether	ug/L	50	48.0	96	70-130	
Naphthalene	ug/L	50	51.4	103	70-130	
o-Xylene	ug/L	50	49.9	100	70-130	
Toluene	ug/L	50	48.6	97	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			101	70-130	
4-Bromofluorobenzene (S)	%			106	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			103	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 479983 479984

Parameter	Units	9275070028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	52.9	52.2	106	104	70-130	1	30	
Benzene	ug/L	ND	50	50	49.2	49.3	98	99	70-130	0	30	
Ethylbenzene	ug/L	ND	50	50	49.5	46.7	99	93	70-130	6	30	
m&p-Xylene	ug/L	ND	100	100	101	97.0	101	97	70-130	4	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	51.2	52.0	102	104	70-130	2	30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 479983 479984

Parameter	Units	9275070028 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Naphthalene	ug/L	ND	50	50	55.4	53.9	111	108	70-130	3	30	
o-Xylene	ug/L	ND	50	50	51.9	49.4	104	99	70-130	5	30	
Toluene	ug/L	ND	50	50	52.1	50.7	104	101	70-130	3	30	
1,2-Dichloroethane-d4 (S)	%						98	97	70-130			
4-Bromofluorobenzene (S)	%						105	100	70-130			
Dibromofluoromethane (S)	%						98	103	70-130			
Toluene-d8 (S)	%						102	102	70-130			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MSV/11823 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9275072002, 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072009

METHOD BLANK: 480226 Matrix: Water
Associated Lab Samples: 9275072002, 9275072003, 9275072004, 9275072005, 9275072006, 9275072007, 9275072009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/09/10 15:52	
Benzene	ug/L	ND	5.0	08/09/10 15:52	
Ethylbenzene	ug/L	ND	5.0	08/09/10 15:52	
m&p-Xylene	ug/L	ND	10.0	08/09/10 15:52	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/09/10 15:52	
Naphthalene	ug/L	ND	5.0	08/09/10 15:52	
o-Xylene	ug/L	ND	5.0	08/09/10 15:52	
Toluene	ug/L	ND	5.0	08/09/10 15:52	
Xylene (Total)	ug/L	ND	10.0	08/09/10 15:52	
1,2-Dichloroethane-d4 (S)	%	114	70-130	08/09/10 15:52	
4-Bromofluorobenzene (S)	%	102	70-130	08/09/10 15:52	
Dibromofluoromethane (S)	%	112	70-130	08/09/10 15:52	
Toluene-d8 (S)	%	101	70-130	08/09/10 15:52	

LABORATORY CONTROL SAMPLE: 480227

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.3	101	70-130	
Benzene	ug/L	50	45.1	90	70-130	
Ethylbenzene	ug/L	50	47.1	94	70-130	
m&p-Xylene	ug/L	100	100	100	70-130	
Methyl-tert-butyl ether	ug/L	50	48.3	97	70-130	
Naphthalene	ug/L	50	51.6	103	70-130	
o-Xylene	ug/L	50	49.0	98	70-130	
Toluene	ug/L	50	47.8	96	70-130	
Xylene (Total)	ug/L	150	149	100	70-130	
1,2-Dichloroethane-d4 (S)	%			100	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480228 480229

Parameter	Units	9275072009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	49.8	48.0	100	96	70-130	4	30	
Benzene	ug/L	ND	50	50	48.3	46.9	97	94	70-130	3	30	
Ethylbenzene	ug/L	ND	50	50	50.3	48.6	101	97	70-130	4	30	
m&p-Xylene	ug/L	ND	100	100	105	99.9	105	100	70-130	5	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	49.5	48.7	99	97	70-130	2	30	

REPORT OF LABORATORY ANALYSIS

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(704)875-9092

QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480228 480229

Parameter	Units	9275072009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Naphthalene	ug/L	ND	50	50	53.6	52.6	107	105	70-130	2	30	
o-Xylene	ug/L	ND	50	50	54.7	52.5	109	105	70-130	4	30	
Toluene	ug/L	ND	50	50	51.2	49.7	102	99	70-130	3	30	
1,2-Dichloroethane-d4 (S)	%						96	95	70-130			
4-Bromofluorobenzene (S)	%						107	103	70-130			
Dibromofluoromethane (S)	%						102	103	70-130			
Toluene-d8 (S)	%						102	102	70-130			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MSV/11828 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9275072001, 9275072008, 9275072012, 9275072013, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022, 9275072023, 9275072024, 9275072025, 9275072027, 9275072028, 9275072029, 9275072030

METHOD BLANK: 480404 Matrix: Water
Associated Lab Samples: 9275072001, 9275072008, 9275072012, 9275072013, 9275072014, 9275072015, 9275072016, 9275072017, 9275072018, 9275072019, 9275072020, 9275072021, 9275072022, 9275072023, 9275072024, 9275072025, 9275072027, 9275072028, 9275072029, 9275072030

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/10/10 23:51	
Benzene	ug/L	ND	5.0	08/10/10 23:51	
Ethylbenzene	ug/L	ND	5.0	08/10/10 23:51	
m&p-Xylene	ug/L	ND	10.0	08/10/10 23:51	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/10/10 23:51	
Naphthalene	ug/L	ND	5.0	08/10/10 23:51	
o-Xylene	ug/L	ND	5.0	08/10/10 23:51	
Toluene	ug/L	ND	5.0	08/10/10 23:51	
Xylene (Total)	ug/L	ND	10.0	08/10/10 23:51	
1,2-Dichloroethane-d4 (S)	%	99	70-130	08/10/10 23:51	
4-Bromofluorobenzene (S)	%	98	70-130	08/10/10 23:51	
Dibromofluoromethane (S)	%	100	70-130	08/10/10 23:51	
Toluene-d8 (S)	%	97	70-130	08/10/10 23:51	

LABORATORY CONTROL SAMPLE: 480405

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.4	101	70-130	
Benzene	ug/L	50	48.1	96	70-130	
Ethylbenzene	ug/L	50	48.3	97	70-130	
m&p-Xylene	ug/L	100	99.0	99	70-130	
Methyl-tert-butyl ether	ug/L	50	50.3	101	70-130	
Naphthalene	ug/L	50	56.6	113	70-130	
o-Xylene	ug/L	50	49.7	99	70-130	
Toluene	ug/L	50	48.9	98	70-130	
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480406 480407

Parameter	Units	9275072030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	51.0	49.2	102	98	70-130	4	30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480406 480407

Parameter	Units	9275072030 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	50	50	51.1	52.7	102	105	70-130	3	30	
Ethylbenzene	ug/L	ND	50	50	51.8	50.1	104	100	70-130	3	30	
m&p-Xylene	ug/L	ND	100	100	104	100	104	100	70-130	4	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	47.3	48.2	95	96	70-130	2	30	
Naphthalene	ug/L	ND	50	50	70.0	57.4	140	115	70-130	20	30	M0
o-Xylene	ug/L	ND	50	50	51.9	49.9	104	100	70-130	4	30	
Toluene	ug/L	ND	50	50	51.9	51.9	104	104	70-130	0	30	
1,2-Dichloroethane-d4 (S)	%						99	95	70-130			
4-Bromofluorobenzene (S)	%						97	96	70-130			
Dibromofluoromethane (S)	%						103	98	70-130			
Toluene-d8 (S)	%						99	100	70-130			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MSV/11830 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9275072031, 9275072032, 9275072033, 9275072034, 9275072035

METHOD BLANK: 480424 Matrix: Water
Associated Lab Samples: 9275072031, 9275072032, 9275072033, 9275072034, 9275072035

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/10/10 15:32	
Benzene	ug/L	ND	5.0	08/10/10 15:32	
Ethylbenzene	ug/L	ND	5.0	08/10/10 15:32	
m&p-Xylene	ug/L	ND	10.0	08/10/10 15:32	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/10/10 15:32	
Naphthalene	ug/L	ND	5.0	08/10/10 15:32	
o-Xylene	ug/L	ND	5.0	08/10/10 15:32	
Toluene	ug/L	ND	5.0	08/10/10 15:32	
Xylene (Total)	ug/L	ND	10.0	08/10/10 15:32	
1,2-Dichloroethane-d4 (S)	%	93	70-130	08/10/10 15:32	
4-Bromofluorobenzene (S)	%	96	70-130	08/10/10 15:32	
Dibromofluoromethane (S)	%	97	70-130	08/10/10 15:32	
Toluene-d8 (S)	%	99	70-130	08/10/10 15:32	

LABORATORY CONTROL SAMPLE: 480425

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	43.6	87	70-130	
Benzene	ug/L	50	49.5	99	70-130	
Ethylbenzene	ug/L	50	47.9	96	70-130	
m&p-Xylene	ug/L	100	97.2	97	70-130	
Methyl-tert-butyl ether	ug/L	50	48.4	97	70-130	
Naphthalene	ug/L	50	58.7	117	70-130	
o-Xylene	ug/L	50	47.9	96	70-130	
Toluene	ug/L	50	48.5	97	70-130	
Xylene (Total)	ug/L	150	145	97	70-130	
1,2-Dichloroethane-d4 (S)	%			88	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Dibromofluoromethane (S)	%			96	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480426 480427

Parameter	Units	9275072033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	55.9	52.0	112	104	70-130	7	30	
Benzene	ug/L	ND	50	50	50.5	49.5	101	99	70-130	2	30	
Ethylbenzene	ug/L	ND	50	50	50.1	50.0	100	100	70-130	0	30	
m&p-Xylene	ug/L	ND	100	100	102	101	102	101	70-130	1	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	50.7	47.8	101	96	70-130	6	30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480426 480427

Parameter	Units	9275072033 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Naphthalene	ug/L	ND	50	50	50.0	53.0	96	102	70-130	6	30	
o-Xylene	ug/L	ND	50	50	51.2	50.6	102	101	70-130	1	30	
Toluene	ug/L	ND	50	50	50.7	48.8	101	98	70-130	4	30	
1,2-Dichloroethane-d4 (S)	%						113	103	70-130			
4-Bromofluorobenzene (S)	%						101	99	70-130			
Dibromofluoromethane (S)	%						107	104	70-130			
Toluene-d8 (S)	%						101	99	70-130			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

QC Batch: MSV/11831 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 9275072010, 9275072011, 9275072026

METHOD BLANK: 480429 Matrix: Water
Associated Lab Samples: 9275072010, 9275072011, 9275072026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/10/10 16:25	
Benzene	ug/L	ND	5.0	08/10/10 16:25	
Ethylbenzene	ug/L	ND	5.0	08/10/10 16:25	
m&p-Xylene	ug/L	ND	10.0	08/10/10 16:25	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/10/10 16:25	
Naphthalene	ug/L	ND	5.0	08/10/10 16:25	
o-Xylene	ug/L	ND	5.0	08/10/10 16:25	
Toluene	ug/L	ND	5.0	08/10/10 16:25	
Xylene (Total)	ug/L	ND	10.0	08/10/10 16:25	
1,2-Dichloroethane-d4 (S)	%	105	70-130	08/10/10 16:25	
4-Bromofluorobenzene (S)	%	94	70-130	08/10/10 16:25	
Dibromofluoromethane (S)	%	102	70-130	08/10/10 16:25	
Toluene-d8 (S)	%	102	70-130	08/10/10 16:25	

METHOD BLANK: 481016 Matrix: Water
Associated Lab Samples: 9275072010, 9275072011, 9275072026

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	08/11/10 01:33	
Benzene	ug/L	ND	5.0	08/11/10 01:33	
Ethylbenzene	ug/L	ND	5.0	08/11/10 01:33	
m&p-Xylene	ug/L	ND	10.0	08/11/10 01:33	
Methyl-tert-butyl ether	ug/L	ND	5.0	08/11/10 01:33	
Naphthalene	ug/L	ND	5.0	08/11/10 01:33	
o-Xylene	ug/L	ND	5.0	08/11/10 01:33	
Toluene	ug/L	ND	5.0	08/11/10 01:33	
Xylene (Total)	ug/L	ND	10.0	08/11/10 01:33	
1,2-Dichloroethane-d4 (S)	%	108	70-130	08/11/10 01:33	
4-Bromofluorobenzene (S)	%	92	70-130	08/11/10 01:33	
Dibromofluoromethane (S)	%	113	70-130	08/11/10 01:33	
Toluene-d8 (S)	%	104	70-130	08/11/10 01:33	

LABORATORY CONTROL SAMPLE: 480430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	52.8	106	70-130	
Benzene	ug/L	50	48.8	98	70-130	
Ethylbenzene	ug/L	50	48.5	97	70-130	
m&p-Xylene	ug/L	100	99.2	99	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

LABORATORY CONTROL SAMPLE: 480430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Methyl-tert-butyl ether	ug/L	50	49.6	99	70-130	
Naphthalene	ug/L	50	54.8	110	70-130	
o-Xylene	ug/L	50	50.1	100	70-130	
Toluene	ug/L	50	48.2	96	70-130	
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Dibromofluoromethane (S)	%			99	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 480431 480432

Parameter	Units	9274918013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	57.3	56.2	115	112	70-130	2	30	
Benzene	ug/L	ND	50	50	52.7	51.2	105	102	70-130	3	30	
Ethylbenzene	ug/L	ND	50	50	53.1	51.1	106	102	70-130	4	30	
m&p-Xylene	ug/L	ND	100	100	108	104	108	104	70-130	4	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	55.2	52.5	110	105	70-130	5	30	
Naphthalene	ug/L	ND	50	50	55.2	50.9	110	102	70-130	8	30	
o-Xylene	ug/L	ND	50	50	55.3	53.5	111	107	70-130	3	30	
Toluene	ug/L	ND	50	50	53.3	52.7	106	105	70-130	1	30	
1,2-Dichloroethane-d4 (S)	%						110	109	70-130			
4-Bromofluorobenzene (S)	%						102	99	70-130			
Dibromofluoromethane (S)	%						103	107	70-130			
Toluene-d8 (S)	%						104	105	70-130			

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QUALIFIERS

Project: NICKELPUMPER 235 04877
Pace Project No.: 9275072

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 4

1381294

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street
	Columbia, SC 29201
Email To:	
Phone: 803-896-6240	Fax: 803-896-6245
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	D. Thoma
Copy To:	
Purchase Order No.:	
Project Name:	Nickelpumper 235
Project Number:	04877 / CA 38600

Section C Invoice Information:

Attention:	Finance (D. Thoma)
Company Name:	SCDHEC-UST
Address:	
Pace Quote Reference:	
Pace Project Manager:	R. Spencer
Pace Profile #:	849-3

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, MTBE (8260B)	1,2 DCA	EDB (Soil)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW-1~~																							
2	MW-2R	WT	G			8/4	1:35		7			1	6						X	X	X	X		9275072 (could not open)
3	MW-3R						1:50																	odor 001
4	MW-4D						2:20																	Odor 002
5	MW-5						10:35																	no odor 003
6	~~MW-6~~						—																	odor 004
7	MW-7						11:13																	Not Located
8	MW-8R						11:30																	no odor 005
9	~~MW-9~~						—																	odor 006
10	MW-10						11:50																	Not Located
11	MW-11	WT	G			8/4	12:00		7			1	6						X	X	X	X		odor 007
12	~~MW-12~~																							slight odor 008
																								Not Located

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report "J" values		8-16-10	10:14	Pace	8/16/10	10:14	
		8-6-10	15:45		8/6/10	15:45	5.1 yes no yes

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 4

1381293

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC
Email To:
Phone: 803-896-6240 Fax: 803-896-6245
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.:
Project Name: NickelPumper 235
Project Number: 04877 / CA 38600

Section C Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC - UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX + MTBE (8260)	1,2 DCA	EDB (SOIL)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-14	WT	G			8/4	10:53		7			1	6						X	X	X	X		no odor 009
2	MW-15						14:50																	odor 10
3	MW-16						14:32																	no odor 11
4	MW-17						16:10																	no odor 12
5	MW-18						12:24																	no odor 13
6	MW-19						15:23																	no odor 14
7	MW-20						15:05																	no odor 15
8	MW-21						15:38																	no odor 16
9	MW-22						15:50																	no odor 17
10	~~MW-23~~																							Not Located
11	~~MW-24~~																							Not Located
12	MW-25	WT	G			8/4	11:50		7			1	6						X	X	X	X		18

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Please report "J" Values		8/6/10	10:14		8/6/10	1014				
		8/6/10	1547		8/6/10	15:47	5.1	yes	no	yes

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

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Page: 3 of 4

1381296

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-896-6240 Fax: 803-896-6245
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.:
Project Name: Nickelpumper 235
Project Number: 04877/CA #36600

Section C Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC-UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	PEX, Naph, MTBE (8260B)	1,2 DCA	EDB (504)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9275072
1	MW-26	WT	G			8/4	13:42		7			16							X	X	X	X		No odor 019
2	MW-27						12:47																	No odor 020
3	MW-28						11:03																	No odor 021
4	~~MW-29~~																							Not Located
5	MW-30						10:55																	No odor 22
6	MW-31						10:48																	No odor 23
7	MW-32						10:35																	odor 24
8	MW-33						10:41																	No odor 25
9	MW-34						13:20																	Strong odor 26
10	MW-35						12:15																	no odor 27
11	MW-36	WT	G			8/4	12:10		7			16							X	X	X	X		no odor 28
12	~~MW-37~~																							Product

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Please report 1IJ" Values		8/4/10	10:14		8/4/10	DIY	
		8/6/10	1545		8/6/10	15:50	5.1 4C no 4C

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Ivey
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 4 of 4

1381295

Section A — Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To:
Phone: 803-896-6240 Fax: 803-896-6245
Requested Due Date/TAT:

Section B — Required Project Information:

Report To: D. Thoma
Copy To:
Purchase Order No.:
Project Name: Nickelpumper 235
Project Number: 04877/CA 38600

Section C — Invoice Information:

Attention: Finance (D. Thoma)
Company Name: SCDHEC - UST
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Requested Analysis Filtered (Y/N): BTEX, NH_4, MBE (8260)	1,2 DCA	EDB (8011)	Total Lead	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-38	WT	G			8/4	11:56		7			1	6						X	X	X	9275072
2	MW-39						11:44																	no odor
3	MW-40						12:02																	no odor
4	MW-41						10:25																	slight odor (organic)
5	MW-42						13:34																	No odor
6	DW-1						15:25		↓			↓	↓											No odor
7	DW-2						16:07		7			1	6						X	X	X	X			Wt. odor
8	WSW-1						14:20		6				6						X	X	X			No odor
9	WSW-2	WT	G			8/4	14:00		6				6						X	X	X			Wt. odor
10	~~WSW-3~~																							Not functional
11	~~WSW-4~~																							Not functional
12																								

ADDITIONAL COMMENTS

Please report "J" Values

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	8/6/10	10:14	Pace	8/6/10	1014
	8/6/10	1540		8/6/10	15:40

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Kyle Pudney
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 8/4/2010

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment.

SEP 15 2010

UST DOCKET 10 tech

RENEE SPENCER
PACE ANALYTICAL SERVICES
9800 KINCEY AVE STE 100
HUNTERSVILLE NC 28078

Re: Laboratory Analyses Approval
Bid # IFB-33871-05/29/08-EMW, PO #4500011309

Dear Ms. Spencer:

Under the terms and conditions of the referenced bid package, analytical sampling has been approved for the referenced facilities. The facilities have been assigned individual Cost Agreement (CA) numbers as listed below. Please reference the CA number and Purchase Order #4500011309 on the appropriate invoice submitted for payment against the facility. SCDHEC personnel will perform the sampling.

UST Permit #	Facility	Analyses-Groundwater	CA #	Bottles (Y/N)	Date Needed
07747	Sahil of Columbia	2-BTEXMN & DCA	39907	N	-----
04846	S&B Fina	9-Total Lead	39903	N	-----
04877	Nickelpumper 235	3-BTEXMN, DCA, & EDB	39982	N	-----
02459	Frm Moore Store 208	6-BTEXMN, DCA, & EDB	40004	N	-----
10261	Family Folks	1-Total Lead	40022	N	-----

If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Approved Cost Agreements

cc: Technical Files (w/o enc.)

Approved Cost Agreement 39982

Facility: 04877 NICKELPUMPER 235

PADGETJP

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
11 ANALYSES						
	GW GROUNDWATER	A	BTEX+NAPTH+MTBE	3.0000	23.00	69.00
		F	EDB	3.0000	25.00	75.00
				Total Amount		144.00

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

September 23, 2010

Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201



RE: Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

Dear Ms. Thoma:
Enclosed are the analytical results for sample(s) received by the laboratory on September 17, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Huntersville laboratory unless otherwise footnoted. All Microbiological analyses were performed at the laboratory where the samples were received.

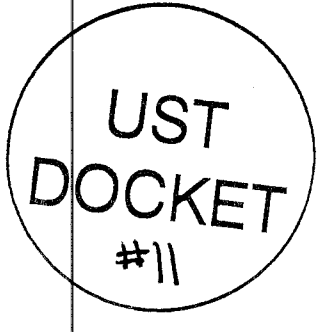
If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Renee Spencer

renee.spencer@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/LELAP Certification #: 04034
New Jersey Certification #: NC012
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
Pennsylvania Certification #: 68-00784
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031

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Huntersville, NC 28078
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SAMPLE SUMMARY

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

Lab ID	Sample ID	Matrix	Date Collected	Date Received
9277871001	**MW-9**	Water	09/15/10 10:45	09/17/10 14:40

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Huntersville, NC 28078
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SAMPLE ANALYTE COUNT

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

Lab ID	Sample ID	Method	Analysts	Analytes Reported
9277871001	**MW-9**	EPA 8011	RES	2
		EPA 8260	KJM	13

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ANALYTICAL RESULTS

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

Sample: MW-9 **Lab ID: 9277871001** Collected: 09/15/10 10:45 Received: 09/17/10 14:40 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**2.4**	ug/L	0.079	0.079	4	09/20/10 15:59	09/21/10 10:46	106-93-4	
1-Chloro-2-bromopropane (S)	74	%	60-140		4	09/20/10 15:59	09/21/10 10:46	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**636**	ug/L	25.0	6.0	5		09/22/10 05:26	71-43-2	
1,2-Dichloroethane	ND	ug/L	25.0	6.5	5		09/22/10 05:26	107-06-2	
Ethylbenzene	**443**	ug/L	25.0	5.5	5		09/22/10 05:26	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	10.0	5		09/22/10 05:26	1634-04-4	
Naphthalene	**256**	ug/L	25.0	14.5	5		09/22/10 05:26	91-20-3	
Toluene	**200**	ug/L	25.0	9.0	5		09/22/10 05:26	108-88-3	
Xylene (Total)	**1120**	ug/L	50.0	13.5	5		09/22/10 05:26	1330-20-7	
m&p-Xylene	**542**	ug/L	50.0	13.5	5		09/22/10 05:26	179601-23-1	
o-Xylene	**575**	ug/L	25.0	8.5	5		09/22/10 05:26	95-47-6	
4-Bromofluorobenzene (S)	111	%	70-130		5		09/22/10 05:26	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		5		09/22/10 05:26	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	70-130		5		09/22/10 05:26	17060-07-0	
Toluene-d8 (S)	97	%	70-130		5		09/22/10 05:26	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

QC Batch: OEXT/11217
QC Batch Method: EPA 8011
Analysis Method: EPA 8011
Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9277871001

METHOD BLANK: 499737
Matrix: Water
Associated Lab Samples: 9277871001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	09/21/10 01:28	
1-Chloro-2-bromopropane (S)	%	104	60-140	09/21/10 01:28	

LABORATORY CONTROL SAMPLE & LCSD: 499738 499739

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0.32	0.32	112	112	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				104	95	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 499740 499741

Parameter	Units	9277871001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	2.4	.28	.28	2.7	2.7	106	106	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						108	109	60-140			

SAMPLE DUPLICATE: 499742

Parameter	Units	9277873001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	108	9		

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

QC Batch: MSV/12321
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 9277871001

METHOD BLANK: 500244
Matrix: Water
Associated Lab Samples: 9277871001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	09/21/10 22:03	
Benzene	ug/L	ND	5.0	09/21/10 22:03	
Ethylbenzene	ug/L	ND	5.0	09/21/10 22:03	
m&p-Xylene	ug/L	ND	10.0	09/21/10 22:03	
Methyl-tert-butyl ether	ug/L	ND	5.0	09/21/10 22:03	
Naphthalene	ug/L	ND	5.0	09/21/10 22:03	
o-Xylene	ug/L	ND	5.0	09/21/10 22:03	
Toluene	ug/L	ND	5.0	09/21/10 22:03	
Xylene (Total)	ug/L	ND	10.0	09/21/10 22:03	
1,2-Dichloroethane-d4 (S)	%	120	70-130	09/21/10 22:03	
4-Bromofluorobenzene (S)	%	108	70-130	09/21/10 22:03	
Dibromofluoromethane (S)	%	113	70-130	09/21/10 22:03	
Toluene-d8 (S)	%	96	70-130	09/21/10 22:03	

LABORATORY CONTROL SAMPLE: 500245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	58.3	117	70-130	
Benzene	ug/L	50	49.8	100	70-130	
Ethylbenzene	ug/L	50	48.9	98	70-130	
m&p-Xylene	ug/L	100	98.5	99	70-130	
Methyl-tert-butyl ether	ug/L	50	52.1	104	70-130	
Naphthalene	ug/L	50	47.9	96	70-130	
o-Xylene	ug/L	50	51.4	103	70-130	
Toluene	ug/L	50	50.1	100	70-130	
Xylene (Total)	ug/L	150	150	100	70-130	
1,2-Dichloroethane-d4 (S)	%			113	70-130	
4-Bromofluorobenzene (S)	%			112	70-130	
Dibromofluoromethane (S)	%			109	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 500246 500247

Parameter	Units	9277810015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	50	50	50.9	47.2	102	94	70-130	7	30	
Benzene	ug/L	ND	50	50	40.3	38.8	81	78	70-130	4	30	
Ethylbenzene	ug/L	ND	50	50	37.1	36.6	74	73	70-130	1	30	
m&p-Xylene	ug/L	ND	100	100	81.4	73.8	81	73	70-130	10	30	
Methyl-tert-butyl ether	ug/L	ND	50	50	41.3	38.2	82	76	70-130	8	30	

REPORT OF LABORATORY ANALYSIS

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(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 500246 500247

Parameter	Units	9277810015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Naphthalene	ug/L	ND	50	50	33.2	31.1	66	62	70-130	7	30	M0
o-Xylene	ug/L	ND	50	50	40.2	37.2	80	74	70-130	8	30	
Toluene	ug/L	ND	50	50	41.5	40.0	83	80	70-130	4	30	
1,2-Dichloroethane-d4 (S)	%						116	108	70-130			
4-Bromofluorobenzene (S)	%						113	112	70-130			
Dibromofluoromethane (S)	%						110	105	70-130			
Toluene-d8 (S)	%						100	101	70-130			

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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: NICKLE PUMPER #235 04877
Pace Project No.: 9277871

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

ANALYTE QUALIFIERS

M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1351553

Section A Required Client Information:

Company: SCDHEC/UST
Address: 2600 Bull St.
Cola, S.C. 29201
Email To:
Phone: 803 896 6241 Fax: 803 896 6245
Requested Due Date/TAT:

Section B Required Project Information:

Report To: D. Thang
Copy To: Frank C
Purchase Order No.: 4500011309
Project Name: Nicklepumper #235
Project Number: 04877 / CA# 39982

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #: 849-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX/MTBE 8260	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-9	WT	G			9/16/10	1045		6			X						X	X		9277871 001
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	CDC	9/17/10	934	Pace	9/17	934				
	Pace	9/17	1440	Justin Mattel/pace CH	9/17/10	1440	38	Y	n	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Joel P. Padgett
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 9/17/10

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

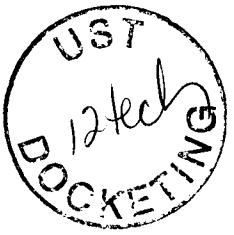
17

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

SEP 18 2013

Re: **QAPP Contractor Addendum Request**
Groundwater Sampling Contract
Solicitation # IFB-5400002759, PO#4600088529

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400002759 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 2.0, it is requested that you submit a Contractor Addendum for each site listed below. The Addendums must be submitted within 15 business days in my attention. The project manager for each site will issue a notice to proceed once the Addendum has been reviewed and approved. Please note, site reconnaissance should be conducted during the Addendum review so that any issues that arise may be addressed prior to commencing work at the site.

UST Permit #	Site Name	County	# samples and requested analysis*	Project Manager
04877	Nickelpumper 235	Hampton	57-BTEXMN, DCA, Oxygenates, & EDB	J. Padgett
11207	Evans Service Center	Florence	25-BTEXMN, DCA, & EDB	M. Milenkova
13172	Curtis Service Station	Chesterfield	8-BTEXMN, DCA, Oxygenates, & EDB	M. Hornosky
18856	Steady Simmons	Jasper	23-BTEXMN, DCA, Oxygenates, & EDB	M. Hornosky
05273	Clelands One Stop	Jasper	17-BTEXMN, DCA & Oxygenates	M. Hornosky
02903	Food Mart	Dillon	6-BTEXMN, DCA, Oxygenates, EDB, & total lead	D. Orgain
12966	Stop N Shop	Greenville	11-BTEXMN, DCA, Oxygenates, EDB, & total lead	D. Orgain
09141	Abe's Garage	Williamsburg	8-BTEXMN, DCA, Oxygenates, & EDB	J. Martin
08327	Hot Spot 2995	Spartanburg	20-BTEXMN, DCA, Oxygenates, & EDB	M. Rivers
17630	Marilyn's Station	Richland	37-BTEXMN, DCA, Oxygenates, & EDB	S. Fulmer
04581	Donahue Grocery	Spartanburg	50-BTEXMN, DCA, Oxygenates, & EDB	M. Rivers
12789	Jamiva	Clarendon	4-BTEXMN & DCA	M. Hornosky
03027	Carson's Amoco	Dorchester	18- BTEXMN, DCA, & Oxygenates	J. Padgett
10382	Winners Circle	Kershaw	41- BTEXMN, DCA, Oxygenates, & EDB	D. Thoma

12663	Jingle Jungle	Lancaster	25- BTEXMN, DCA, Oxygenates, & EDB	S. Fulmer
04244	Browns Texaco	Greenville	47-BTEXMN, DCA, Oxygenates, & EDB	S. Briney
10598	Amoco Station 11	Greenville	22- BTEXMN, DCA, Oxygenates, & EDB	S. Briney

* The number of samples may not include trip blanks, field blanks, or field duplicates.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0631 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Site Information Packages

cc: Technical Files

Midlands Environmental Consultants, Inc.

September 24, 2013

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: QAPP Contractor Addendum – Revision 0
Nicklepumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 13-4611
Certified Site Rehabilitation Contractor UCC-0009



Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On September 23, 2013 MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Section A: Project Management

A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Nicklepumper 235, SCDHEC Site ID# 04877

25 East Railroad Avenue, South Carolina

Prepared by:
Courtney M. Sanders
Project Biologist
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: September 24, 2013

Approvals

Joel P. Padgett, P.G. SC DHEC Project Manager	_____ Signature	Date_____
Jeff L. Coleman Site Rehabilitation Contractor	_____ Signature	Date 9/26/13
Courtney M. Sanders Contractor QA Manager	_____ Signature	Date 9.26.13
Daniel J. Wright Laboratory Director	_____ Signature	Date 09/24/2013

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A3 Distribution List

Name	Title	License Number/Exp. Date	Organization/Address	Telephone Number	Fax Number	Email Address
Joel P. Padgett, P.G.	SC DHEC Technical Project Manager	Professional Geologist SC 1100 Exp. 06/30/2015	SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201	803-898-0655	803-898-0673	padgetjp@dhec.sc.gov
Bryan T. Shane, P.G.	Site Rehabilitation Contractor	Professional Geologist- SC 1102 Exp. 06/30/2015	Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	bts@meci.net
Courtney M. Sanders	Quality Assurance Officer		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net
Jeff L. Coleman	Field Manager		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	jlc@meci.net
Daniel J. Wright	Laboratory Director	Lab Certification SC 32010 Exp. 12/17/2015	Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172	803-791-9700	803-791-9111	dwright@shealylab.com
Project Verifier	Courtney M. Sanders or Kyle V. Pudney		Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073	803-808-2043	803-808-2048	cms@meci.net

Table 1A Addendum Distribution List

A4 Problem Definition/Background

Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.

The subject site (Nicklepumper 235) is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The site currently maintains one 5,000 gallon diesel underground storage tank (UST), one 8,000 gallon regular unleaded gasoline UST, one 8,000 gallon plus gasoline UST, and one 8,000 gallon premium gasoline UST. The subject tanks are currently in compliance with an issued compliance date of April 18, 2013. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in January of 1993 and confirmed the release in July of 1994. The site is currently classified as Class 2BB.

The South Carolina Department of Health and Environmental Control (SCDHEC) reported a second release of petroleum product from the subject tanks one April 04, 2008 and confirmed the release on April 25, 2008. The release was issued a No Further Action on April 25, 2008.

Please answer the following: Does this project fall under UST or Brownfields area?

Underground Storage Tank Division

A5 Project/Task Description

1. **Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).**

A comprehensive sampling event will be conducted at the subject site (Nickelpumper 235) to determine current site conditions and current analytical data.

2. ***The work will begin within*** fourteen (14) days of receipt of approved QAPP contractors addendum ***after cost approval and sampling should be complete by*** twenty-one (21) days of receipt of approved QAPP contractors addendum.

3. ***Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.***

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

A6 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The site is currently an active gasoline service station.

A7 Certification

The Following Laboratory(ies) will be used for this Project:

Commercial Lab(s)

Full Name of the Laboratory___Shealy Environmental Services, Inc.____
Name of Lab Director_____Daniel J. Wright_____
SC DHEC Certification Number_____32010_____
Parameters this Lab will analyze for this project:

BTEX, Napth, MTBE, 1,2 DCA, 8 Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

Please note: SC DHEC may require that the contractor submit some or all of the Laboratory's SOPs as part of this QAPP.

A8 Documents and Records

Personnel will receive the most current version of the QAPP Addendum via: (Check all that apply)

____US Mail ____Courier __X__ Hand delivered

Other (please specify):_____E-mailed electronic copies___

Record	Produced By	Hardcopy/ Electronic	Storage Location For how long?	Archival
Instrument Raw Data	Target, Thermospec, or Iteva software	Hardcopy and Electronic	Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs	Yes
Final Reports	LIMS	Electronic	Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years	Yes
Field Work	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Chain of Custody	Field Staff	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
QAPP Addendum	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes
Internal QC record	Courtney Sanders	Hardcopy	MECI office: 235B Dooley Road / Min. 5 years	Yes
Sampling Report	Courtney Sanders	Hardcopy & Electronic	MECI office: 235B Dooley Road / Min. 5 years	Yes

Table 2A Record Identification, Storage, and Disposal

Section B Measurement/Data Acquisition

B1 Sampling Process/Experimental Design

Item	Start Date	End Date	Comments
Site Reconnaissance	9/23/13	9/23/13	Already Completed
QAPP preparation	9/24/13	9/24/13	In progress
QAPP approval	9/25/13	10/16/13	Assuming three week turnaround
Monitoring well Sampling	10/17/13	10/31/13	Sampled within 2 weeks of QAPP approval
Report Preparation	11/1/13	11/22/13	Three weeks to prepare/submit report

Table 3A Sampling Activities

B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

***Estimate* the number of samples of each matrix that are expected to be collected:**

Soil	
Ground Water from monitoring wells	34
From Drinking/Irrigation water wells	4
Field Duplicate Collection	2
Field Blank Collection	1
Trip Blank	1
From surface water features	
Total number of Water samples	42

Notes:
During the September 23, 2013 site visit, thirty four (34) monitoring wells were located. Monitoring wells MW-6, MW-9. MW-12, MW-15, MW-23, MW-24, MW-29, MW-37, and DW-2 were not located. If the monitoring wells are located during sampling activities, the newly located monitoring wells will be sampled accordingly.

During the initial site visit it was noted that two (2) monitoring well were in need bolts. A combined total of two (2) bolts are needed for the monitoring wells to be properly secured. **Total Bolts Needed: 2 Bolts.**

All monitoring well samples will be analyzed by Shealy Environmental Services, Inc. for BTEX, Napth, MTBE, 1,2 DCA, 8 Oxygenates (EPA Method 8260-B), and EDB (EPA Method 8011).

Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.

Samples will be transported to the laboratory by shipment with a lab provided courier or with a lab approved shipping company. If a courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers will be repacked with wet ice, and left at the office for pick-up. If no courier is scheduled to visit the MECI office the day following a sampling event, all sampling coolers are to be dropped off at the lab or at an approved shipping company for overnight delivery to the lab immediately following the sampling event.

Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.

Failure	Response	Documentation	Individual Responsible
Water level indicator not working properly	Attempt to clean probe, change battery, use back-up indicator if need be.	Record on field sheets, notify office staff. Take indicator out of rotation until problem identified and corrected.	Field Staff, Field Manager
Field meters not working	Attempt to clean probes, recalibrate in the field.	Record on field sheets, notify office staff. Take meters out of rotation until problem identified and corrected.	Field Staff, Field Manager
Wells not located	Use metal detector, measure from known points, contact project manager for additional information.	Record method used to attempt to locate the well on field sheets, and possibly reasoning for the well to be missing	Field Staff

Table 4A Field Corrective Action

B3 Sample Handling and Custody

1. ***How will the samples get from the Site to the Lab to ensure holding requirements are met?***

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. ***If sample preservation procedures differ from the UST Programmatic QAPP, please provide details.***

3. ***If chain of custody procedures differ from the UST Programmatic QAPP, please provide details.***

B4 Analytical Methods

1. ***Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:***

Parameter	Method Referenced	Comments
BTEX+Naph+MTBE+Oxygentaes	8260B	
PAH's	8270D	

EDB	8011	
Lead,T.	6010C	
Ferrous Iron	SM 3500-FED	
Nitrate	353.2	
Sulfate	300.0	
Methane	RSK-175	
TOC	Walkley-Black	
DRO - TPH	8015C	
pH	*	
Conductivity	*	
Dissolved Oxygen	*	
Temperature	*	
Turbidity	*	

Table 5A Analytical SOPs and Referenced Methods

- **This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

2. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field equipment needing periodic maintenance, the schedule for this, and the person responsible.

Instrument	Serial Number	Type of Maintenance	Frequency	Person responsible
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace probe tip	Yearly	C. Sanders
YSI 63	09C 101302, 10K 101895, 07M 100905	Replace batteries	As Needed	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	General inspection for wear and tear on equipment	Daily	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Check buffer solutions for expiration	Weekly	C. Sanders
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace membrane	4 to 8 weeks	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Replace batteries	As Needed	Field Staff

YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	General inspection for wear and tear on equipment	Daily	Field Staff
Micro TPW/TPI Turbidimeter	201301174 201301183	General inspection for wear and tear on equipment	Daily	Field Staff

Table 6A Instrument and Equipment Maintenance

B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

Instrument	Serial Number	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA
Volatiles Mass Spec	Shealy SOP S-SV-021 Page 7	Minimum of 5 calibration standards for all compounds	When indicated by continuous calibration verification standard	Method Criteria	Detailed in SOP	MSV Analyst
Semi-volatile Mass Spec	Shealy SOP S-SV-021 Page 7	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	MSSV Analyst
GC ECD	Shealy SOP S-SV-012 Page 5	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	GC Analyst
Dionex IC	Shealy SOP S-IN-010 Page 6	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	IC Analyst
ICP	Shealy SOP S-IM-005 Page 6 & 7	Minimum of 3 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	ICP Analyst
Cetac Mercury Analyzer	Shealy SOP S-IM-006 Page 5	Minimum of 5 calibration standards for all compounds	When indicated by calibration verification standard	Method Criteria	Detailed in SOP	Mercury Analyst
Lacaht	Shealy	Minimum of 5	Daily or when	Method Criteria	Detailed in SOP	Nitrate

Instrument	Serial Number	Calibration Procedure	Frequency of Calibration	Acceptance Criteria	Corrective Action (CA)	Person Responsible for CA
QuickChem 8000	SOP S-IN-042 Page 5	calibration standards	indicated by calibration verification standard			Analyst
YSI 63	09C 101302, 10K 101895, 07M 100905	pH Calibration	Daily	+/- 0.2 pH units	clean/replace probe tip, recalibrate	Field Staff
YSI 63	09C 101302, 10K 101895, 07M 100905	Conductivity Calibration	As directed by manufacturer	+/- 10 uS	clean/replace probe tip, recalibrate	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	DO calibration	Daily	+/- 0.25 mg/l	clean/replace probe tip, recalibrate	Field Staff
YSI 550A	04L 2026AK, 08B 101407, 04A 0912AI	Temperature Calibration	Daily	+/- 1 °C	clean/replace probe tip, recalibrate	Field Staff
Electronic Water Level Indicator	18432 77107	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff
Oil/Water Interface probe	01-2872 01-0261 01-4101 01-3464	Checked vs. Standard	Monthly	+/- 0.01 foot per 10 foot length	Replace probe tape	Field Staff

Table 7A Instrument Calibration Criteria and Corrective Action

*** This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. If procedures for storage, handling or transport of supplies/consumables differ from the UST Programmatic QAPP, please provide details.

B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e.,
3. Provide its relevance to the project.
4. Indicate the justification criteria for use of these data sources and/or models.

Data Source	Used for	Justification for use in this project	Comments
Small scope assessment sampling and monitoring well installation reports	Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's	Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered.	Previous assessment reports will be used to help determine the location of missing monitoring wells, and screened intervals.

Table 8A Non-Direct Measurements

5. Identify key resources/support facilities needed.

There are no non-direct measurements in this project

B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab. This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

Section C Assessment and Oversight

C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager. If severe problems are identified by the SCDHEC project manager, the project manager can stop the work until the problems are corrected.

2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done by the Contractor on the Commercial Lab(s) that are*

being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?

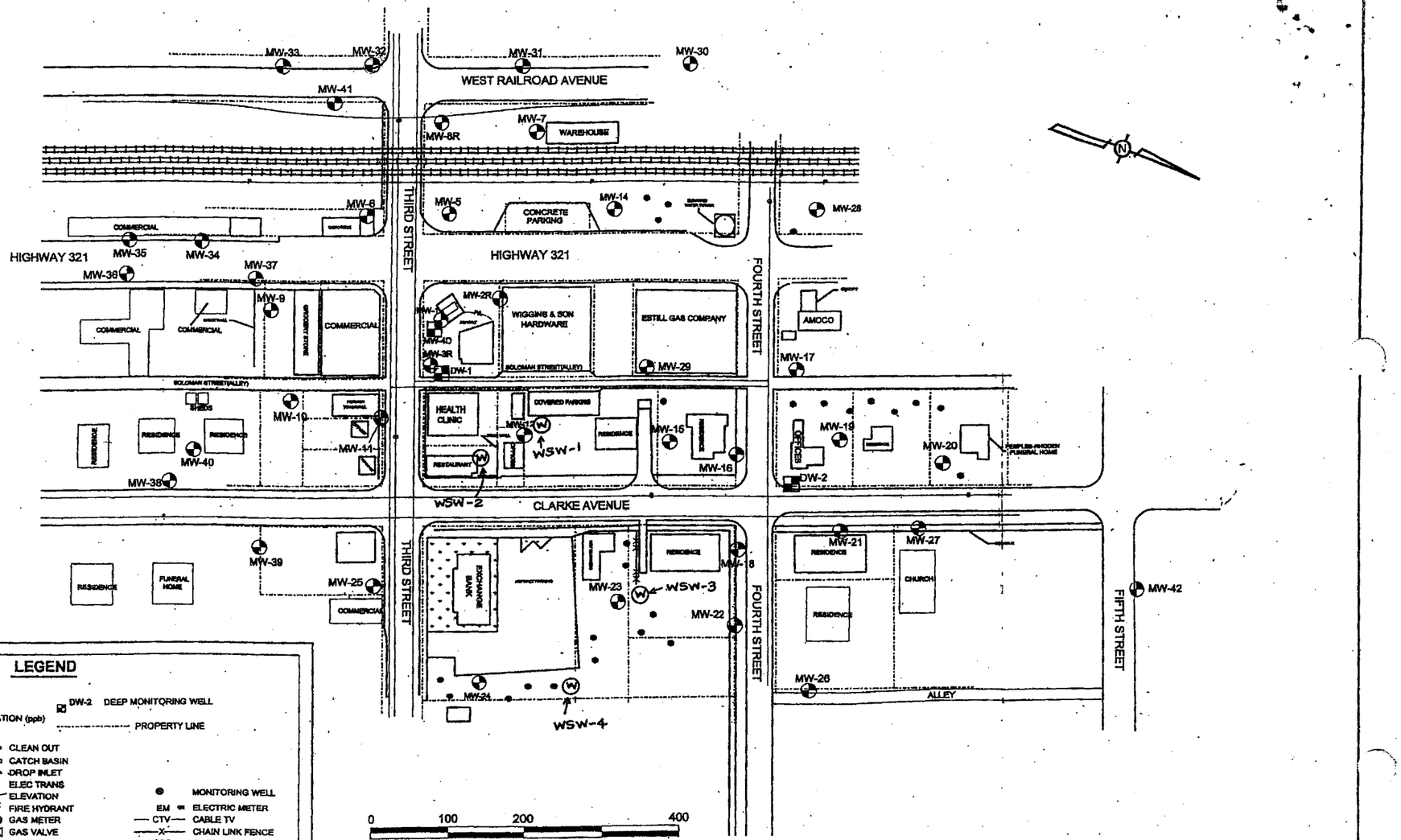
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. If during a random audit, severe problems are found, work will be stopped by the according Wibby Environmental representative and the QA officer contacted to determine corrective action. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification. Audits will be conducted on site specific basis; Analytical results reported for QAPP required duplicates, field blanks, and trip blanks will compared to samples collected from the monitoring well network. When available current analytical results will be compared to historical analytical results to further test the accuracy of quality control.

C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

Section D Data Validation and Usability

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).



LEGEND

MW-12 MONITORING WELL
DW-2 DEEP MONITORING WELL
CONTAMINANT CONCENTRATION (ppb)
PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	99.9	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD		GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	GV	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE		

CONSULTECH ENVIRONMENTAL, LLC.	DRAWN: CJH	DATE: 1/17/08
Environmental Consulting and Engineering © 1998	SITE ID # 04877	
	PROJECT: Nickelpumper #235	
	PROJECT No.: 07-04-05	
	LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number

Client	Report to Contact	Sampler (Printed Name)	Quote No.
Address	Telephone No. / Fax No. / Email	Waybill No.	Page ___ of ___
City / State / Zip Code	Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.		
Project Name			
Project Number	P.O Number		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis	Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID

Turn Around Time Required (Prior lab approval required for expedited TA)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

1. Relinquished by / Sampler	Date	Time	1. Received by	Date	Time
2. Relinquished by	Date	Time	2. Received by	Date	Time
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory Received by	Date	Time

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

RECEIVED

SEP 26 2013

SC Department of
Health and Environmental
Control

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

BRYAN SHANE PG
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

OCT 10 2013

UST 14Rel DOCKETING

Re: Notice to Proceed-Groundwater sampling/QAPP Contractor Addendum approval
Groundwater sampling contract
Contract #IFB-5400002759, PO #4600088529
Nicklepumper #235, 25 East Railroad Avenue, Estill, SC
UST Permit #04877; CA #46775 (MECI); CA #46776 (Shealy)
Hampton County

Dear Mr. Shane:

In accordance with Contract #IFB-5400002759 and Quality Assurance Program Plan (QAPP) Revision 2.0 for the UST Management Division, the Quality Assurance Project Plan (QAPP) Contractor Addendum has been reviewed and approved. In accordance with QAPP Revision 2.0, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered (including quality assurance problems), the actions taken, and the results must be included in the final report submitted to the UST Management Division.

On October 8, 2013, Division personnel mobilized to the site to locate and uncover monitoring/recovery wells not located by Midlands during site reconnaissance. Monitoring wells MW-9 and MW-37 were located and marked. Monitoring well MW-1 was also marked. This well has a non-standard well vault cover that requires a specialized tool for access. The Division has the tool and will provide it to Midlands on a temporary basis so that the well can be sampled.

Midlands Environmental Consultants, Inc. will perform services at the site on behalf of the release owner/operator (O/O) and payment for the services will be made from the State Underground Petroleum Environmental Response Bank (SUPERB) account. The release O/O has no obligation to pay for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs. **Please note that the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

The final report should contain the requirements of Section III.2.15 of the contract. Please submit the report to Debra Thoma, the contract manager.

If you have any site-specific questions, please contact me at (803) 898-0655 or via e-mail at padgetjp@dhec.sc.gov. If you have any contract-specific questions, please contact Debra Thoma at (803) 898-0631 or via e-mail at thomadl@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

JPP/jpp
04877.mr1

enc: Approved QAPP Contractor Addendum signature page
Approved cost agreement
Contractor memorandum

cc: Debra Thoma, Corrective Action Section (w/o enc)
Kelly Maberry, Shealy Environmental, 106 Vantage Point Dr., West Columbia, SC, 29172 (w/approved CA)
Technical files (w/enc)

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

UNDERGROUND STORAGE TANK MANAGEMENT DIVISION
BUREAU OF LAND AND WASTE MANAGEMENT
2600 Bull Street, Columbia, South Carolina 29201
Telephone: 803-898-2544

MEMORANDUM

TO: Midlands Environmental Consultants, Inc

FROM: Joel Padgett, P.G.

RE: **NOTICE TO PROCEED**

Facility Name: Nicklepumper 235

Permit Number: 04877

County: Hampton

Work To Be Completed: Sample all MW/RW and water supply wells WSW-1 through WSW-5 for BTEX+naph+MtBE+DCA+oxygenates, EDB. **Do not sample wells contianing measurable free-phase product.**

Shealy Environmental 46776

MECI 46775

Approved Cost Agreement 46775

Facility: 04877 NICKELPUMPER 235

PADGETJP

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B	PERSONNEL	3.0000	100.00	300.00
10 SAMPLE COLLECTION						
		A	GROUND WATER	36.0000	4.50	162.00
		C	WATER SUPPLY	5.0000	2.00	10.00
		D	GROUNDWATER NO-PURGE	2.0000	4.50	9.00
		H	FIELD BLANK	1.0000	2.00	2.00
17 DISPOSAL						
		A	WASTEWATER	180.0000	0.10	18.00
18 MISCELLANEOUS						
			QAPP PREP	1.0000	0.00	0.00
				Total Amount		501.00

Approved Cost Agreement 46776

Facility: 04877 NICKELPUMPER 235

PADGETJP

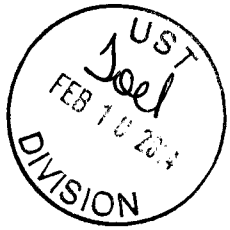
PO Number:

Task / Description	Categories	Item Description	Qty / Pct	Unit Price	Amount
11 ANALYSES					
	GW GROUNDWATER	A1 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	45.0000	35.00	1,575.00
		F EDB	45.0000	20.00	900.00
			Total Amount		2,475.00

Midlands Environmental Consultants, Inc.

February 7, 2014

Ms. Debra Thoma, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Report of Groundwater Sampling
Nickelpumper 235
25 East Railroad Ave
Estill, South Carolina
SCDHEC Site ID Number 04877; CA # 46775
MECI Project Number 13-4611
Certified Site Rehabilitation Contractor UCC-0009



Dear Ms. Thoma,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Nickelpumper 235) is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The subject site currently maintains one 5,000 gallon diesel underground storage tanks (UST), one 8,000 gallon regular unleaded gasoline UST, one 8,000 gallon plus gasoline UST, and one 8,000 gallon premium gasoline UST. The subject tanks are currently in compliance with an issued compliance date of April 18, 2013. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in January of 1993 and confirmed the release in July of 1994. The site is currently classified as Class 2BB.

The South Carolina Department of Health and Environmental Control (SCDHEC) reported a second release of petroleum product from the subject tanks on April 04, 2008 and confirmed the release on April 25, 2008. The release was issued a No Further Action on April 25, 2008.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On February 5th & 6th, 2014, MECI personnel collected groundwater samples from thirty-four (34) monitoring wells, and two (2) water supply wells at the subject site. Monitoring well MW-37 was gauged and found to contain measurable free phase petroleum product. There were seven (7) monitoring wells that were unable to be located. MECI personnel were unable to open the well lid of monitoring well MW-1, even with the help of a special tool from SCDHEC employee Joel Padgett. A well house for WSW-3 was unable to be located and a spigot in the ground located close to the area was inoperable. There was a brick shed in the vicinity of WSW-4 that was locked. Bank employees were unaware of any water supply well that could be located in the building and did not know who the brick shed belonged to. Both water supply wells WSW-3 and WSW-4 were unable to be sampled. MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, all of the wells were to be purged prior to sampling. Thirty-four (34) monitoring wells were purged prior to sample collection. Purging was completed by bailing at least five well volumes of water from the well, until pH, conductivity, dissolved oxygen stabilized to within 10%, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI550A meter for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings and a MicroTPI/TPW turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Dated April 2013) and MECI's Standard Operating Procedures (MECI SOP, Dated August, 2011).

The following sampling matrix contains well development and requested analyses for each well during the sampling event:

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
MW-1														
MW-2R	X				X	X	X	X						
MW-3R	X				X	X	X	X						
MW-4D	X				X	X	X	X						
MW-5				X										
MW-6				X										
MW-7	X				X	X	X	X						
MW-8R	X				X	X	X	X						
MW-9	X				X	X	X	X						
MW-10	X				X	X	X	X						
MW-11	X				X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
MW-12				X										
MW-14	X				X	X	X	X						
MW-15				X										
MW-16	X				X	X	X	X						
MW-17	X				X	X	X	X						
MW-18	X				X	X	X	X						
MW-19	X				X	X	X	X						
MW-20	X				X	X	X	X						
MW-21	X				X	X	X	X						
MW-22				X										
MW-23				X										
MW-24	X				X	X	X	X						
MW-25	X				X	X	X	X						
MW-26	X				X	X	X	X						
MW-27	X				X	X	X	X						
MW-28	X				X	X	X	X						
MW-29				X										
MW-30	X				X	X	X	X						
MW-31	X				X	X	X	X						
MW-32	X				X	X	X	X						
MW-33	X				X	X	X	X						
MW-34	X				X	X	X	X						
MW-35	X				X	X	X	X						
MW-36	X				X	X	X	X						
MW-37			X											
MW-38	X				X	X	X	X						
MW-39	X				X	X	X	X						
MW-40	X				X	X	X	X						
MW-41	X				X	X	X	X						
MW-42	X				X	X	X	X						
DW-1	X				X	X	X	X						
DW-2	X				X	X	X	X						
WSW-1					X	X	X	X						
WSW-2					X	X	X	X						
WSW-3				X										
WSW-4				X										
MW-2R Dup.					X	X	X	X						
MW-3R Dup.					X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

Monitoring Well	Purge	No Purge	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
Field Blank 1					X	X	X	X						
Field Blank 2					X	X	X	X						
Trip Blank 1					X		X	X						
Trip Blank 2					X		X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons
Trip Blank provided by Shealy Environmental, temperature obtained upon receipt at Laboratory

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 364.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

Jeff L. Coleman
Senior Scientist

Attachments:

Nickelpumper 235
Estill, South Carolina

February 7, 2014
MECI Job #: 13-4611

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: G.G., B.J., K.P.

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	***	***	UNK	***	***	***	***	***	Could Not Open Well Lid / Tool from SCDHEC Did Not Work
MW-2R	Y	2/6/14	15:40	10-25	***	7.09	***	2.35	14.5	Slight Odor
MW-3R	Y	2/6/14	14:20	10-25	***	6.41	***	1.55	4.0	Odor / Sheen
MW-4D	Y	2/6/14	15:13	80-85	***	15.68	***	4.92	19.0	No Odor
MW-5	N	***	***	15-25	***	***	***	***	***	Not Located / Used Metal Detector
MW-6	N	***	***	15-25	***	***	***	***	***	Not Located / Used Metal Detector
MW-7	Y	2/5/14	10:53	15-25	***	5.85	***	5.95	8.0	No Odor
MW-8R	Y	2/5/14	11:05	10-25	***	5.55	***	3.37	16.0	Slight Odor
MW-9	Y	2/5/14	13:39	15-25	***	5.66	***	3.08	11.0	Odor
MW-10	Y	2/5/14	13:51	15-25	***	4.21	***	2.01	5.0	Odor
MW-11	Y	2/6/14	14:04	15-25	***	6.09	***	3.48	9.0	No Odor
MW-12	N	***	***	15-25	***	***	***	***	***	Not Located / Used Metal Detector
MW-14	Y	2/5/14	12:15	15-25	***	6.85	***	5.96	15.0	No Odor
MW-15	N	***	***	15-25	***	***	***	***	***	Not Located / Possibly Under Trailer
MW-16	Y	2/6/14	13:35	15-25	***	6.71	***	4.30	15.0	No Odor
									116.5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: G.G., B.J., K.P.

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-17	Y	2/6/14	13:10	15-25	***	7.40	***	1.98	14.5	No Odor
MW-18	Y	2/5/14	15:12	15-25	***	6.22	***	4.31	12.0	No Odor
MW-19	Y	2/6/14	11:50	15-25	***	6.95	***	2.19	15.0	No Odor / Added 1 Bolt / Added Well Cap
MW-20	Y	2/6/14	10:55	15-25	***	6.11	***	4.65	15.5	No Odor
MW-21	Y	2/6/14	11:30	15-25	***	6.74	***	3.21	15.0	No Odor
MW-22	N	***	***	15-25	***	***	***	***	***	Not Located / Used Metal Detector
MW-23	N	***	***	15-25	***	***	***	***	***	Not Located / Used Metal Detector
MW-24	Y	2/5/14	14:45	15-25	***	6.15	***	7.31	10.0	No Odor
MW-25	Y	2/5/14	14:26	5-20	***	5.27	***	6.34	4.5	No Odor
MW-26	Y	2/6/14	12:45	5-20	***	5.49	***	5.61	12.0	No Odor
MW-27	Y	2/6/14	11:10	5-20	***	6.49	***	4.79	11.0	No Odor
MW-28	Y	2/5/14	12:16	5-20	***	7.19	***	6.30	6.0	No Odor
MW-29	N	***	***	5-20	***	***	***	***	***	Not Located / Possibly Behind Locked Fence
MW-30	Y	2/5/14	10:21	5-20	***	7.24	***	8.25	7.0	No Odor
MW-31	Y	2/5/14	10:38	5-20	***	6.61	***	6.78	8.5	No Odor
									131.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: G.G., B.J., K.P.

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 Fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-32	Y	2/5/14	11:25	5-20	***	4.38	***	2.03	13.0	Odor / Sheen
MW-33	Y	2/5/14	11:30	5-20	***	4.61	***	6.49	13.0	No Odor
MW-34	Y	2/5/14	13:01	5-20	***	4.58	***	2.37	5.0	Odor
MW-35	Y	2/5/14	13:01	5-20	***	3.99	***	3.74	6.0	No Odor
MW-36	Y	2/5/14	13:18	5-20	***	3.54	***	2.98	13.5	No Odor
MW-37	N	***	***	5-20	4.54	4.56	0.01	***	***	Product / Bailer Check
MW-38	Y	2/5/14	14:06	5-20	***	3.49	***	2.75	5.0	No Odor
MW-39	Y	2/5/14	14:21	5-20	***	3.81	***	2.65	5.0	No Odor
MW-40	Y	2/5/14	14:04	5-20	***	3.28	***	4.61	4.0	No Odor
MW-41	Y	2/5/14	11:55	5-20	***	4.20	***	2.75	13.0	Slight Odor
MW-42	Y	2/6/14	10:30	5-20	***	6.86	***	5.60	5.0	No Odor
DW-1	Y	2/6/14	14:47	90-95	***	18.20	***	2.71	18.0	No Odor
DW-2	Y	2/6/14	12:20	90-95	***	17.72	***	4.38	16.0	No Odor
WSW-1	Y	2/6/14	13:45	***	***	***	***	***	***	No Odor
WSW-2	Y	2/6/14	13:46	***	***	***	***	***	***	No Odor
									116.5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: G.G., B.J., K.P.

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
WSW-3	N	***	***	***	***	***	***	***	***	Could Not Locate Well House / Spiggot in Area Inoperable
WSW-4	N	***	***	***	***	***	***	***	***	Potential Well House Locked / No One in Bank knew about a Water Supply Well
MW-2R Dup.	Y	2/6/14	15:40	***	***	***	***	***	***	Duplicate Sample
MW-3R Dup.	Y	2/6/14	14:20	***	***	***	***	***	***	Duplicate Sample
Field Blank 1	Y	2/5/14	15:18	***	***	***	***	***	***	Field Blank
Field Blank 2	Y	2/6/14	15:45	***	***	***	***	***	***	Field Blank
Trip Blank 1	Y	2/5/14	15:20	***	***	***	***	***	***	Laboratory Prepared Sample
Trip Blank 2	Y	2/6/14	15:47	***	***	***	***	***	***	Laboratory Prepared Sample
									0.0	**TOTAL GALLONS PURGED**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-2R

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	7.09			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			17.91	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.92	gallons
5 casing volume (5 X CV)=		5	14.60	gallons

Total Volume of Water Purged Before Sampling 14.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:52	15:28	15:31	15:34	15:57	15:40		
pH (s.u.)	5.84	5.65	5.60	5.56	5.49	5.41		
Specific Conductivity (µmhos/cm)	201.6	313.6	319.4	323.8	318.5	317.8		
Water Temperature (°C)	20.0	20.4	20.6	20.9	21.2	21.3		
Dissolved Oxygen	2.35	2.64	2.74	2.60	2.50	2.42		
Turbidity (NTU)	25.65	89.26	106.3	157.4	174.8	201.9		
PID readings, if required								

Remarks: Sample Time: 15:40

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-3R

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	6.41		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		18.59	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	3.03	gallons
5 casing volume (5 X CV)=	5	15.15	gallons

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:15	14:18						
pH (s.u.)	5.89	Sheen						
Specific Conductivity (µmhos/cm)	361.8	Sheen						
Water Temperature (°C)	20.1	Sheen						
Dissolved Oxygen	1.55	Sheen						
Turbidity (NTU)	14.61	Sheen						
PID readings, if required								

Remarks: Sample Time: 14:20 **Dry @ 4.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014
Field Personnel: B. Johnson, K. Pudney, G. Globensky
General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235
Site ID#: 04877 **Monitoring Well #** MW-4D
Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	15.68		feet
Total Well Depth (TWD)	85		feet
Length of the water column (LWC=TWD-DGW)		69.32	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	11.30	gallons
5 casing volume (5 X CV)=	5	56.50	gallons

Total Volume of Water Purged Before Sampling 19 gals.
*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:53	15:05						
pH (s.u.)	8.67	8.05						
Specific Conductivity (µmhos/cm)	210.2	197.3						
Water Temperature (°C)	22.2	21.6						
Dissolved Oxygen	4.92	2.20						
Turbidity (NTU)	20.76	89.88						
PID readings, if required								

Remarks: Sample Time: 15:13 **Dry @ 19.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-7

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	5.85			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			19.15	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.12	gallons
5 casing volume (5 X CV)=		5	15.61	gallons

Total Volume of Water Purged Before Sampling 8 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:45	10:48	10:51					
pH (s.u.)	4.32	4.34	4.01					
Specific Conductivity (µmhos/cm)	147.4	149.6	163.2					
Water Temperature (°C)	21.1	21.0	21.0					
Dissolved Oxygen	5.95	6.21	6.43					
Turbidity (NTU)	13.74	46.92	57.2					
PID readings, if required								

Remarks: Sample Time: 10:53 **Dry @ 8.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-8R

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	5.55		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		19.45	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	3.17	gallons
5 casing volume (5 X CV)=	5	15.85	gallons

Total Volume of Water Purged Before Sampling 16 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:50	10:53	10:56	10:59	11:02	11:09		
pH (s.u.)	4.95	4.99	5.09	5.16	5.13	5.12		
Specific Conductivity (µmhos/cm)	81.6	76.3	72.5	70.6	73.8	71.7		
Water Temperature (°C)	18.8	19.4	20.0	20.1	20.3	20.4		
Dissolved Oxygen	3.37	3.19	2.98	2.86	2.94	3.08		
Turbidity (NTU)	17.57	36.21	59.8	92.6	115.7	132.4		
PID readings, if required								

Remarks: Sample Time: 11:09

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-9

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	5.66			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			19.34	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	3.15	gallons
5 casing volume (5 X CV)=		5	15.76	gallons

Total Volume of Water Purged Before Sampling 11 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:30	13:33	13:36	13:39				
pH (s.u.)	4.97	5.54	5.55	5.57				
Specific Conductivity (µmhos/cm)	139.0	149.8	158.4	159.1				
Water Temperature (°C)	18.1	20.1	20.8	20.8				
Dissolved Oxygen	3.08	2.89	2.85	2.84				
Turbidity (NTU)	20.32	56.41	87.65	88.1				
PID readings, if required								

Remarks: Sample Time: 13:39 **Parameters within 10%**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-10

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	4.21			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			20.79	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.39	gallons
5 casing volume (5 X CV)=		5	16.94	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:45	13:48	13:51					
pH (s.u.)	6.20	6.22	6.20					
Specific Conductivity (µmhos/cm)	226.9	229.7	238.8					
Water Temperature (°C)	20.0	20.4	20.6					
Dissolved Oxygen	2.01	3.13	4.41					
Turbidity (NTU)	36.24	126.80	230.5					
PID readings, if required								

Remarks: Sample Time: 13:51 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-11

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.09			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.91	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.08	gallons
5 casing volume (5 X CV)=		5	15.41	gallons

Total Volume of Water Purged Before Sampling 9 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:55	13:58	14:01	14:04				
pH (s.u.)	5.44	5.42	5.48	5.45				
Specific Conductivity (µmhos/cm)	93.2	94.5	97.3	99.8				
Water Temperature (°C)	17.0	18.3	18.9	19.6				
Dissolved Oxygen	3.48	3.46	3.35	3.27				
Turbidity (NTU)	26.31	39.08	74.59	98.41				
PID readings, if required								

Remarks: Sample Time: 14:04 **Dry @ 9.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-14

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	7.09			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			17.91	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.92	gallons
5 casing volume (5 X CV)=		5	14.60	gallons

Total Volume of Water Purged Before Sampling 14.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:00	12:03	12:06	12:09	12:12	12:15		
pH (s.u.)	4.43	4.30	4.28	4.35	4.41	4.46		
Specific Conductivity (µmhos/cm)	63.6	64.4	64.4	67.1	66.2	65.0		
Water Temperature (°C)	19.6	20.2	20.7	20.6	20.8	20.8		
Dissolved Oxygen	5.96	6.43	6.59	6.20	5.94	5.86		
Turbidity (NTU)	19.54	41.39	72.7	126.5	143.8	169.3		
PID readings, if required								

Remarks: Sample Time: 12:15

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-16

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.71			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.29	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.98	gallons
5 casing volume (5 X CV)=		5	14.91	gallons

Total Volume of Water Purged Before Sampling 15 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:20	13:23	13:26	13:29	13:32	13:35		
pH (s.u.)	6.08	6.06	6.01	5.96	5.93	5.91		
Specific Conductivity (µmhos/cm)	81.7	82.8	84.0	85.4	86.3	86.0		
Water Temperature (°C)	17.1	17.7	18.4	19.0	19.8	20.3		
Dissolved Oxygen	4.30	4.14	3.95	3.69	3.48	3.32		
Turbidity (NTU)	15.63	28.11	60.5	103.6	127.4	146.9		
PID readings, if required								

Remarks: Sample Time: 13:35

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-17

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	7.40		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		17.6	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.87	gallons
5 casing volume (5 X CV)=	5	14.34	gallons

Total Volume of Water Purged Before Sampling 14.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:55	12:58	13:01	13:04	13:07	13:10		
pH (s.u.)	6.99	6.90	6.82	6.74	6.69	6.64		
Specific Conductivity (µmhos/cm)	71.4	72.2	74.6	77.7	79.2	79.0		
Water Temperature (°C)	19.8	20.0	20.3	20.5	20.8	21.1		
Dissolved Oxygen	1.98	1.80	1.63	1.60	1.55	1.52		
Turbidity (NTU)	26.37	34.29	56.7	78.4	84.66	79.51		
PID readings, if required								

Remarks: Sample Time: 13:10

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-18

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.22			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.78	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.06	gallons
5 casing volume (5 X CV)=		5	15.31	gallons

Total Volume of Water Purged Before Sampling 12 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	15:00	15:03	15:06	15:09	15:12			
pH (s.u.)	4.99	4.96	4.97	4.96	4.93			
Specific Conductivity (µmhos/cm)	59.9	62.3	64.7	54.7	59.0			
Water Temperature (°C)	18.8	19.7	21.0	20.7	21.2			
Dissolved Oxygen	4.31	3.87	0.35	4.07	3.01			
Turbidity (NTU)	18.93	49.95	68.4	102.7	132.5			
PID readings, if required								

Remarks: Sample Time: 15:12 **Dry @ 12.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-19

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.95			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.05	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.94	gallons
5 casing volume (5 X CV)=		5	14.71	gallons

Total Volume of Water Purged Before Sampling 15 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:35	11:38	11:41	11:44	11:47	11:50		
pH (s.u.)	5.62	5.36	5.07	5.29	5.18	5.20		
Specific Conductivity (µmhos/cm)	48.7	55.8	56.9	54.3	50.8	52.6		
Water Temperature (°C)	18.0	19.4	19.7	19.9	20.0	20.2		
Dissolved Oxygen	2.19	4.11	4.43	4.11	3.86	2.43		
Turbidity (NTU)	20.42	56.39	81.56	128.5	161.0	198.3		
PID readings, if required								

Remarks: Sample Time: 11:50

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-20

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.11			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.89	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.08	gallons
5 casing volume (5 X CV)=		5	15.40	gallons

Total Volume of Water Purged Before Sampling 15.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:40	10:43	10:46	10:49	10:52	10:55		
pH (s.u.)	5.24	5.03	4.95	4.92	4.91	4.94		
Specific Conductivity (µmhos/cm)	54.8	56.0	56.6	56.7	55.9	57.7		
Water Temperature (°C)	17.2	18.5	19.2	19.4	19.5	19.7		
Dissolved Oxygen	4.65	5.00	4.54	4.48	4.53	4.57		
Turbidity (NTU)	23.74	64.59	111.2	137.8	159.6	214.2		
PID readings, if required								

Remarks: Sample Time: 10:55

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-21

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.74			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.26	feet
1 casing volume (CV=LWC X C)=	____ X	0.163	2.98	gallons
5 casing volume (5 X CV)=		5	14.88	gallons

Total Volume of Water Purged Before Sampling 15 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:15	11:18	11:21	11:24	11:27	11:30		
pH (s.u.)	5.22	4.83	4.70	4.76	4.82	4.93		
Specific Conductivity (µmhos/cm)	53.2	56.3	57.1	54.8	58.1	62.2		
Water Temperature (°C)	18.3	20.0	20.3	20.4	20.4	20.6		
Dissolved Oxygen	3.21	4.94	5.01	4.81	3.69	3.02		
Turbidity (NTU)	13.49	71.81	94.37	129.6	152.4	177.5		
PID readings, if required								

Remarks: Sample Time: 11:30

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-24

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.15			feet
Total Well Depth (TWD)	25			feet
Length of the water column (LWC=TWD-DGW)			18.85	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	3.07	gallons
5 casing volume (5 X CV)=		5	15.36	gallons

Total Volume of Water Purged Before Sampling 10 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:35	14:38	14:41	14:44				
pH (s.u.)	5.63	5.42	5.19	5.09				
Specific Conductivity (µmhos/cm)	73.5	64.7	61.1	61.9				
Water Temperature (°C)	21.0	20.8	20.9	20.9				
Dissolved Oxygen	7.31	7.48	7.80	8.03				
Turbidity (NTU)	53.89	99.36	144.7	168.9				
PID readings, if required								

Remarks: Sample Time: 14:45 **Dry @ 10.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-25

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	5.27		feet
Total Well Depth (TWD)	25		feet
Length of the water column (LWC=TWD-DGW)		19.73	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	3.22	gallons
5 casing volume (5 X CV)=	5	16.08	gallons

Total Volume of Water Purged Before Sampling 4.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:20	14:23	14:26					
pH (s.u.)	5.23	5.63	5.71					
Specific Conductivity (µmhos/cm)	171.0	151.9	154.3					
Water Temperature (°C)	19.5	20.1	19.7					
Dissolved Oxygen	6.34	6.99	6.81					
Turbidity (NTU)	24.86	183.5	229.4					
PID readings, if required								

Remarks: Sample Time: 14:26 **Dry @ 4.5 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-26

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	5.49			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			14.51	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.37	gallons
5 casing volume (5 X CV)=		5	11.83	gallons

Total Volume of Water Purged Before Sampling 12 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:30	12:33	12:36	12:39	12:42	12:45		
pH (s.u.)	10.64	9.95	9.83	9.72	9.59	9.41		
Specific Conductivity (µmhos/cm)	121.9	88.0	86.4	84.5	82.8	81.3		
Water Temperature (°C)	18.9	16.8	17.4	18.6	19.3	19.9		
Dissolved Oxygen	5.61	8.27	6.31	6.09	5.86	5.76		
Turbidity (NTU)	37.94	51.3	115.8	167.2	244.8	294.3		
PID readings, if required								

Remarks: Sample Time: 12:45

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-27

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.49			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			13.51	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.20	gallons
5 casing volume (5 X CV)=		5	11.01	gallons

Total Volume of Water Purged Before Sampling 11 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:00	11:02	11:04	11:06	11:08	11:10		
pH (s.u.)	5.52	5.63	5.64	5.59	5.62	5.58		
Specific Conductivity (µmhos/cm)	87.5	89.9	90.1	89.2	88.4	87.3		
Water Temperature (°C)	18.9	19.0	19.1	19.4	19.7	20.1		
Dissolved Oxygen	4.79	5.41	5.50	5.46	5.32	5.21		
Turbidity (NTU)	19.73	46.51	61.82	74.99	82.63	85.44		
PID readings, if required								

Remarks: Sample Time: 11:10

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-28

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	7.19			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			12.81	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	2.09	gallons
5 casing volume (5 X CV)=		5	10.44	gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:10	12:12	12:14	12:16				
pH (s.u.)	4.91	4.93	4.92	4.94				
Specific Conductivity (µmhos/cm)	39.6	35.5	36.1	36.4				
Water Temperature (°C)	20.8	20.0	20.7	21.0				
Dissolved Oxygen	6.30	7.53	7.29	7.15				
Turbidity (NTU)	23.57	74.8	93.6	113.7				
PID readings, if required								

Remarks: Sample Time: 12:16 **Dry @ 6.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-30

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	7.24			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			12.76	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.08	gallons
5 casing volume (5 X CV)=		5	10.40	gallons

Total Volume of Water Purged Before Sampling 7 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:15	10:17	10:19	10:21				
pH (s.u.)	4.13	4.45	4.40	4.35				
Specific Conductivity (µmhos/cm)	92.6	84.4	91.3	94.1				
Water Temperature (°C)	21.6	20.4	20.9	21.1				
Dissolved Oxygen	8.25	8.17	8.10	7.81				
Turbidity (NTU)	54.73	89.46	152.1	170.3				
PID readings, if required								

Remarks: Sample Time: 10:21 **Dry @ 7.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-31

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	6.61			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			13.39	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.18	gallons
5 casing volume (5 X CV)=		5	10.91	gallons

Total Volume of Water Purged Before Sampling 8.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:30	10:32	10:34	10:36	10:38			
pH (s.u.)	4.04	4.00	3.89	4.09	4.03			
Specific Conductivity (µmhos/cm)	155.8	148.3	153.9	142.1	150.0			
Water Temperature (°C)	21.8	19.9	20.0	20.3	21.1			
Dissolved Oxygen	6.78	7.22	7.53	7.32	7.06			
Turbidity (NTU)	17.28	49.11	75.62	68.45	47.39			
PID readings, if required								

Remarks: Sample Time: 10:38 **Dry @ 8.5 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-32

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	4.38			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			15.62	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.55	gallons
5 casing volume (5 X CV)=		5	12.73	gallons

Total Volume of Water Purged Before Sampling 13 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:10	11:13	11:16	11:19	11:22	11:25		
pH (s.u.)	5.33	Sheen	Sheen	Sheen	Sheen	Sheen		
Specific Conductivity (µmhos/cm)	110.0	Sheen	Sheen	Sheen	Sheen	Sheen		
Water Temperature (°C)	20.6	Sheen	Sheen	Sheen	Sheen	Sheen		
Dissolved Oxygen	2.03	Sheen	Sheen	Sheen	Sheen	Sheen		
Turbidity (NTU)	22.16	Sheen	Sheen	Sheen	Sheen	Sheen		
PID readings, if required								

Remarks: Sample Time: 11:25

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-33

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	4.61			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			15.39	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.51	gallons
5 casing volume (5 X CV)=		5	12.54	gallons

Total Volume of Water Purged Before Sampling 13 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11:15	11:18	11:21	11:24	11:27	11:30		
pH (s.u.)	5.69	5.80	5.79	5.76	5.73	5.8		
Specific Conductivity (µmhos/cm)	143.0	142.7	140.3	142.6	143.8	144.5		
Water Temperature (°C)	21.4	20.3	20.3	20.4	21.2	21		
Dissolved Oxygen	6.49	7.52	7.30	7.16	7.37	7.03		
Turbidity (NTU)	63.82	147.1	161.0	189.4	226.5	241.8		
PID readings, if required								

Remarks: Sample Time: 11:30

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-34

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	4.58			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			15.42	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	2.51	gallons
5 casing volume (5 X CV)=		5	12.57	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:55	12:58	13:01					
pH (s.u.)	5.52	5.44	5.32					
Specific Conductivity (µmhos/cm)	102.2	109.1	118.4					
Water Temperature (°C)	19.0	20.1	21.6					
Dissolved Oxygen	2.37	2.62	2.61					
Turbidity (NTU)	21.72	39.6	144.3					
PID readings, if required								

Remarks: Sample Time: 13:01 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-35

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	3.99			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			16.01	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.61	gallons
5 casing volume (5 X CV)=		5	13.05	gallons

Total Volume of Water Purged Before Sampling 6 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:55	12:58	13:01					
pH (s.u.)	5.18	4.89	4.84					
Specific Conductivity (µmhos/cm)	78.1	79.5	97.0					
Water Temperature (°C)	21.3	21.3	21.8					
Dissolved Oxygen	3.74	4.13	3.25					
Turbidity (NTU)	25.41	62.78	94.36					
PID readings, if required								

Remarks: Sample Time: 13:01 **Dry @ 6.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-36

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	3.54		feet
Total Well Depth (TWD)	20		feet
Length of the water column (LWC=TWD-DGW)		16.46	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.68	gallons
5 casing volume (5 X CV)=	5	13.41	gallons

Total Volume of Water Purged Before Sampling 13.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	13:05	13:07	13:10	13:12	13:15	13:18		
pH (s.u.)	5.15	5.05	4.86	4.67	4.58	4.54		
Specific Conductivity (µmhos/cm)	72.6	71.0	71.1	70.1	70.6	71.1		
Water Temperature (°C)	19.5	19.4	19.7	19.8	19.9	19.9		
Dissolved Oxygen	2.98	3.35	3.12	3.23	3.41	3.52		
Turbidity (NTU)	26.45	84.3	121.4	178.2	191.3	214.8		
PID readings, if required								

Remarks: Sample Time: 13:18

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-38

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	3.49		feet
Total Well Depth (TWD)	20		feet
Length of the water column (LWC=TWD-DGW)		16.51	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.69	gallons
5 casing volume (5 X CV)=	5	13.46	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:00	14:03	14:06					
pH (s.u.)	5.50	4.93	4.71					
Specific Conductivity (µmhos/cm)	88.5	83.4	87.4					
Water Temperature (°C)	17.4	16.7	19.0					
Dissolved Oxygen	2.75	3.45	2.93					
Turbidity (NTU)	18.74	52.7	99.8					
PID readings, if required								

Remarks: Sample Time: 14:06 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-39

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	3.81		feet
Total Well Depth (TWD)	20		feet
Length of the water column (LWC=TWD-DGW)		16.19	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.64	gallons
5 casing volume (5 X CV)=	5	13.19	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:15	14:18	14:21					
pH (s.u.)	4.93	4.97	4.88					
Specific Conductivity (µmhos/cm)	90.6	89.7	96.9					
Water Temperature (°C)	15.8	14.7	18.0					
Dissolved Oxygen	2.65	3.03	2.06					
Turbidity (NTU)	22.83	84.56	139.1					
PID readings, if required								

Remarks: Sample Time: 14:21 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-40

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	3.28			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			16.72	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	2.73	gallons
5 casing volume (5 X CV)=		5	13.63	gallons

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:00	14:03						
pH (s.u.)	4.62	4.49						
Specific Conductivity (µmhos/cm)	84.5	84.6						
Water Temperature (°C)	18.9	19.3						
Dissolved Oxygen	4.61	3.64						
Turbidity (NTU)	31.57	238.1						
PID readings, if required								

Remarks: Sample Time: 14:04 **Dry @ 4.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/5/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-41

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	4.20			feet
Total Well Depth (TWD)	20			feet
Length of the water column (LWC=TWD-DGW)			15.8	feet
1 casing volume (CV=LWC X C)= _____ X		0.163	2.58	gallons
5 casing volume (5 X CV)=		5	12.88	gallons

Total Volume of Water Purged Before Sampling 13 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	11;40	11:43	11:46	11:49	11:52	11:55		
pH (s.u.)	5.16	5.05	4.87	4.66	4.59	4.52		
Specific Conductivity (µmhos/cm)	108.8	99.1	98.3	97.4	85.3	82.6		
Water Temperature (°C)	20.6	19.0	19.3	19.5	19.6	19.8		
Dissolved Oxygen	2.75	4.04	3.52	2.87	3.49	3.81		
Turbidity (NTU)	12.73	89.56	100.5	113.8	139.6	164.1		
PID readings, if required								

Remarks: Sample Time: 11:55

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** MW-42

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:			feet
Depth to Free Product (DFP)			feet
Depth to Ground Water (DGW)	6.86		feet
Total Well Depth (TWD)	20		feet
Length of the water column (LWC=TWD-DGW)		13.14	feet
1 casing volume (CV=LWC X C)= ____ X	0.163	2.14	gallons
5 casing volume (5 X CV)=	5	10.71	gallons

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	10:25	10:27	10:30					
pH (s.u.)	5.60	5.47	5.36					
Specific Conductivity (µmhos/cm)	79.6	82.8	84.4					
Water Temperature (°C)	17.1	19.5	20.5					
Dissolved Oxygen	5.60	4.66	3.64					
Turbidity (NTU)	14.71	83.69	142.5					
PID readings, if required								

Remarks: Sample Time: 10:30 **Dry @ 5.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by	Date/Time	Received by	Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** DW-1

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	18.20			feet
Total Well Depth (TWD)	95			feet
Length of the water column (LWC=TWD-DGW)			76.8	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	12.52	gallons
5 casing volume (5 X CV)=		5	62.59	gallons

Total Volume of Water Purged Before Sampling 18 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	14:25	14:40						
pH (s.u.)	11.15	11.54						
Specific Conductivity (µmhos/cm)	373.8	449.1						
Water Temperature (°C)	22.5	21.7						
Dissolved Oxygen	2.71	2.39						
Turbidity (NTU)	21.48	48.3						
PID readings, if required								

Remarks: Sample Time: 14:47 **Dry @ 18.0 gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

Field Data Information Sheet for Groundwater Sampling

Date (mm/dd/yy): 2/6/2014

Field Personnel: B. Johnson, K. Pudney, G. Globensky

General Weather Conditions: Sunny

Ambient Air Temperature: 10.0 °C

Quality Assurance

pH/Conductivity Meter		**DO Meter**	
YSI 63		**YSI 550A**	
09C 101302		04L 2026AK	
10K 101895	X	08B 101895	X
07M 100905		04A 0912AI	
Calibration Buffer:	4, 7, & 10		

Chain of Custody

Relinquished by Date/Time Received by Date/Time

Facility Name: Nickelpumper 235

Site ID#: 04877 **Monitoring Well #** DW-2

Water Supply Well **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness:				feet
Depth to Free Product (DFP)				feet
Depth to Ground Water (DGW)	17.72			feet
Total Well Depth (TWD)	95			feet
Length of the water column (LWC=TWD-DGW)			77.28	feet
1 casing volume (CV=LWC X C)= ____ X		0.163	12.60	gallons
5 casing volume (5 X CV)=		5	62.98	gallons

Total Volume of Water Purged Before Sampling 16 gals.

*If free product is present over 1/8 inch, sampling will not be required.

Cumulative Volume Purged (gallons)	Inital	1st Vol	2nd Vol	3rd Vol	4th Vol	5th Vol	Post Sampling	
Time (military)	12:00	12:15						
pH (s.u.)	10.80	12.21						
Specific Conductivity (µmhos/cm)	496.0	1,171.0						
Water Temperature (°C)	21.0	21.1						
Dissolved Oxygen	4.38	1.81						
Turbidity (NTU)	12.05	39.7						
PID readings, if required								

Remarks: Sample Time: 12:20 **Dry @ 16.0 gallons**

Midlands Environmental Consultants, Inc.

February 7, 2014

Re: Treatment of Purge Water
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 13-4611

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 364.0 gallons were treated on February 5th and 6th, 2014 at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

SHEALY

Chain of Custody Record

Number 34512

Client	Report to Contact	Sampler (Printed Name)	Quote No.
SCHEC WCT	D Thone (WCT)	Dave Johnson	
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page**
200 Bell Street			1 of 1
City / **State** / **Zip Code**	**Preservative**		**Number of Containers**
Columbia / SC / 29201	1. Unpres. 4. HNO3 7. NaOH		**Bottle (See Instructions on back)**
Project Name	2. NaOH/ZnA 5. HCL		**Preservative**
Nickelpenny 225	3. H2SO4 6. Na Thio.		**Lot No.**
Project Number	**P.O Number**		
04877/46776	4600099529		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: Pb, Ni, Mg, Fe, Mn	1,2 DCE	Cl, SO4	1,2DCE	Remarks / Cooler ID
MW-1	11/4/14		G	X					X	X	X	X	
MW-2R	11/4/14	14:46											
MW-3R	11/4/14	14:32											
MW-4D	11/4/14	15:36											
MW-5													
MW-6													
MW-7	11/4/14	14:03											
MW-8													
MW-9		13:31											
MW-10		13:51	G	X					X	X	X	X	

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	QC Requirements (Specify)	Possible Hazard Identification
☐ Standard ☐ Rush (Please Specify)	☐ Return to Client ☐ Disposal by Lab		☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	11/4/14	17:46	1. Received by		
2. Relinquished by	11/5/14	10:20	2. Received by	11/5/14	1040
3. Relinquished by			3. Received by		
4. Relinquished by	11/5/14		4. Laboratory Received by		

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 34613

Client	Report to Contact	Sampler (Printed Name)	Quote No.
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page** ___ of ___

City	State	Zip Code	Project Name	Project Number	P.O Number

Preservative
1. Unpres. 4. HNO3 7. NaOH
2. NaOH/ZnA 5. HCL
3. H2SO4 6. Na Thio.

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis												Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler			1. Received by		
2. Relinquished by			2. Received by		
3. Relinquished by			3. Received by		
4. Relinquished by			4. Laboratory Received by		

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 31314

Client	Report to Contact	Sampler (Printed Name)	Quote No.
[illegible]	[illegible]	[illegible]	
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page** 3 of 6
[illegible]	[illegible]		
City / **State** / **Zip Code**	**Preservative**		Number of Containers
[illegible] / SC / 29201	1. Unpres. 4. HNO3 7. NaOH		Bottle (See Instructions on back)
Project Name	2. NaOH/ZnA 5. HCL		Preservative
[illegible]	3. H2SO4 6. Na Thio.		Lot No.
Project Number	**P.O Number**		
[illegible]	[illegible]		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis	BTEX, MTBE, Naph	1,2 EDB	Cond	1 DB	Remarks / Cooler ID
MW-22			C	X						X	X	X	X	[illegible]
MW-23														[illegible]
MW-24	3/5/14	13:45												[illegible]
MW-25	3/5/14	14:26												[illegible]
MW-26	3/6/14	10:14												[illegible]
MW-27	3/6/14	11:26												[illegible]
MW-28	3/6/14	10:11												[illegible]
MW-29														[illegible]
MW-32	3/4/14	16:31												[illegible]
MW-31	3/4/14	16:35	C	X						X	X	X	X	[illegible]

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	[illegible]	[illegible]	1. Received by	[illegible]	[illegible]
2. Relinquished by	[illegible]	[illegible]	2. Received by	[illegible]	[illegible]
3. Relinquished by			3. Received by		
4. Relinquished by	[illegible]		4. Laboratory Received by		

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 34615

Client	Report to Contact	Sampler (Printed Name)	Quote No.
SCDHEC - LLT	D Thompson	Brian Johnson	
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page** 1 of 6
1362 Pickett Post	803 896 4151 dthompson@scdhec.gov		
City / **State** / **Zip Code**	**Preservative**		
Columbia / SC / 29201	1. Unpres. 4. HNO3 7. NaOH 2. NaOH/ZnA 5. HCL 3. H2SO4 6. Na Thio.		
Project Name			
McEntire 235			
Project Number	**P.O Number**		
4827/46776	4411859		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis	Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID
MW-32	9/9/21	11:04	G	X					X	3	1	3		
MW-33	9/9/21	11:30												
MW-34	9/9/21	11:51												
MW-35	9/9/21	12:21												
MW-36	9/9/21	12:15												
~~MW-37~~														
MW-38	9/9/21	11:46												
MW-39	9/9/21	11:21												
MW-40	9/9/21	11:41												
MW-41	9/9/21	11:59	G	X					X	3	1	3		

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	QC Requirements (Specify)	Possible Hazard Identification
☐ Standard ☐ Rush (Please Specify)	☐ Return to Client ☐ Disposal by Lab		☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	9/9/21	1:30	1. Received by	9/9	1515
2. Relinquished by	9/9/21	4:30	2. Received by	9/9	1630
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory Received by	Date	Time

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

Shealy Environmental Services, Inc.

106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

SHEALY **Chain of Custody Record** **Number** 31016

Client	Report to Contact	Sampler (Printed Name)	Quote No.
SCHC-HCT	D Thompson	Brian Johnson	
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page**
2611 Bull Street	803-576-6651 dthompson@schc.org		1 of 1
City / State / Zip Code	**Preservative**		**Number of Containers**
Columbia SC 29201	1. Unpres. 4. HNO3 7. NaOH		**Bottle (See Instructions on back)**
Project Name	2. NaOH/ZnA 5. HCL		**Preservative**
McMaster, JR	3. H2SO4 6. Na Thio.		**Lot No.**
Project Number	**P.O Number**		
14577/46776	4600059709		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: STARS List	1,4-D Dioxane	VOC	EDB									Remarks / Cooler ID
MW-42	3/6/24	14:30	G	X					X	X	X	X									
DW-1	3/6/24	11:07	G	X																	
DW-2	3/6/24	12:24	G	X																	
LGW-1	3/6/24	13:45	G		X																
LGW-2	3/6/24	12:41	G		X																
LGW-3																					
LGW-4																					
MW-38 DUP	3/6/24	12:10	G	X																	
MW-5 DUP	3/6/24	12:00	G	X																	
Trip Blank #1	3/6/24	15:30	G	X					X	X	X	X									

Turn Around Time Required (Prior lab approval required for expedited TAT)	Sample Disposal	QC Requirements (Specify)	Possible Hazard Identification
☐ Standard ☐ Rush (Please Specify)	☐ Return to Client ☐ Disposal by Lab		☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	3/7	1400	1. Received by	3/7	1400
2. Relinquished by	3/7	1600	2. Received by	3/7	1600
3. Relinquished by			3. Received by		
4. Relinquished by	3/7		4. Laboratory Received by		

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

SHEALY

Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

Number 3867

Client	Report to Contact	Sampler (Printed Name)	Quote No.
Address	**Telephone No. / Fax No. / Email**	**Waybill No.**	**Page** 1 of 1

City	State	Zip Code

Preservative
1. Unpres. 4. HNO3 7. NaOH
2. NaOH/ZnA 5. HCL
3. H2SO4 6. Na Thio.

Project Name

Project Number

P.O Number

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis	Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

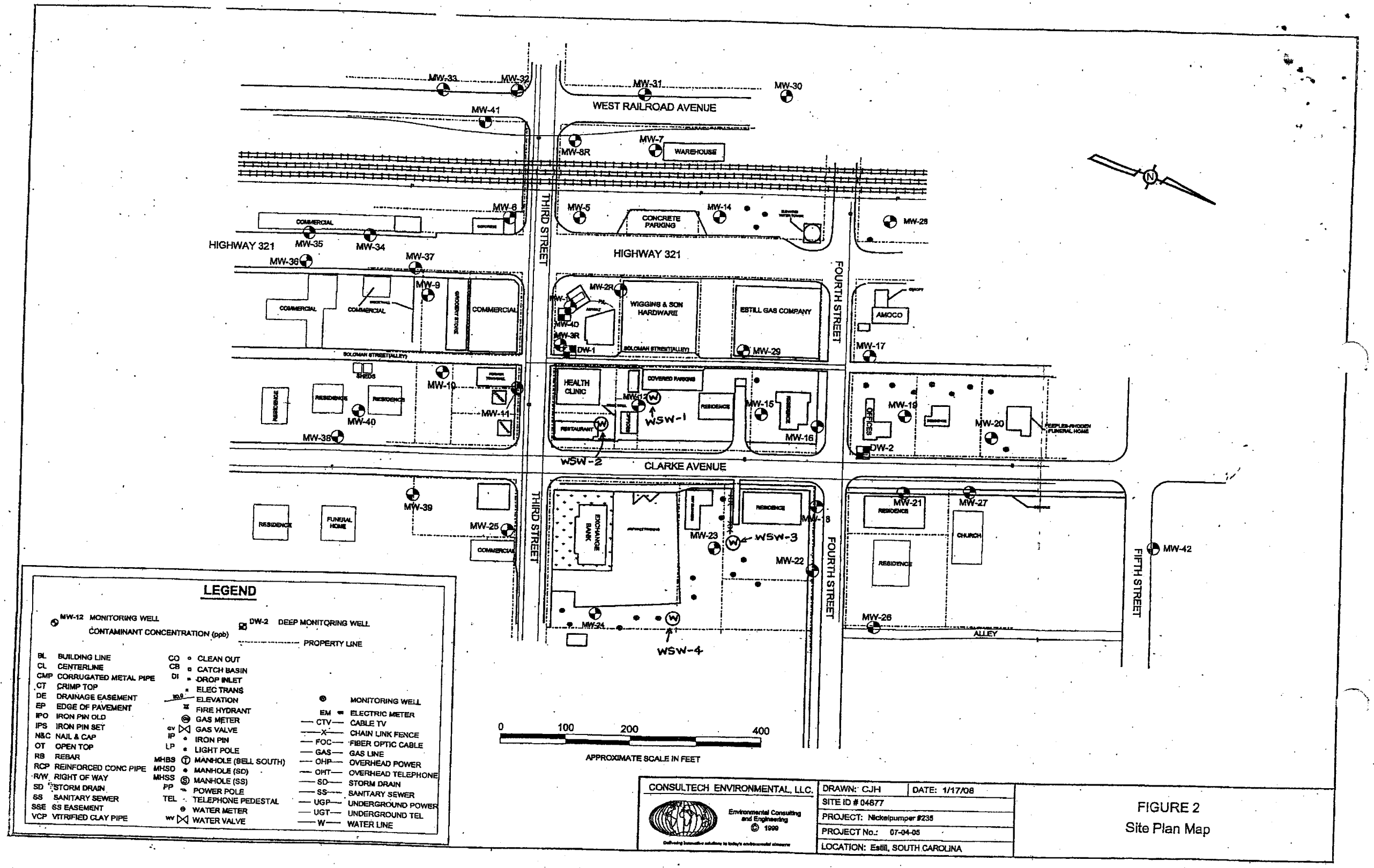
1. Relinquished by / Sampler	Date	Time	1. Received by	Date	Time
2. Relinquished by	Date	Time	2. Received by	Date	Time
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	Date	Time	4. Laboratory Received by	Date	Time

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack

Receipt Temp. _____ °C

Temp. Blank ☐ Y / ☐ N



LEGEND

MW-12 MONITORING WELL — CONTAMINANT CONCENTRATION (ppb)

DW-2 DEEP MONITORING WELL

PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	100.0	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD		GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	GV	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE		

CONSULTECH ENVIRONMENTAL, LLC.
Environmental Consulting and Engineering
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DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

RECEIVED
FEB 07 2014
SC Department of
Health and Environmental
Control

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

SC DHEC - UST Management
2600 Bull Street
Columbia, SC 29201
Attention: Debra Thoma



Project Name: **Nicklepumper 235, Hampton County**

Project Number: **UST Permit #04877/CA #46776**

Lot Number: **PB07036**

Date Completed: **02/14/2014**

Kelly M. Maberry
Project Manager

This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

Case Narrative
SC DHEC - UST Management
Lot Number: PB07036

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving
Sample containers for MW-8 were labeled MW-8R.

Trip Blank #2 was not received.

Samples -013 and -016 for volatiles analysis contained vials with air bubbles greater than ¼" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

EDB/DBCP
The sample result for -007 has a P qualifier because the relative percent difference (RPD) between the two dissimilar phase GC columns exceeds 40%. Section 7.10.4 of SW-846 method 8000B states the higher of the two results is reported; however the lower result is reported for this sample. The higher result for sample -007 was 2.0 ug/L.

Due to high detections for target compounds, samples -023 and -025 were diluted10x and 5x, respectively. As a result, the associated surrogate was recovered outside of the acceptance limits. No corrective action was required, as dilutions of 5X and greater may impact surrogate recoveries.

Sample -030 had sediment in the vials that altered the sample volume.

Sample Summary
SC DHEC - UST Management
Lot Number: PB07036

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	MW-2R	Aqueous	02/06/2014 1540	02/07/2014
002	MW-3R	Aqueous	02/06/2014 1420	02/07/2014
003	MW-4D	Aqueous	02/06/2014 1530	02/07/2014
004	MW-7	Aqueous	02/05/2014 1053	02/07/2014
005	MW-8	Aqueous	02/05/2014 1105	02/07/2014
006	MW-9	Aqueous	02/05/2014 1339	02/07/2014
007	MW-10	Aqueous	02/05/2014 1351	02/07/2014
008	MW-11	Aqueous	02/06/2014 1404	02/07/2014
009	MW-14	Aqueous	02/05/2014 1215	02/07/2014
010	MW-16	Aqueous	02/06/2014 1335	02/07/2014
011	MW-17	Aqueous	02/06/2014 1310	02/07/2014
012	MW-18	Aqueous	02/05/2014 1512	02/07/2014
013	MW-19	Aqueous	02/06/2014 1150	02/07/2014
014	MW-20	Aqueous	02/06/2014 1055	02/07/2014
015	MW-21	Aqueous	02/06/2014 1130	02/07/2014
016	MW-24	Aqueous	02/05/2014 1445	02/07/2014
017	MW-25	Aqueous	02/05/2014 1426	02/07/2014
018	MW-26	Aqueous	02/06/2014 1245	02/07/2014
019	MW-27	Aqueous	02/06/2014 1110	02/07/2014
020	MW-28	Aqueous	02/05/2014 1216	02/07/2014
021	MW-30	Aqueous	02/05/2014 1021	02/07/2014
022	MW-31	Aqueous	02/05/2014 1038	02/07/2014
023	MW-32	Aqueous	02/05/2014 1125	02/07/2014
024	MW-33	Aqueous	02/05/2014 1130	02/07/2014
025	MW-34	Aqueous	02/05/2014 1301	02/07/2014
026	MW-35	Aqueous	02/05/2014 1301	02/07/2014
027	MW-36	Aqueous	02/05/2014 1318	02/07/2014
028	MW-38	Aqueous	02/05/2014 1406	02/07/2014
029	MW-39	Aqueous	02/05/2014 1421	02/07/2014
030	MW-40	Aqueous	02/05/2014 1404	02/07/2014
031	MW-41	Aqueous	02/05/2014 1155	02/07/2014
032	MW-42	Aqueous	02/06/2014 1030	02/07/2014
033	DW-1	Aqueous	02/06/2014 1447	02/07/2014
034	DW-2	Aqueous	02/06/2014 1220	02/07/2014
035	WSW-1	Aqueous	02/06/2014 1345	02/07/2014
036	WSW-2	Aqueous	02/06/2014 1346	02/07/2014
037	MW-2R Dup	Aqueous	02/06/2014 1540	02/07/2014
038	MW-3R Dup	Aqueous	02/06/2014 1420	02/07/2014
039	Field Blank #1	Aqueous	02/05/2014 1518	02/07/2014
040	Field Blank #2	Aqueous	02/06/2014 1545	02/07/2014
041	Trip Blank #1	Aqueous	02/05/2014 1520	02/07/2014

(41 samples)

Executive Summary
SC DHEC - UST Management
Lot Number: PB07036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	MW-3R	Aqueous	tert-Amyl alcohol (TAA)	8260B	1800	J	ug/L	8
002	MW-3R	Aqueous	Benzene	8260B	3600		ug/L	8
002	MW-3R	Aqueous	Ethylbenzene	8260B	640		ug/L	8
002	MW-3R	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	58	J	ug/L	8
002	MW-3R	Aqueous	Naphthalene	8260B	230	J	ug/L	8
002	MW-3R	Aqueous	Xylenes (total)	8260B	450	J	ug/L	8
002	MW-3R	Aqueous	1,2-Dibromoethane (EDB)	8011	0.23		ug/L	8
005	MW-8	Aqueous	Benzene	8260B	2.9	J	ug/L	11
005	MW-8	Aqueous	Ethylbenzene	8260B	23		ug/L	11
005	MW-8	Aqueous	Naphthalene	8260B	33		ug/L	11
006	MW-9	Aqueous	tert-Amyl alcohol (TAA)	8260B	980	J	ug/L	12
006	MW-9	Aqueous	Benzene	8260B	4400		ug/L	12
006	MW-9	Aqueous	Ethylbenzene	8260B	2200		ug/L	12
006	MW-9	Aqueous	Naphthalene	8260B	410	J	ug/L	12
006	MW-9	Aqueous	Toluene	8260B	11000		ug/L	12
006	MW-9	Aqueous	Xylenes (total)	8260B	8100		ug/L	12
006	MW-9	Aqueous	1,2-Dibromoethane (EDB)	8011	6.0		ug/L	12
007	MW-10	Aqueous	tert-Amyl alcohol (TAA)	8260B	1300	J	ug/L	13
007	MW-10	Aqueous	Benzene	8260B	4500		ug/L	13
007	MW-10	Aqueous	Ethylbenzene	8260B	1400		ug/L	13
007	MW-10	Aqueous	Naphthalene	8260B	440	J	ug/L	13
007	MW-10	Aqueous	Toluene	8260B	690		ug/L	13
007	MW-10	Aqueous	Xylenes (total)	8260B	1400		ug/L	13
007	MW-10	Aqueous	1,2-Dibromoethane (EDB)	8011	0.51	P	ug/L	13
008	MW-11	Aqueous	Benzene	8260B	0.74	J	ug/L	14
008	MW-11	Aqueous	Naphthalene	8260B	3.1	J	ug/L	14
010	MW-16	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1.4	J	ug/L	16
010	MW-16	Aqueous	Naphthalene	8260B	4.6	J	ug/L	16
011	MW-17	Aqueous	Naphthalene	8260B	6.4		ug/L	17
012	MW-18	Aqueous	tert-Amyl alcohol (TAA)	8260B	740		ug/L	18
012	MW-18	Aqueous	Benzene	8260B	44		ug/L	18
012	MW-18	Aqueous	1,2-Dichloroethane	8260B	8.8	J	ug/L	18
012	MW-18	Aqueous	Ethylbenzene	8260B	20	J	ug/L	18
012	MW-18	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	39		ug/L	18
012	MW-18	Aqueous	Naphthalene	8260B	24	J	ug/L	18
012	MW-18	Aqueous	tert-butyl alcohol (TBA)	8260B	40	J	ug/L	18
012	MW-18	Aqueous	1,2-Dibromoethane (EDB)	8011	0.077		ug/L	18
015	MW-21	Aqueous	tert-Amyl alcohol (TAA)	8260B	1800		ug/L	21
015	MW-21	Aqueous	Benzene	8260B	280		ug/L	21
015	MW-21	Aqueous	1,2-Dichloroethane	8260B	47	J	ug/L	21
015	MW-21	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	340		ug/L	21
015	MW-21	Aqueous	Naphthalene	8260B	49	J	ug/L	21
015	MW-21	Aqueous	tert-butyl alcohol (TBA)	8260B	230	J	ug/L	21
015	MW-21	Aqueous	1,2-Dibromoethane (EDB)	8011	0.20		ug/L	21
017	MW-25	Aqueous	Naphthalene	8260B	4.6	J	ug/L	23

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
019	MW-27	Aqueous	Benzene	8260B	0.37	J	ug/L	25
019	MW-27	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1.3	J	ug/L	25
022	MW-31	Aqueous	Naphthalene	8260B	4.8	J	ug/L	28
023	MW-32	Aqueous	tert-Amyl alcohol (TAA)	8260B	54000		ug/L	29
023	MW-32	Aqueous	Benzene	8260B	3800		ug/L	29
023	MW-32	Aqueous	Ethylbenzene	8260B	3100		ug/L	29
023	MW-32	Aqueous	Naphthalene	8260B	2600		ug/L	29
023	MW-32	Aqueous	Toluene	8260B	100000		ug/L	29
023	MW-32	Aqueous	Xylenes (total)	8260B	16000		ug/L	29
023	MW-32	Aqueous	1,2-Dibromoethane (EDB)	8011	6.4		ug/L	29
025	MW-34	Aqueous	Benzene	8260B	68	J	ug/L	31
025	MW-34	Aqueous	Ethylbenzene	8260B	1500		ug/L	31
025	MW-34	Aqueous	Naphthalene	8260B	740		ug/L	31
025	MW-34	Aqueous	Xylenes (total)	8260B	1500		ug/L	31
025	MW-34	Aqueous	1,2-Dibromoethane (EDB)	8011	1.5		ug/L	31
027	MW-36	Aqueous	tert-Amyl alcohol (TAA)	8260B	110		ug/L	33
028	MW-38	Aqueous	tert-Amyl alcohol (TAA)	8260B	120		ug/L	34
028	MW-38	Aqueous	Benzene	8260B	28		ug/L	34
028	MW-38	Aqueous	1,2-Dichloroethane	8260B	1.6	J	ug/L	34
028	MW-38	Aqueous	Diisopropyl ether (IPE)	8260B	9.0	J	ug/L	34
028	MW-38	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	3.4	J	ug/L	34
028	MW-38	Aqueous	Naphthalene	8260B	5.4		ug/L	34
030	MW-40	Aqueous	tert-Amyl alcohol (TAA)	8260B	23	J	ug/L	36
030	MW-40	Aqueous	Benzene	8260B	1.1	J	ug/L	36
031	MW-41	Aqueous	tert-Amyl alcohol (TAA)	8260B	49	J	ug/L	37
031	MW-41	Aqueous	Benzene	8260B	1.0	J	ug/L	37
031	MW-41	Aqueous	Ethylbenzene	8260B	6.2		ug/L	37
031	MW-41	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1.7	J	ug/L	37
031	MW-41	Aqueous	Naphthalene	8260B	7.6		ug/L	37
031	MW-41	Aqueous	tert-butyl alcohol (TBA)	8260B	25	J	ug/L	37
032	MW-42	Aqueous	tert-Amyl alcohol (TAA)	8260B	42	J	ug/L	38
032	MW-42	Aqueous	Benzene	8260B	45		ug/L	38
032	MW-42	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1.5	J	ug/L	38
032	MW-42	Aqueous	Naphthalene	8260B	4.5	J	ug/L	38
032	MW-42	Aqueous	Xylenes (total)	8260B	6.4		ug/L	38
032	MW-42	Aqueous	1,2-Dibromoethane (EDB)	8011	0.042		ug/L	38
033	DW-1	Aqueous	Benzene	8260B	0.68	J	ug/L	39
034	DW-2	Aqueous	tert-Amyl alcohol (TAA)	8260B	8.5	J	ug/L	40
034	DW-2	Aqueous	Benzene	8260B	3.3	J	ug/L	40
034	DW-2	Aqueous	Ethylbenzene	8260B	2.3	J	ug/L	40
034	DW-2	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	1.8	J	ug/L	40
034	DW-2	Aqueous	Toluene	8260B	4.0	J	ug/L	40
034	DW-2	Aqueous	Xylenes (total)	8260B	11		ug/L	40
038	MW-3R Dup	Aqueous	tert-Amyl alcohol (TAA)	8260B	1600	J	ug/L	44
038	MW-3R Dup	Aqueous	Benzene	8260B	3300		ug/L	44
038	MW-3R Dup	Aqueous	Ethylbenzene	8260B	560		ug/L	44
038	MW-3R Dup	Aqueous	Methyl tertiary butyl ether (MTBE)	8260B	55	J	ug/L	44
038	MW-3R Dup	Aqueous	Naphthalene	8260B	200	J	ug/L	44

Executive Summary (Continued)

Lot Number: PB07036

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
038	MW-3R Dup	Aqueous	Xylenes (total)	8260B	450	J	ug/L	44
038	MW-3R Dup	Aqueous	1,2-Dibromoethane (EDB)	8011	0.20		ug/L	44
040	Field Blank #2	Aqueous	Ethyl-tert-butyl ether (ETBE)	8260B	0.31	J	ug/L	46
040	Field Blank #2	Aqueous	tert-butyl alcohol (TBA)	8260B	12	J	ug/L	46

(97 detections)

Client: **SC DHEC - UST Management**
Description: **MW-2R**
Date Sampled: **02/06/2014 1540**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-001**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1300	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1132	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		101	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-002**
Description: **MW-3R** | Matrix: **Aqueous**
Date Sampled: **02/06/2014 1420**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	02/12/2014 1545	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**1800**	**J**	**10000**	**670**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	20	ug/L	1
Benzene	**71-43-2**	**8260B**	**3600**		**500**	**20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	100	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	100	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	3300	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**640**		**500**	**170**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**58**	**J**	**500**	**40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**230**	**J**	**500**	**170**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	670	ug/L	1
Toluene	108-88-3	8260B	ND		500	170	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**450**	**J**	**500**	**170**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1143	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.23**		**0.020**	**0.020**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-003**
Description: **MW-4D** | Matrix: **Aqueous**
Date Sampled: **02/06/2014 1530**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1320	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1153	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		103	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-7**
Date Sampled: **02/05/2014 1053**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-004**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1341	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		88	70-130
Toluene-d8		94	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1203	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-005**
Description: **MW-8** | Matrix: **Aqueous**
Date Sampled: **02/05/2014 1105**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1401	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**2.9**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**23**		**5.0**	**1.7**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**33**		**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1214	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-9**
Date Sampled: **02/05/2014 1339**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-006**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	02/12/2014 1606	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**980**	**J**	**10000**	**670**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	20	ug/L	1
Benzene	**71-43-2**	**8260B**	**4400**		**500**	**20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	100	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	100	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	3300	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**2200**		**500**	**170**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		500	40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**410**	**J**	**500**	**170**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	670	ug/L	1
Toluene	**108-88-3**	**8260B**	**11000**		**500**	**170**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**8100**		**500**	**170**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	10	02/14/2014 1224	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**6.0**		**0.19**	**0.19**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		110	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-10**
Date Sampled: **02/05/2014 1351**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-007**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	02/12/2014 1627	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**1300**	**J**	**10000**	**670**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	20	ug/L	1
Benzene	**71-43-2**	**8260B**	**4500**		**500**	**20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	100	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	100	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	3300	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**1400**		**500**	**170**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		500	40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**440**	**J**	**500**	**170**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	670	ug/L	1
Toluene	**108-88-3**	**8260B**	**690**		**500**	**170**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**1400**		**500**	**170**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1234	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.51**	**P**	**0.020**	**0.020**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		94	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-11**
Date Sampled: **02/06/2014 1404**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-008**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1422	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**0.74**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**3.1**	**J**	**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1245	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		113	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-14**
Date Sampled: **02/05/2014 1215**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-009**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1442	ALL		40264

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1255	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-16**
Date Sampled: **02/06/2014 1335**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-010**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1016	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**1.4**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**4.6**	**J**	**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		75	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1305	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-17**
Date Sampled: **02/06/2014 1310**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-011**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	5030B	8260B	1	02/14/2014 0412	ALL		40301

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	2
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	2
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	2
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	2
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	2
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	2
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	2
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	2
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	2
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	2
Naphthalene	**91-20-3**	**8260B**	**6.4**		**5.0**	**1.7**	**ug/L**	**2**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	2
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	2
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		84	70-130
Toluene-d8		92	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1316	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		108	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-18**
Date Sampled: **02/05/2014 1512**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-012**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	5	02/12/2014 1609	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**740**		**500**	**34**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		50	1.0	ug/L	1
Benzene	**71-43-2**	**8260B**	**44**		**25**	**1.0**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		500	5.0	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**8.8**	**J**	**25**	**1.5**	**ug/L**	**1**
Diisopropyl ether (IPE)	108-20-3	8260B	ND		50	2.0	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		500	5.0	ug/L	1
Ethanol	64-17-5	8260B	ND		5000	170	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**20**	**J**	**25**	**8.5**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		500	1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**39**		**25**	**2.0**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**24**	**J**	**25**	**8.5**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**40**	**J**	**500**	**34**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		25	8.5	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		25	8.5	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		75	70-130
Toluene-d8		83	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/14/2014 1327	JCG	02/13/2014 1440	40292

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.077**		**0.020**	**0.020**	**ug/L**	**2**

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		119	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-19**
Date Sampled: **02/06/2014 1150**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-013**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1038	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		76	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1336	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		100	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-20**
Date Sampled: **02/06/2014 1055**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-014**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1100	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		74	70-130
Toluene-d8		83	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1347	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		112	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-21**
Date Sampled: **02/06/2014 1130**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-015**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	10	02/12/2014 1631	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**1800**		**1000**	**67**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		100	2.0	ug/L	1
Benzene	**71-43-2**	**8260B**	**280**		**50**	**2.0**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		1000	10	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**47**	**J**	**50**	**3.0**	**ug/L**	**1**
Diisopropyl ether (IPE)	108-20-3	8260B	ND		100	4.0	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		1000	10	ug/L	1
Ethanol	64-17-5	8260B	ND		10000	330	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		50	17	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		1000	2.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**340**		**50**	**4.0**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**49**	**J**	**50**	**17**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**230**	**J**	**1000**	**67**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		50	17	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		50	17	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		83	70-130
Bromofluorobenzene		75	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1357	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.20**		**0.020**	**0.020**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-24**
Date Sampled: **02/05/2014 1445**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-016**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1122	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		71	70-130
Toluene-d8		81	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1408	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		100	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-25**
Date Sampled: **02/05/2014 1426**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-017**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1143	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**4.6**	**J**	**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		75	70-130
Toluene-d8		84	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1419	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		103	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-26**
Date Sampled: **02/06/2014 1245**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-018**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1205	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		83	70-130
Bromofluorobenzene		73	70-130
Toluene-d8		81	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1429	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		95	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-27**
Date Sampled: **02/06/2014 1110**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-019**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1227	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**0.37**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**1.3**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		81	70-130
Bromofluorobenzene		71	70-130
Toluene-d8		79	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1440	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		108	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-28**
Date Sampled: **02/05/2014 1216**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-020**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1250	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		81	70-130
Bromofluorobenzene		71	70-130
Toluene-d8		79	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1450	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-021**
Description: **MW-30** | Matrix: **Aqueous**
Date Sampled: **02/05/2014 1021**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1312	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		83	70-130
Bromofluorobenzene		74	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1501	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		111	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-31**
Date Sampled: **02/05/2014 1038**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-022**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1334	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**4.8**	**J**	**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		77	70-130
Toluene-d8		85	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1512	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		115	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-32**
Date Sampled: **02/05/2014 1125**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-023**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	500	02/12/2014 1653	ALL		40267
2	5030B	8260B	1000	02/14/2014 0434	ALL		40301

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**54000**		**50000**	**3400**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		5000	100	ug/L	1
Benzene	**71-43-2**	**8260B**	**3800**		**2500**	**100**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		50000	500	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		2500	150	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		5000	200	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		50000	500	ug/L	1
Ethanol	64-17-5	8260B	ND		500000	17000	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**3100**		**2500**	**850**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		50000	100	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		2500	200	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**2600**		**2500**	**850**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		50000	3400	ug/L	1
Toluene	**108-88-3**	**8260B**	**100000**		**5000**	**1700**	**ug/L**	**2**
Xylenes (total)	**1330-20-7**	**8260B**	**16000**		**2500**	**850**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130		90	70-130
Bromofluorobenzene		77	70-130		83	70-130
Toluene-d8		83	70-130		91	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1543	JCG	02/11/2014 1448	40227
2	8011	8011	10	02/13/2014 1203	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**6.4**		**0.19**	**0.19**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		113	57-137	N	180	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-33**
Date Sampled: **02/05/2014 1130**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-024**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1356	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		86	70-130
Bromofluorobenzene		77	70-130
Toluene-d8		83	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	8011	8011	1	02/13/2014 1131	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		102	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-34**
Date Sampled: **02/05/2014 1301**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-025**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	02/12/2014 1715	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		10000	670	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	20	ug/L	1
Benzene	**71-43-2**	**8260B**	**68**	**J**	**500**	**20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	100	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	100	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	3300	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**1500**		**500**	**170**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		500	40	ug/L	1
Naphthalene	**91-20-3**	**8260B**	**740**		**500**	**170**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	670	ug/L	1
Toluene	108-88-3	8260B	ND		500	170	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**1500**		**500**	**170**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		76	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1605	JCG	02/11/2014 1448	40227
2	8011	8011	5	02/13/2014 1214	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**1.5**		**0.098**	**0.098**	**ug/L**	**2**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		114	57-137	N	150	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-026**
Description: **MW-35** | Matrix: **Aqueous**
Date Sampled: **02/05/2014 1301**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1419	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		84	70-130
Bromofluorobenzene		74	70-130
Toluene-d8		83	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1615	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		111	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-027**
Description: **MW-36** | Matrix: **Aqueous**
Date Sampled: **02/05/2014 1318**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1441	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**110**		**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		73	70-130
Toluene-d8		82	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1626	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		106	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-38**
Date Sampled: **02/05/2014 1406**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-028**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1503	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**120**		**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**28**		**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	**107-06-2**	**8260B**	**1.6**	**J**	**5.0**	**0.30**	**ug/L**	**1**
Diisopropyl ether (IPE)	**108-20-3**	**8260B**	**9.0**	**J**	**10**	**0.40**	**ug/L**	**1**
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**3.4**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**5.4**		**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	70-130
Bromofluorobenzene		75	70-130
Toluene-d8		83	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1636	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.021	0.021	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		103	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-39**
Date Sampled: **02/05/2014 1421**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-029**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/12/2014 1525	ALL		40267

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		82	70-130
Bromofluorobenzene		72	70-130
Toluene-d8		79	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1647	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-40**
Date Sampled: **02/05/2014 1404**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-030**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1325	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**23**	**J**	**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**1.1**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		96	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1658	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.022	0.022	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		89	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-41**
Date Sampled: **02/05/2014 1155**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-031**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1346	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**49**	**J**	**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**1.0**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**6.2**		**5.0**	**1.7**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**1.7**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**7.6**		**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**25**	**J**	**100**	**6.7**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		99	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1708	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.020	0.020	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		108	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-032**
Description: **MW-42** | Matrix: **Aqueous**
Date Sampled: **02/06/2014 1030**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1408	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**42**	**J**	**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**45**		**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**1.5**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**4.5**	**J**	**5.0**	**1.7**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**6.4**		**5.0**	**1.7**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		95	70-130
Toluene-d8		100	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/12/2014 1719	JCG	02/11/2014 1448	40227

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.042**		**0.020**	**0.020**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		105	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **DW-1**
Date Sampled: **02/06/2014 1447**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-033**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1430	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**0.68**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	70-130
Bromofluorobenzene		96	70-130
Toluene-d8		101	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1408	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		106	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **DW-2**
Date Sampled: **02/06/2014 1220**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-034**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1452	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**8.5**	**J**	**100**	**6.7**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	**71-43-2**	**8260B**	**3.3**	**J**	**5.0**	**0.20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**2.3**	**J**	**5.0**	**1.7**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**1.8**	**J**	**5.0**	**0.40**	**ug/L**	**1**
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	**108-88-3**	**8260B**	**4.0**	**J**	**5.0**	**1.7**	**ug/L**	**1**
Xylenes (total)	**1330-20-7**	**8260B**	**11**		**5.0**	**1.7**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		93	70-130
Toluene-d8		98	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1439	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		124	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **WSW-1**
Date Sampled: **02/06/2014 1345**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-035**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1513	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1450	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **WSW-2**
Date Sampled: **02/06/2014 1346**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-036**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1534	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		1.0	0.13	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		1.0	0.15	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		1.0	0.33	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		1.0	0.40	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	0.33	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		1.0	0.33	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		95	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1500	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-037**
Description: **MW-2R Dup** | Matrix: **Aqueous**
Date Sampled: **02/06/2014 1540**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1555	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	70-130
Bromofluorobenzene		92	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1510	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		109	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **MW-3R Dup**
Date Sampled: **02/06/2014 1420**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-038**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	100	02/13/2014 1657	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	**75-85-4**	**8260B**	**1600**	**J**	**10000**	**670**	**ug/L**	**1**
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		1000	20	ug/L	1
Benzene	**71-43-2**	**8260B**	**3300**		**500**	**20**	**ug/L**	**1**
tert-Butyl formate (TBF)	762-75-4	8260B	ND		10000	100	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		500	30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		1000	40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		10000	100	ug/L	1
Ethanol	64-17-5	8260B	ND		100000	3300	ug/L	1
Ethylbenzene	**100-41-4**	**8260B**	**560**		**500**	**170**	**ug/L**	**1**
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		10000	20	ug/L	1
Methyl tertiary butyl ether (MTBE)	**1634-04-4**	**8260B**	**55**	**J**	**500**	**40**	**ug/L**	**1**
Naphthalene	**91-20-3**	**8260B**	**200**	**J**	**500**	**170**	**ug/L**	**1**
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		10000	670	ug/L	1
Toluene	108-88-3	8260B	ND		500	170	ug/L	1
Xylenes (total)	**1330-20-7**	**8260B**	**450**	**J**	**500**	**170**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		94	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1520	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	**106-93-4**	**8011**	**0.20**		**0.020**	**0.020**	**ug/L**	**1**

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		119	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management** | Laboratory ID: **PB07036-039**
Description: **Field Blank #1** | Matrix: **Aqueous**
Date Sampled: **02/05/2014 1518**
Date Received: **02/07/2014**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1057	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		90	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1531	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		104	57-137

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **Field Blank #2**
Date Sampled: **02/06/2014 1545**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-040**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1118	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	**637-92-3**	**8260B**	**0.31**	**J**	**100**	**0.20**	**ug/L**	**1**
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	**75-65-0**	**8260B**	**12**	**J**	**100**	**6.7**	**ug/L**	**1**
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		97	70-130

EDB & DBCP by Microextraction

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	8011	8011	1	02/14/2014 1541	JCG	02/13/2014 1440	40293

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
1,2-Dibromoethane (EDB)	106-93-4	8011	ND		0.019	0.019	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,1,1,2-Tetrachloroethane		110	57-137

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **Trip Blank #1**
Date Sampled: **02/05/2014 1520**
Date Received: **02/07/2014**

Laboratory ID: **PB07036-041**
Matrix: **Aqueous**

Volatile Organic Compounds by GC/MS

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	02/13/2014 1139	ALL		40278

Parameter	CAS Number	Analytical Method	Result	Q	PQL	MDL	Units	Run
tert-Amyl alcohol (TAA)	75-85-4	8260B	ND		100	6.7	ug/L	1
tert-Amyl methyl ether (TAME)	994-05-8	8260B	ND		10	0.20	ug/L	1
Benzene	71-43-2	8260B	ND		5.0	0.20	ug/L	1
tert-Butyl formate (TBF)	762-75-4	8260B	ND		100	1.0	ug/L	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	0.30	ug/L	1
Diisopropyl ether (IPE)	108-20-3	8260B	ND		10	0.40	ug/L	1
3,3-Dimethyl-1-butanol	624-95-3	8260B	ND		100	1.0	ug/L	1
Ethanol	64-17-5	8260B	ND		1000	33	ug/L	1
Ethylbenzene	100-41-4	8260B	ND		5.0	1.7	ug/L	1
Ethyl-tert-butyl ether (ETBE)	637-92-3	8260B	ND		100	0.20	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	0.40	ug/L	1
Naphthalene	91-20-3	8260B	ND		5.0	1.7	ug/L	1
tert-butyl alcohol (TBA)	75-65-0	8260B	ND		100	6.7	ug/L	1
Toluene	108-88-3	8260B	ND		5.0	1.7	ug/L	1
Xylenes (total)	1330-20-7	8260B	ND		5.0	1.7	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		95	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

QC Summary

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40264-001
Batch: 40264
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/12/2014 0935
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/12/2014 0935
Benzene	ND		1	5.0	0.20	ug/L	02/12/2014 0935
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/12/2014 0935
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	02/12/2014 0935
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/12/2014 0935
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/12/2014 0935
Ethanol	ND		1	1000	33	ug/L	02/12/2014 0935
Ethylbenzene	ND		1	5.0	1.7	ug/L	02/12/2014 0935
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/12/2014 0935
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	02/12/2014 0935
Naphthalene	ND		1	5.0	1.7	ug/L	02/12/2014 0935
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/12/2014 0935
Toluene	ND		1	5.0	1.7	ug/L	02/12/2014 0935
Xylenes (total)	ND		1	5.0	1.7	ug/L	02/12/2014 0935

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		92	70-130
Toluene-d8		97	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40264-002
Batch: 40264
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	980		1	98	70-130	02/12/2014 0810
tert-Amyl methyl ether (TAME)	50	54		1	108	70-130	02/12/2014 0810
Benzene	50	56		1	112	70-130	02/12/2014 0810
tert-Butyl formate (TBF)	250	270		1	107	70-130	02/12/2014 0810
1,2-Dichloroethane	50	52		1	104	70-130	02/12/2014 0810
Diisopropyl ether (IPE)	50	55		1	111	70-130	02/12/2014 0810
3,3-Dimethyl-1-butanol	1000	1000		1	104	70-130	02/12/2014 0810
Ethanol	5000	4700		1	93	60-140	02/12/2014 0810
Ethylbenzene	50	56		1	113	70-130	02/12/2014 0810
Ethyl-tert-butyl ether (ETBE)	50	52		1	104	70-130	02/12/2014 0810
Methyl tertiary butyl ether (MTBE)	50	52		1	103	70-130	02/12/2014 0810

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40264-002
Batch: 40264
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Naphthalene	50	60		1	119	70-130	02/12/2014 0810
tert-butyl alcohol (TBA)	1000	980		1	98	70-130	02/12/2014 0810
Toluene	50	57		1	114	70-130	02/12/2014 0810
Xylenes (total)	100	110		1	112	70-130	02/12/2014 0810

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		92	70-130
1,2-Dichloroethane-d4		90	70-130
Toluene-d8		97	70-130

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40264-003
Batch: 40264
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	940		1	94	3.7	70-130	20	02/12/2014 0831
tert-Amyl methyl ether (TAME)	50	54		1	108	0.56	70-130	20	02/12/2014 0831
Benzene	50	55		1	109	2.2	70-130	20	02/12/2014 0831
tert-Butyl formate (TBF)	250	260		1	103	3.5	70-130	20	02/12/2014 0831
1,2-Dichloroethane	50	49		1	98	5.2	70-130	20	02/12/2014 0831
Diisopropyl ether (IPE)	50	53		1	107	3.9	70-130	20	02/12/2014 0831
3,3-Dimethyl-1-butanol	1000	1000		1	101	2.7	70-130	20	02/12/2014 0831
Ethanol	5000	4500		1	90	3.1	60-140	20	02/12/2014 0831
Ethylbenzene	50	54		1	108	4.1	70-130	20	02/12/2014 0831
Ethyl-tert-butyl ether (ETBE)	50	51		1	103	1.4	70-130	20	02/12/2014 0831
Methyl tertiary butyl ether (MTBE)	50	50		1	101	2.5	70-130	20	02/12/2014 0831
Naphthalene	50	54		1	109	9.2	70-130	20	02/12/2014 0831
tert-butyl alcohol (TBA)	1000	940		1	94	4.4	70-130	20	02/12/2014 0831
Toluene	50	55		1	110	3.7	70-130	20	02/12/2014 0831
Xylenes (total)	100	110		1	107	4.5	70-130	20	02/12/2014 0831

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		89	70-130
Toluene-d8		96	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MS

Sample ID: PB07036-007MS
Batch: 40264
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1300	100000	93000		100	92	70-130	02/12/2014 1648
tert-Amyl methyl ether (TAME)	ND	5000	5400		100	108	70-130	02/12/2014 1648
Benzene	4500	5000	10000		100	116	70-130	02/12/2014 1648
tert-Butyl formate (TBF)	ND	25000	23000		100	93	70-130	02/12/2014 1648
1,2-Dichloroethane	ND	5000	5100		100	103	70-130	02/12/2014 1648
Diisopropyl ether (IPE)	ND	5000	5500		100	110	70-130	02/12/2014 1648
3,3-Dimethyl-1-butanol	ND	100000	97000		100	97	70-130	02/12/2014 1648
Ethanol	ND	500000	440000		100	89	70-130	02/12/2014 1648
Ethylbenzene	1400	5000	7100		100	114	70-130	02/12/2014 1648
Ethyl-tert-butyl ether (ETBE)	ND	5000	5200		100	104	70-130	02/12/2014 1648
Methyl tertiary butyl ether (MTBE)	ND	5000	5200		100	105	70-130	02/12/2014 1648
Naphthalene	440	5000	5600		100	103	70-130	02/12/2014 1648
tert-butyl alcohol (TBA)	ND	100000	88000		100	88	70-130	02/12/2014 1648
Toluene	690	5000	6400		100	115	70-130	02/12/2014 1648
Xylenes (total)	1400	10000	13000		100	113	70-130	02/12/2014 1648

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		89	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		97	70-130

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PB07036-007MD
Batch: 40264
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1300	100000	96000		100	94	2.6	70-130	20	02/12/2014 1709
tert-Amyl methyl ether (TAME)	ND	5000	5400		100	109	0.18	70-130	20	02/12/2014 1709
Benzene	4500	5000	10000		100	118	0.63	70-130	20	02/12/2014 1709
tert-Butyl formate (TBF)	ND	25000	23000		100	93	0.20	70-130	20	02/12/2014 1709
1,2-Dichloroethane	ND	5000	5200		100	103	0.41	70-130	20	02/12/2014 1709
Diisopropyl ether (IPE)	ND	5000	5600		100	111	1.3	70-130	20	02/12/2014 1709
3,3-Dimethyl-1-butanol	ND	100000	100000		100	101	3.4	70-130	20	02/12/2014 1709
Ethanol	ND	500000	460000		100	92	3.9	70-130	20	02/12/2014 1709
Ethylbenzene	1400	5000	7000		100	112	1.4	70-130	20	02/12/2014 1709
Ethyl-tert-butyl ether (ETBE)	ND	5000	5300		100	105	1.5	70-130	20	02/12/2014 1709
Methyl tertiary butyl ether (MTBE)	ND	5000	5200		100	103	1.5	70-130	20	02/12/2014 1709

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PB07036-007MD
Batch: 40264
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	440	5000	6400		100	119	14	70-130	20	02/12/2014 1709
tert-butyl alcohol (TBA)	ND	100000	93000		100	93	5.7	70-130	20	02/12/2014 1709
Toluene	690	5000	6400		100	114	0.82	70-130	20	02/12/2014 1709
Xylenes (total)	1400	10000	13000		100	112	0.96	70-130	20	02/12/2014 1709

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		94	70-130
Bromofluorobenzene		91	70-130
Toluene-d8		95	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40267-001
Batch: 40267
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/12/2014 0954
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/12/2014 0954
Benzene	ND		1	5.0	0.20	ug/L	02/12/2014 0954
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/12/2014 0954
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	02/12/2014 0954
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/12/2014 0954
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/12/2014 0954
Ethanol	ND		1	1000	33	ug/L	02/12/2014 0954
Ethylbenzene	ND		1	5.0	1.7	ug/L	02/12/2014 0954
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/12/2014 0954
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	02/12/2014 0954
Naphthalene	ND		1	5.0	1.7	ug/L	02/12/2014 0954
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/12/2014 0954
Toluene	ND		1	5.0	1.7	ug/L	02/12/2014 0954
Xylenes (total)	ND		1	5.0	1.7	ug/L	02/12/2014 0954

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		74	70-130
1,2-Dichloroethane-d4		81	70-130
Toluene-d8		82	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40267-002
Batch: 40267
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	910		1	91	70-130	02/12/2014 0823
tert-Amyl methyl ether (TAME)	50	56		1	112	70-130	02/12/2014 0823
Benzene	50	53		1	105	70-130	02/12/2014 0823
tert-Butyl formate (TBF)	250	250		1	99	70-130	02/12/2014 0823
1,2-Dichloroethane	50	54		1	109	70-130	02/12/2014 0823
Diisopropyl ether (IPE)	50	54		1	108	70-130	02/12/2014 0823
3,3-Dimethyl-1-butanol	1000	910		1	91	70-130	02/12/2014 0823
Ethanol	5000	4600		1	91	60-140	02/12/2014 0823
Ethylbenzene	50	54		1	108	70-130	02/12/2014 0823
Ethyl-tert-butyl ether (ETBE)	50	55		1	110	70-130	02/12/2014 0823
Methyl tertiary butyl ether (MTBE)	50	51		1	103	70-130	02/12/2014 0823
Naphthalene	50	48		1	96	70-130	02/12/2014 0823
tert-butyl alcohol (TBA)	1000	1000		1	103	70-130	02/12/2014 0823
Toluene	50	54		1	108	70-130	02/12/2014 0823
Xylenes (total)	100	110		1	110	70-130	02/12/2014 0823

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		75	70-130
1,2-Dichloroethane-d4		76	70-130
Toluene-d8		80	70-130

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40267-003
Batch: 40267
Analytical Method: 8260B
Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	950		1	95	3.9	70-130	20	02/12/2014 0846
tert-Amyl methyl ether (TAME)	50	56		1	112	0.14	70-130	20	02/12/2014 0846
Benzene	50	51		1	103	2.0	70-130	20	02/12/2014 0846
tert-Butyl formate (TBF)	250	240		1	97	1.3	70-130	20	02/12/2014 0846
1,2-Dichloroethane	50	53		1	106	2.4	70-130	20	02/12/2014 0846
Diisopropyl ether (IPE)	50	52		1	104	4.0	70-130	20	02/12/2014 0846
3,3-Dimethyl-1-butanol	1000	940		1	94	3.8	70-130	20	02/12/2014 0846
Ethanol	5000	4400		1	87	4.4	60-140	20	02/12/2014 0846
Ethylbenzene	50	53		1	107	1.1	70-130	20	02/12/2014 0846
Ethyl-tert-butyl ether (ETBE)	50	54		1	109	1.0	70-130	20	02/12/2014 0846
Methyl tertiary butyl ether (MTBE)	50	51		1	102	0.67	70-130	20	02/12/2014 0846

PQL = Practical quantitation limit
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40267-003
Batch: 40267
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Naphthalene	50	50		1	99	3.4	70-130	20	02/12/2014 0846
tert-butyl alcohol (TBA)	1000	1000		1	105	1.8	70-130	20	02/12/2014 0846
Toluene	50	53		1	106	1.6	70-130	20	02/12/2014 0846
Xylenes (total)	100	110		1	108	1.6	70-130	20	02/12/2014 0846

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		76	70-130
1,2-Dichloroethane-d4		77	70-130
Toluene-d8		79	70-130

Volatile Organic Compounds by GC/MS - MS

Sample ID: PB07036-025MS
Batch: 40267
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	100000	99000		100	99	70-130	02/12/2014 1737
tert-Amyl methyl ether (TAME)	ND	5000	6100		100	123	70-130	02/12/2014 1737
Benzene	68	5000	6200		100	124	70-130	02/12/2014 1737
tert-Butyl formate (TBF)	ND	25000	23000		100	91	70-130	02/12/2014 1737
1,2-Dichloroethane	ND	5000	6400		100	128	70-130	02/12/2014 1737
Diisopropyl ether (IPE)	ND	5000	6100		100	122	70-130	02/12/2014 1737
3,3-Dimethyl-1-butanol	ND	100000	100000		100	102	70-130	02/12/2014 1737
Ethanol	ND	500000	510000		100	102	70-130	02/12/2014 1737
Ethylbenzene	1500	5000	7700		100	124	70-130	02/12/2014 1737
Ethyl-tert-butyl ether (ETBE)	ND	5000	6100		100	122	70-130	02/12/2014 1737
Methyl tertiary butyl ether (MTBE)	ND	5000	5800		100	116	70-130	02/12/2014 1737
Naphthalene	740	5000	5400		100	93	70-130	02/12/2014 1737
tert-butyl alcohol (TBA)	ND	100000	110000		100	114	70-130	02/12/2014 1737
Toluene	ND	5000	6300		100	125	70-130	02/12/2014 1737
Xylenes (total)	1500	10000	14000		100	124	70-130	02/12/2014 1737

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		75	70-130
Bromofluorobenzene		71	70-130
Toluene-d8		76	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MSD

Sample ID: PB07036-025MD
Batch: 40267
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	ND	100000	100000		100	103	4.2	70-130	20	02/12/2014 1759
tert-Amyl methyl ether (TAME)	ND	5000	6000		100	120	2.5	70-130	20	02/12/2014 1759
Benzene	68	5000	6100		100	120	2.9	70-130	20	02/12/2014 1759
tert-Butyl formate (TBF)	ND	25000	22000		100	90	1.1	70-130	20	02/12/2014 1759
1,2-Dichloroethane	ND	5000	6100		100	121	5.2	70-130	20	02/12/2014 1759
Diisopropyl ether (IPE)	ND	5000	5900		100	119	2.7	70-130	20	02/12/2014 1759
3,3-Dimethyl-1-butanol	ND	100000	110000		100	106	4.2	70-130	20	02/12/2014 1759
Ethanol	ND	500000	540000		100	108	5.4	70-130	20	02/12/2014 1759
Ethylbenzene	1500	5000	7500		100	121	1.7	70-130	20	02/12/2014 1759
Ethyl-tert-butyl ether (ETBE)	ND	5000	6100		100	121	0.94	70-130	20	02/12/2014 1759
Methyl tertiary butyl ether (MTBE)	ND	5000	5700		100	114	1.8	70-130	20	02/12/2014 1759
Naphthalene	740	5000	5700		100	99	6.1	70-130	20	02/12/2014 1759
tert-butyl alcohol (TBA)	ND	100000	120000		100	119	4.3	70-130	20	02/12/2014 1759
Toluene	ND	5000	6000		100	121	3.9	70-130	20	02/12/2014 1759
Xylenes (total)	1500	10000	14000		100	121	1.9	70-130	20	02/12/2014 1759

Surrogate	Q	% Rec	Acceptance Limit
1,2-Dichloroethane-d4		74	70-130
Bromofluorobenzene		71	70-130
Toluene-d8		75	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40278-001
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/13/2014 1036
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/13/2014 1036
Benzene	ND		1	5.0	0.20	ug/L	02/13/2014 1036
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/13/2014 1036
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	02/13/2014 1036
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/13/2014 1036
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/13/2014 1036
Ethanol	ND		1	1000	33	ug/L	02/13/2014 1036
Ethylbenzene	ND		1	5.0	1.7	ug/L	02/13/2014 1036
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/13/2014 1036
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	02/13/2014 1036

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40278-001
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	5.0	1.7	ug/L	02/13/2014 1036
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/13/2014 1036
Toluene	ND		1	5.0	1.7	ug/L	02/13/2014 1036
Xylenes (total)	ND		1	5.0	1.7	ug/L	02/13/2014 1036

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		93	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40278-002
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	101	70-130	02/13/2014 0912
tert-Amyl methyl ether (TAME)	50	54		1	107	70-130	02/13/2014 0912
Benzene	50	53		1	107	70-130	02/13/2014 0912
tert-Butyl formate (TBF)	250	270		1	107	70-130	02/13/2014 0912
1,2-Dichloroethane	50	50		1	101	70-130	02/13/2014 0912
Diisopropyl ether (IPE)	50	54		1	107	70-130	02/13/2014 0912
3,3-Dimethyl-1-butanol	1000	1000		1	105	70-130	02/13/2014 0912
Ethanol	5000	4500		1	90	60-140	02/13/2014 0912
Ethylbenzene	50	53		1	105	70-130	02/13/2014 0912
Ethyl-tert-butyl ether (ETBE)	50	51		1	102	70-130	02/13/2014 0912
Methyl tertiary butyl ether (MTBE)	50	49		1	97	70-130	02/13/2014 0912
Naphthalene	50	55		1	110	70-130	02/13/2014 0912
tert-butyl alcohol (TBA)	1000	960		1	96	70-130	02/13/2014 0912
Toluene	50	53		1	107	70-130	02/13/2014 0912
Xylenes (total)	100	110		1	106	70-130	02/13/2014 0912

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		92	70-130
1,2-Dichloroethane-d4		97	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40278-003
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	990		1	99	1.8	70-130	20	02/13/2014 0933
tert-Amyl methyl ether (TAME)	50	52		1	103	3.8	70-130	20	02/13/2014 0933
Benzene	50	52		1	103	3.6	70-130	20	02/13/2014 0933
tert-Butyl formate (TBF)	250	250		1	101	5.9	70-130	20	02/13/2014 0933
1,2-Dichloroethane	50	48		1	96	4.5	70-130	20	02/13/2014 0933
Diisopropyl ether (IPE)	50	52		1	104	2.7	70-130	20	02/13/2014 0933
3,3-Dimethyl-1-butanol	1000	1000		1	103	1.4	70-130	20	02/13/2014 0933
Ethanol	5000	4500		1	90	0.070	60-140	20	02/13/2014 0933
Ethylbenzene	50	51		1	102	3.4	70-130	20	02/13/2014 0933
Ethyl-tert-butyl ether (ETBE)	50	49		1	98	3.8	70-130	20	02/13/2014 0933
Methyl tertiary butyl ether (MTBE)	50	48		1	96	1.4	70-130	20	02/13/2014 0933
Naphthalene	50	54		1	108	2.3	70-130	20	02/13/2014 0933
tert-butyl alcohol (TBA)	1000	940		1	94	2.6	70-130	20	02/13/2014 0933
Toluene	50	51		1	103	3.7	70-130	20	02/13/2014 0933
Xylenes (total)	100	100		1	102	4.4	70-130	20	02/13/2014 0933

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		92	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		95	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40278-001
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/13/2014 1036
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/13/2014 1036
Benzene	ND		1	1.0	0.13	ug/L	02/13/2014 1036
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/13/2014 1036
1,2-Dichloroethane	ND		1	1.0	0.15	ug/L	02/13/2014 1036
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/13/2014 1036
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/13/2014 1036
Ethanol	ND		1	1000	33	ug/L	02/13/2014 1036
Ethylbenzene	ND		1	1.0	0.33	ug/L	02/13/2014 1036
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/13/2014 1036
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	0.40	ug/L	02/13/2014 1036

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40278-001
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	1.0	0.40	ug/L	02/13/2014 1036
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/13/2014 1036
Toluene	ND		1	1.0	0.33	ug/L	02/13/2014 1036
Xylenes (total)	ND		1	1.0	0.33	ug/L	02/13/2014 1036

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		90	70-130
1,2-Dichloroethane-d4		93	70-130
Toluene-d8		96	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40278-002
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	1000		1	101	70-130	02/13/2014 0912
tert-Amyl methyl ether (TAME)	50	54		1	107	70-130	02/13/2014 0912
Benzene	50	53		1	107	70-130	02/13/2014 0912
tert-Butyl formate (TBF)	250	270		1	107	70-130	02/13/2014 0912
1,2-Dichloroethane	50	50		1	101	70-130	02/13/2014 0912
Diisopropyl ether (IPE)	50	54		1	107	70-130	02/13/2014 0912
3,3-Dimethyl-1-butanol	1000	1000		1	105	70-130	02/13/2014 0912
Ethanol	5000	4500		1	90	60-140	02/13/2014 0912
Ethylbenzene	50	53		1	105	70-130	02/13/2014 0912
Ethyl-tert-butyl ether (ETBE)	50	51		1	102	70-130	02/13/2014 0912
Methyl tertiary butyl ether (MTBE)	50	49		1	97	70-130	02/13/2014 0912
Naphthalene	50	55		1	110	70-130	02/13/2014 0912
tert-butyl alcohol (TBA)	1000	960		1	96	70-130	02/13/2014 0912
Toluene	50	53		1	107	70-130	02/13/2014 0912
Xylenes (total)	100	110		1	106	70-130	02/13/2014 0912

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		92	70-130
1,2-Dichloroethane-d4		97	70-130
Toluene-d8		97	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40278-003
Batch: 40278
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	990		1	99	1.8	70-130	20	02/13/2014 0933
tert-Amyl methyl ether (TAME)	50	52		1	103	3.8	70-130	20	02/13/2014 0933
Benzene	50	52		1	103	3.6	70-130	20	02/13/2014 0933
tert-Butyl formate (TBF)	250	250		1	101	5.9	70-130	20	02/13/2014 0933
1,2-Dichloroethane	50	48		1	96	4.5	70-130	20	02/13/2014 0933
Diisopropyl ether (IPE)	50	52		1	104	2.7	70-130	20	02/13/2014 0933
3,3-Dimethyl-1-butanol	1000	1000		1	103	1.4	70-130	20	02/13/2014 0933
Ethanol	5000	4500		1	90	0.070	60-140	20	02/13/2014 0933
Ethylbenzene	50	51		1	102	3.4	70-130	20	02/13/2014 0933
Ethyl-tert-butyl ether (ETBE)	50	49		1	98	3.8	70-130	20	02/13/2014 0933
Methyl tertiary butyl ether (MTBE)	50	48		1	96	1.4	70-130	20	02/13/2014 0933
Naphthalene	50	54		1	108	2.3	70-130	20	02/13/2014 0933
tert-butyl alcohol (TBA)	1000	940		1	94	2.6	70-130	20	02/13/2014 0933
Toluene	50	51		1	103	3.7	70-130	20	02/13/2014 0933
Xylenes (total)	100	100		1	102	4.4	70-130	20	02/13/2014 0933

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		92	70-130
1,2-Dichloroethane-d4		91	70-130
Toluene-d8		95	70-130

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40301-001
Batch: 40301
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
tert-Amyl alcohol (TAA)	ND		1	100	6.7	ug/L	02/13/2014 2241
tert-Amyl methyl ether (TAME)	ND		1	10	0.20	ug/L	02/13/2014 2241
Benzene	ND		1	5.0	0.20	ug/L	02/13/2014 2241
tert-Butyl formate (TBF)	ND		1	100	1.0	ug/L	02/13/2014 2241
1,2-Dichloroethane	ND		1	5.0	0.30	ug/L	02/13/2014 2241
Diisopropyl ether (IPE)	ND		1	10	0.40	ug/L	02/13/2014 2241
3,3-Dimethyl-1-butanol	ND		1	100	1.0	ug/L	02/13/2014 2241
Ethanol	ND		1	1000	33	ug/L	02/13/2014 2241
Ethylbenzene	ND		1	5.0	1.7	ug/L	02/13/2014 2241
Ethyl-tert-butyl ether (ETBE)	ND		1	100	0.20	ug/L	02/13/2014 2241
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	0.40	ug/L	02/13/2014 2241

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - MB

Sample ID: PQ40301-001
Batch: 40301
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
Naphthalene	ND		1	5.0	1.7	ug/L	02/13/2014 2241
tert-butyl alcohol (TBA)	ND		1	100	6.7	ug/L	02/13/2014 2241
Toluene	ND		1	5.0	1.7	ug/L	02/13/2014 2241
Xylenes (total)	ND		1	5.0	1.7	ug/L	02/13/2014 2241

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		82	70-130
1,2-Dichloroethane-d4		89	70-130
Toluene-d8		90	70-130

Volatile Organic Compounds by GC/MS - LCS

Sample ID: PQ40301-002
Batch: 40301
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	880		1	88	70-130	02/13/2014 2112
tert-Amyl methyl ether (TAME)	50	57		1	115	70-130	02/13/2014 2112
Benzene	50	52		1	104	70-130	02/13/2014 2112
tert-Butyl formate (TBF)	250	250		1	98	70-130	02/13/2014 2112
1,2-Dichloroethane	50	55		1	110	70-130	02/13/2014 2112
Diisopropyl ether (IPE)	50	54		1	109	70-130	02/13/2014 2112
3,3-Dimethyl-1-butanol	1000	900		1	90	70-130	02/13/2014 2112
Ethanol	5000	4700		1	93	60-140	02/13/2014 2112
Ethylbenzene	50	51		1	102	70-130	02/13/2014 2112
Ethyl-tert-butyl ether (ETBE)	50	57		1	114	70-130	02/13/2014 2112
Methyl tertiary butyl ether (MTBE)	50	59		1	117	70-130	02/13/2014 2112
Naphthalene	50	46		1	93	70-130	02/13/2014 2112
tert-butyl alcohol (TBA)	1000	990		1	99	70-130	02/13/2014 2112
Toluene	50	54		1	107	70-130	02/13/2014 2112
Xylenes (total)	100	110		1	105	70-130	02/13/2014 2112

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		82	70-130
1,2-Dichloroethane-d4		83	70-130
Toluene-d8		86	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Volatile Organic Compounds by GC/MS - LCSD

Sample ID: PQ40301-003
Batch: 40301
Analytical Method: 8260B

Matrix: Aqueous
Prep Method: 5030B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
tert-Amyl alcohol (TAA)	1000	870		1	87	0.85	70-130	20	02/13/2014 2134
tert-Amyl methyl ether (TAME)	50	58		1	116	1.2	70-130	20	02/13/2014 2134
Benzene	50	53		1	107	2.3	70-130	20	02/13/2014 2134
tert-Butyl formate (TBF)	250	250		1	99	1.1	70-130	20	02/13/2014 2134
1,2-Dichloroethane	50	56		1	111	0.92	70-130	20	02/13/2014 2134
Diisopropyl ether (IPE)	50	56		1	112	3.5	70-130	20	02/13/2014 2134
3,3-Dimethyl-1-butanol	1000	910		1	91	0.37	70-130	20	02/13/2014 2134
Ethanol	5000	4700		1	93	0.041	60-140	20	02/13/2014 2134
Ethylbenzene	50	52		1	104	1.8	70-130	20	02/13/2014 2134
Ethyl-tert-butyl ether (ETBE)	50	58		1	115	1.3	70-130	20	02/13/2014 2134
Methyl tertiary butyl ether (MTBE)	50	59		1	119	1.3	70-130	20	02/13/2014 2134
Naphthalene	50	47		1	93	0.40	70-130	20	02/13/2014 2134
tert-butyl alcohol (TBA)	1000	980		1	98	1.5	70-130	20	02/13/2014 2134
Toluene	50	55		1	110	2.6	70-130	20	02/13/2014 2134
Xylenes (total)	100	110		1	107	1.6	70-130	20	02/13/2014 2134

Surrogate	Q	% Rec	Acceptance Limit
Bromofluorobenzene		81	70-130
1,2-Dichloroethane-d4		83	70-130
Toluene-d8		87	70-130

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: PQ40227-001
Batch: 40227
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/11/2014 1448

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/12/2014 1315

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		104	57-137

EDB & DBCP by Microextraction - LCS

Sample ID: PQ40227-002
Batch: 40227
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/11/2014 1448

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.32		1	128	60-140	02/12/2014 1326

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		105	57-137

EDB & DBCP by Microextraction - MS

Sample ID: PB07036-022MS
Batch: 40227
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/11/2014 1448

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.25	0.32		1	128	60-140	02/12/2014 1522

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: PB07036-022MD
Batch: 40227
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/11/2014 1448

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.31		1	128	4.0	60-140	20	02/12/2014 1533

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		107	57-137

EDB & DBCP by Microextraction - MB

Sample ID: PQ40292-001
Batch: 40292
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/14/2014 0917

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		107	57-137

EDB & DBCP by Microextraction - LCS

Sample ID: PQ40292-002
Batch: 40292
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.35		1	138	60-140	02/14/2014 0928

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		107	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MB

Sample ID: PQ40293-001
Batch: 40293
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Result	Q	Dil	PQL	MDL	Units	Analysis Date
1,2-Dibromoethane (EDB)	ND		1	0.020	0.020	ug/L	02/14/2014 1347

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		106	57-137

EDB & DBCP by Microextraction - LCS

Sample ID: PQ40293-002
Batch: 40293
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	0.25	0.31		1	140	60-140	02/14/2014 1358

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		111	57-137

EDB & DBCP by Microextraction - MS

Sample ID: PB07036-033MS
Batch: 40293
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.31		1	128	60-140	02/14/2014 1418

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		103	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

EDB & DBCP by Microextraction - MSD

Sample ID: PB07036-033MD
Batch: 40293
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/13/2014 1440

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
1,2-Dibromoethane (EDB)	ND	0.24	0.31		1	128	0.97	60-140	20	02/14/2014 1429

Surrogate	Q	% Rec	Acceptance Limit
1,1,1,2-Tetrachloroethane		105	57-137

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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Chain of Custody Record

Number 34612

Client: SCDHEC - UST	Report to Contact: D. Thoma (UST)	Sampler (Printed Name): Brian Johnson	Quote No.
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803-898-0631 / ThomadI@dhec.sc.gov	Waybill No.	Page: 1 of 6
City: Columbia; State: SC; Zip Code: 29201	Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.		
Project Name: Nicklepumper 235			
Project Number: 04877 / 46776	P.O Number: 4600088529		Lot No.: PB07036

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: Benzo, Naphth, Mthe	1,2 DCA	OXY's	EDB	Number of Containers	Bottle (See Instructions on back)	Preservative	Remarks / Cooler ID
									3				3			
									A				A			
									5				5			
MW-1	2/6/14		G	X					X	X	X	X				Unable to sample
MW-2R	2/6/14	15:40														Slight odor/duplicated
MW-3R	2/6/14	14:20														Odor/Sheen/duplicated
MW-4D	2/6/14	15:30														no odor
MW-5	2/6/14															not Located
MW-6	2/6/14															not Located
MW-7	2/5/14	10:53														no odor
MW-8	2/5/14	11:05														slight odor
MW-9	2/5/14	13:39														Odor
MW-10	2/5/14	13:51	G	X					X	X	X	X				Odor

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	17:40	1. Received by	2/6	1740
2. Relinquished by	2/7	10:30	2. Received by	2/7	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by: Kelly W.	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack
Receipt Temp. 0.1 °C
Temp. Blank ☑ Y / ☐ N

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Chain of Custody Record — **Number** 34613

Client: SCDHEC - UST	Report to Contact: D Thomas (UST)	Sampler (Printed Name): Brian Johnson
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803-898-0631 / ThomasD@sc.dhec.gov	Waybill No.
City: Columbia	State: SC	Zip Code: 29201
Project Name: Nickelpumper 235	Project Number: 04877 / 46776	P.O Number: 4600088529

Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.

Quote No.: PB07036

Page 2 of 6

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: Bkgr. Naphth. 1,1,1 TCE	1,2 DCA	Oxy's	EDB	Remarks / Cooler ID
MW-11	2/6/14	1404	G	X					X	X	X	X	no odor
~~MW-12~~	2/6/14												not Located
MW-14	2/5/14	12:15											no odor
~~MW-15~~													not Located
MW-16	2/6/14	13:35											no odor
MW-17	2/6/14	13:10											no odor
MW-18	2/5/14	15:12											no odor
MW-19	2/6/14	11:50											no odor
MW-20	2/6/14	10:55											no odor
MW-21	2/6/14	11:30	G	X					X	X	X	X	no odor

Number of Containers: 3 / 3; Bottle (See Instructions on back): A / A; Preservative: 5 / 5

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	1740	1. Received by	2/6	1740
2. Relinquished by	2/7	1630	2. Received by	2/7	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by: Kelly W.	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack; Receipt Temp. 0.1 °C; Temp. Blank ☐ Y / ☑ N

KWP 2-7-14

Chain of Custody Record

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Number 34614

Client: SCDHEC-UST	Report to Contact: D. Thoma (UST)	Sampler (Printed Name): Brian Johnson	Quote No.
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803-898-0631 / thomadl@dhec.sc.gov	Waybill No.	Page 3 of 6
City: Columbia; State: SC; Zip Code: 29201	Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.		
Project Name: Nicklepumper 235			
Project Number: 04877/46776	P.O Number: 4400088529		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: BTEX, Naphth, MTBE	1,2 DCA	Oxy's	EDB	Remarks / Cooler ID
Number of Containers									3	1	3		
Bottle (See Instructions on back)									A		A		
Preservative									5		5		
Lot No.												PB07036	
MW-22			G	X					X	X	X	X	not Located
MW-23													not Located
MW-24	2/5/14	14:45											no odor
MW-25	2/5/14	14:26											no odor
MW-26	2/6/14	12:45											no odor
MW-27	2/6/14	11:10											no odor
MW-28	2/5/14	12:16											no odor
MW-29													not Located
MW-30	2/5/14	10:21											no odor
MW-31	2/5/14	10:38	G	X					X	X	X	X	no odor

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

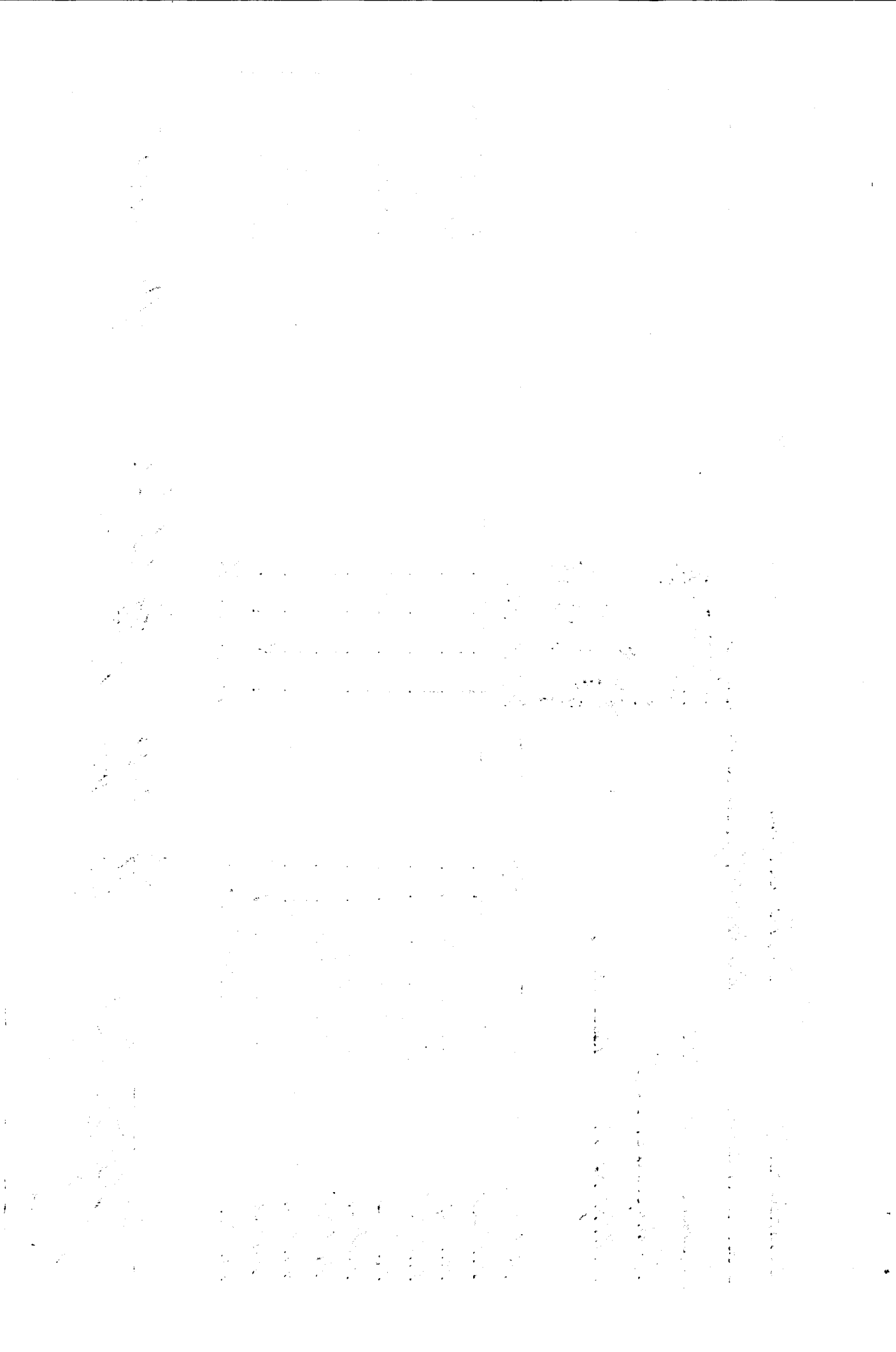
QC Requirements (Specify)

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	1740	1. Received by	2/6	1740
2. Relinquished by	2/7	1030	2. Received by	2/7	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by: Kelly W.R.	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack
Receipt Temp. 0.1 °C
Temp. Blank ☑ Y / ☐ N



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Chain of Custody Record

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Number 34615

Client: SCDHEC - UST	Report to Contact: D. Thoma (UST)	Sampler (Printed Name): Brian Johnson	Quote No.
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803-898-0631 / thomad1@dhec.sc.gov	Waybill No.	Page: 4 of 6
City: Columbia	State: SC	Zip Code: 29201	
Project Name: Nicklepumper 235			
Project Number: 04877/46776	P.O Number: 4600088529		Lot No.: PB07036

Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: BTEX, Naphth, MTBE	1,2 DCA	Oxy's	EDB	Number of Containers	Bottle (See Instructions on back)	Preservative	Remarks / Cooler ID
									3				3	A	5	
MW-32	2/5/14	11:25	G	X					X	X	X	X				odor / Sheen
MW-33	2/5/14	11:30														no odor
MW-34	2/5/14	13:01														odor
MW-35	2/5/14	13:01														no odor
MW-36	2/5/14	13:14														no odor
~~MW-37~~																Product
MW-38	2/5/14	14:06														no odor
MW-39	2/5/14	14:21														no odor
MW-40	2/5/14	14:04														no odor
MW-41	2/5/14	11:55	G	X					X	X	X	X				Slight odor

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

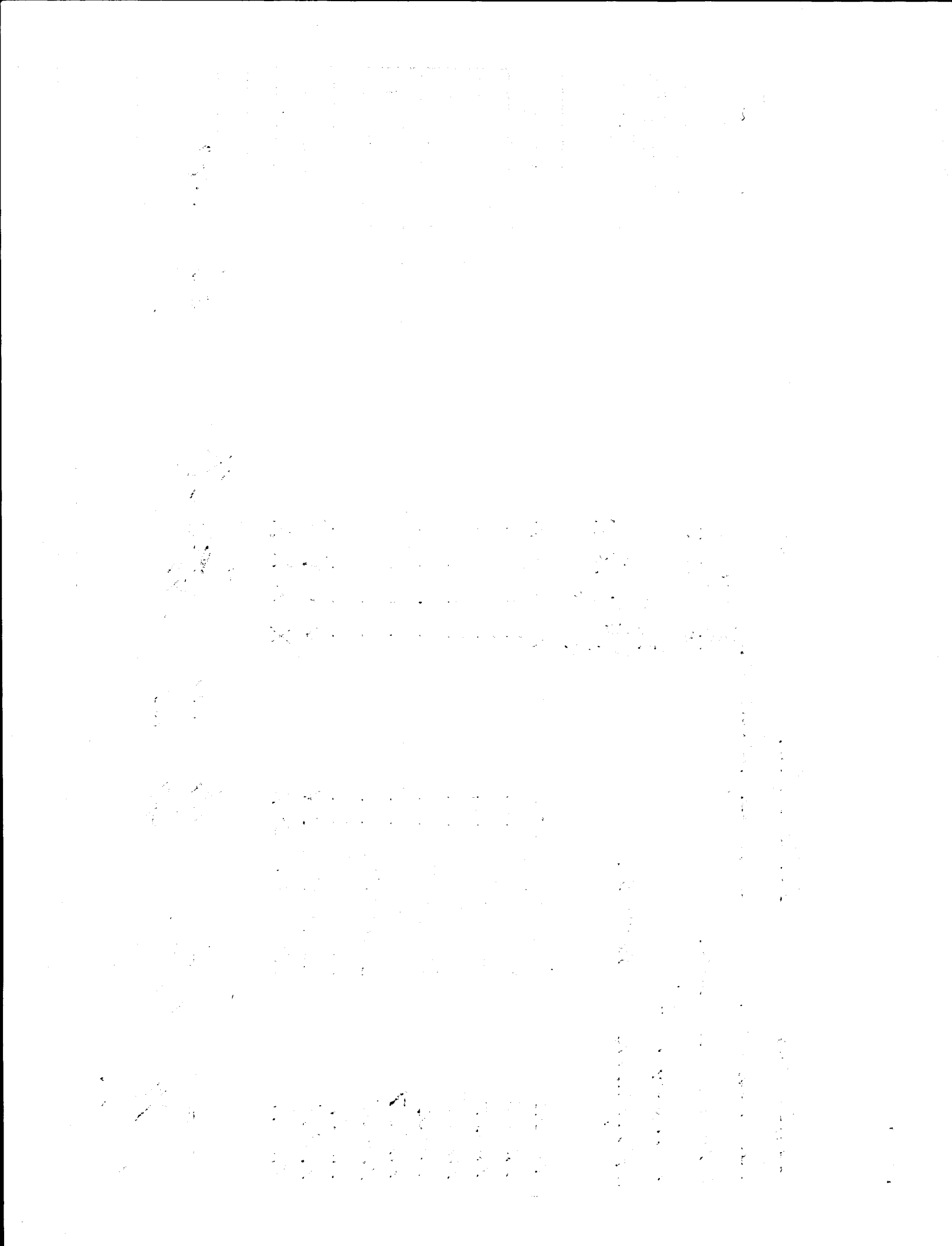
QC Requirements (Specify)

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	1740	1. Received by	2/6	1740
2. Relinquished by	2/7	1030	2. Received by	2/7	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by: Kelly W	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack
Receipt Temp. 0.1 °C
Temp. Blank ☐ Y / ☑ N



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Number 34616

Client: SCDHEC-UST	Report to Contact: D. Thomas (UST)	Sampler (Printed Name): Brian Johnson	Quote No.
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803-898-0631 / ThomasD@dhec.sc.gov	Waybill No.	Page: 5 of 6
City: Columbia; State: SC; Zip Code: 29201	Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.		
Project Name: Nicklepumper 235			
Project Number: 04877/46776	P.O Number: 4600085529		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: BTEX, MTBE, VOA by 8260	1,2 DCA	Oxygenates	EDB	Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID
MW-42	2/6/14	10:30	6	X					X	X	X	X				PB07036	no odor
DW-1	2/6/14	14:47	|	X					|	|	|	|					no odor
DW-2	2/6/14	12:20	|	X					|	|	|	|					no odor
WSW-1	2/6/14	13:45	|		X				|	|	|	|					Low detection Limits
WSW-2	2/6/14	13:46	|		X				|	|	|	|					
~~WSW-3~~			|						|	|	|	|					Inop
~~WSW-4~~			|						|	|	|	|					not sampled
MW-2R DUP	2/6/14	15:40	|	X					|	|	|	|					
MW-3R DUP	2/6/14	14:20	|	X					|	|	|	|					
Field blank #1	2/5/14	15:18	6	X					X	X	X	X					

Turn Around Time Required (Prior lab approval required for expedited TAT)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

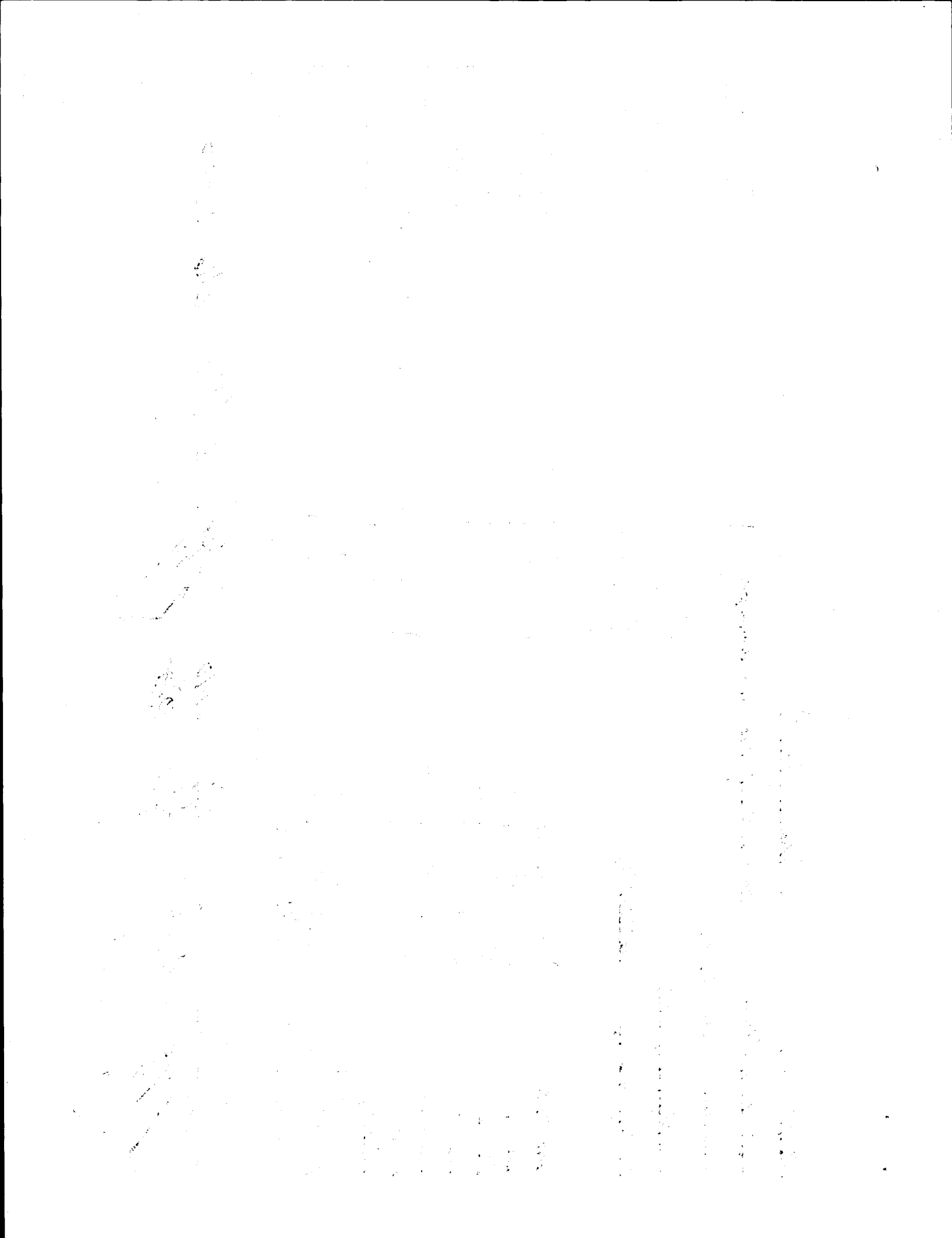
QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	1740	1. Received by	2/6	1740
2. Relinquished by	2/7	1030	2. Received by	2/7	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack
Receipt Temp. 0.1 °C
Temp. Blank ☑ Y / ☐ N



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Chain of Custody Record **Number** 34617

Client: SCDHEC - UST	Report to Contact: D. Thomas (UST)	Sampler (Printed Name): Brian Johnson	Quote No.
Address: 2600 Bull Street	Telephone No. / Fax No. / Email: 803 898 0463 / ThomasD@dhec.sc.gov	Waybill No.	Page: 6 of 6
City: Columbia	State: SC	Zip Code: 29201	Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio.
Project Name: Nickelpumper 235			
Project Number: 04877/46776	P.O Number: 4600086529		

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	G=Grab C=Composite	Matrix: GW	DW	WW	S	Other	Analysis: BTEX, MTBE, Naph	1,2 DCA	8 oxy	1,2 EDB	Number of Containers	Bottle (See Instructions on back)	Preservative	Lot No.	Remarks / Cooler ID
Field blank #2	2/6/14	15:45	G	X					X	X	X	X				PB070130	
Trip blank #1	2/5/14	15:20	G	X					X	X	X						
Trip blank #2	2/6/14	15:47	G	X					X	X	X						

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

	Date	Time		Date	Time
1. Relinquished by / Sampler	2/6	1740	1. Received by	2/6	1740
2. Relinquished by	2/7	830	2. Received by	2/7/14	1030
3. Relinquished by	Date	Time	3. Received by	Date	Time
4. Relinquished by	2/7	1440	4. Laboratory Received by: Kelly	2-7-14	1440

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY
Received on Ice (Check) ☑ Yes ☐ No ☐ Ice Pack
Receipt Temp. 0.1 °C
Temp. Blank ☑ Y / ☐ N

Sample Receipt Checklist (SRC)

Client: SCDHEC Cooler Inspected by/date: KWP 12-7-14 Lot #: PB07030

Means of receipt: ☑ SESI ☐ Client ☐ UPS ☐ FedEx ☐ Airborne Exp ☐ Other

Yes ☐	No ☑		1. Were custody seals present on the cooler?
Yes ☐	No ☐		2. If custody seals were present, were they intact and unbroken?

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:
1099 10.4 10.1 °C ___ / ___ / ___ °C ___ / ___ / ___ °C ___ / ___ / ___ °C
Method: ☐ Temperature Blank ☐ Against Bottles IR Gun ID: #3 IR Gun Correction Factor: -0.3°C
Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.

Yes ☐	No ☐	NA ☑	3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____. (For coolers received via commercial courier, PMs are to be notified immediately.
Yes ☐	No ☐	NA ☑	4. Is the commercial courier's packing slip attached to this form?
Yes ☑	No ☐		5. Were proper custody procedures (relinquished/received) followed?
Yes ☐	No ☐	NA ☑	5a Were samples relinquished by client to commercial courier?
Yes ☑	No ☐		6. Were sample IDs listed?
Yes ☑	No ☐		7. Was collection date & time listed?
Yes ☑	No ☐		8. Were tests to be performed listed on the COC?
Yes ☑	No ☐		9. Did all samples arrive in the proper containers for each test?
KWP 12-7-14 Yes ☑	No ☐		10. Did all container label information (ID, date, time) agree with COC?
Yes ☑	No ☐		11. Did all containers arrive in good condition (unbroken, lids on, etc.)?
Yes ☑	No ☐		12. Was adequate sample volume available?
Yes ☑	No ☐		13. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
Yes ☐	No ☑	KWP 12-7-14	14. Were any samples containers missing?
Yes ☐	No ☑		15. Were there any excess samples not listed on COC?
Yes ☑	No ☐	NA ☐	16. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any VOA vials?
Yes ☐	No ☐	NA ☑	17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2?
Yes ☐	No ☐	NA ☑	18. Were all cyanide and/or sulfide samples received at a pH >12?
Yes ☐	No ☐	NA ☑	19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine?
Yes ☐	No ☐	NA ☑	20. Were collection temperatures documented on the COC for NC samples?
Yes ☐	No ☐	NA ☑	21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ (H_2SO_4,HNO_3,HCl,NaOH) with the SR # (number)

Sample(s) -013(1), -016(1) were received with bubbles >6 mm in diameter.

Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/phenol

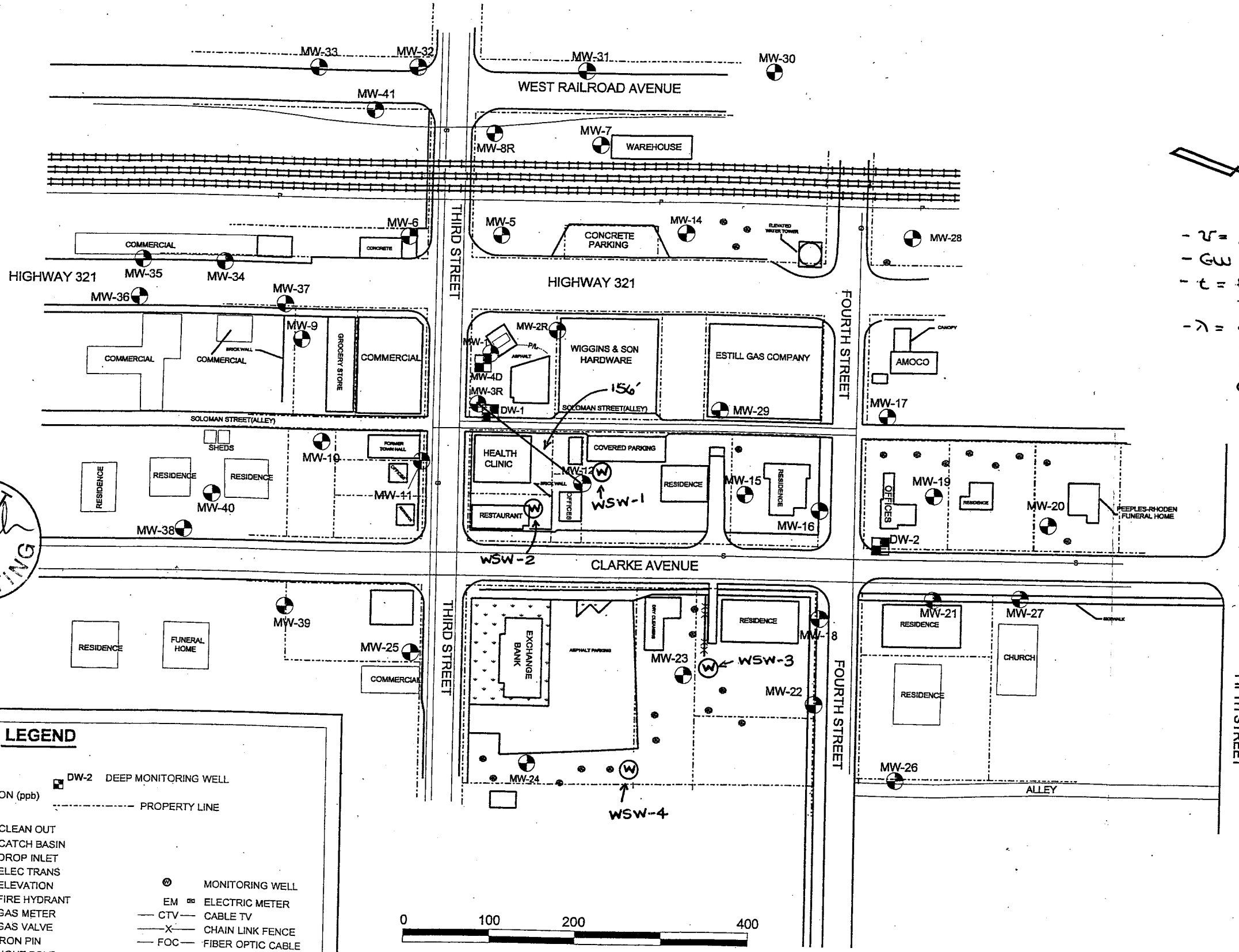
Sample labels verified by: _____ Date: _____

Corrective Action taken, if necessary:

Was client notified: Yes ☐ No ☐ Did client respond: Yes ☐ No ☐

SESI employee: _____ Date of response: _____

Comments: ID on COC MW-8 on bottle MW8R
Only recieved 1 TB



- v = 10 ft/yr (assumed)
- GW flow is radial
- t = time from tank installation to 10/07 sampling - 27 yrs
- λ = degradation factor derived from Domenico Model using MW-3 → MW-12 CoC reduction

$\lambda_B = 1.39 \times 10^{-8}/s$
$\lambda_T = 1.18 \times 10^{-8}/s$
$\lambda_E = 1.21 \times 10^{-8}/s$
$\lambda_M = 1.43 \times 10^{-8}/s$
$\lambda_N = 3.70 \times 10^{-9}/s$
$\lambda_{DCA} = 4.50 \times 10^{-9}/s$
$\lambda_{EDB} = 4.30 \times 10^{-9}/s$

UST DOCKETING 16 Jan

LEGEND

MW-12 MONITORING WELL CONTAMINANT CONCENTRATION (ppb)
DW-2 DEEP MONITORING WELL
PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT
CL	CENTERLINE	CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE	DI	DROP INLET
CT	CRIMP TOP		ELEC TRANS
DE	DRAINAGE EASEMENT	90.0	ELEVATION
EP	EDGE OF PAVEMENT		FIRE HYDRANT
IPO	IRON PIN OLD	GM	GAS METER
IPS	IRON PIN SET	GV	GAS VALVE
N&C	NAIL & CAP	IP	IRON PIN
OT	OPEN TOP	LP	LIGHT POLE
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)
SD	STORM DRAIN	PP	POWER POLE
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL
SSE	SS EASEMENT		WATER METER
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE

W	MONITORING WELL		
EM	ELECTRIC METER		
CTV	CABLE TV		
X	CHAIN LINK FENCE		
FOC	FIBER OPTIC CABLE		
GAS	GAS LINE		
OHP	OVERHEAD POWER		
OHT	OVERHEAD TELEPHONE		
SD	STORM DRAIN		
SS	SANITARY SEWER		
UGP	UNDERGROUND POWER		
UGT	UNDERGROUND TEL		
W	WATER LINE		

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DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : Benzene

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	9.000	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000139	/s

Calculations:

EXP(-4.6471)	=	0.0096
ERFC(-2.8237)	=	2.0000
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0039788	mg/L
C(x,y,z,t) :	3.9788	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : Toluene

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	1.300	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000118	/s

Calculations:

EXP(-4.0985)	=	0.0166
ERFC(-2.5949)	=	1.9999
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0009947	mg/L
C(x,y,z,t) :	0.9947	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : Ethylbenzene

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	1.400	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000121	/s

Calculations:

EXP(-4.1789)	=	0.0153
ERFC(-2.6284)	=	1.9999
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0009885	mg/L
C(x,y,z,t) :	0.9885	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : MtBE

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	2.500	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000143	/s

Calculations:

EXP(-4.7481)	=	0.0087
ERFC(-2.8658)	=	2.0000
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0009990	mg/L
C(x,y,z,t) :	0.9990	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : Naphthalene

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	0.510	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000037	/s

Calculations:

EXP(-1.5665)	=	0.2088
ERFC(-1.5391)	=	1.9752
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0048481	mg/L
C(x,y,z,t) :	4.8481	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : DCA

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	0.680	mg/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000045	/s

Calculations:

EXP(-1.8583)	=	0.1559
ERFC(-1.6608)	=	1.9850
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0048520	mg/L
C(x,y,z,t) :	4.8520	ug/L

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SCDHEC :: Domenico Model version 1.0c

Site ID: 04877 12/22/2008 CoC : EDB

Source: MW-3 Receptor: MW-12

Input Parameters:

CoC Concentration:	2.580	[redacted] ug/L
Width across flow dir.:	3.0000	m
Estimated Source Depth:	3.000	m
Distance along x-axis:	47.500	m
Distance along y-axis:	0.000	m
Distance along z-axis:	0.000	m
Seepage Velocity:	0.0000000970	m/s
Time of transport:	27.0	years
First Order Decay Rate	0.0000000043	/s

Calculations:

EXP(-1.7865)	=	0.1675
ERFC(-1.6308)	=	1.9829
ERF(0.0865)	=	0.0974
ERF(0.4466)	=	0.4736

Decay is considered

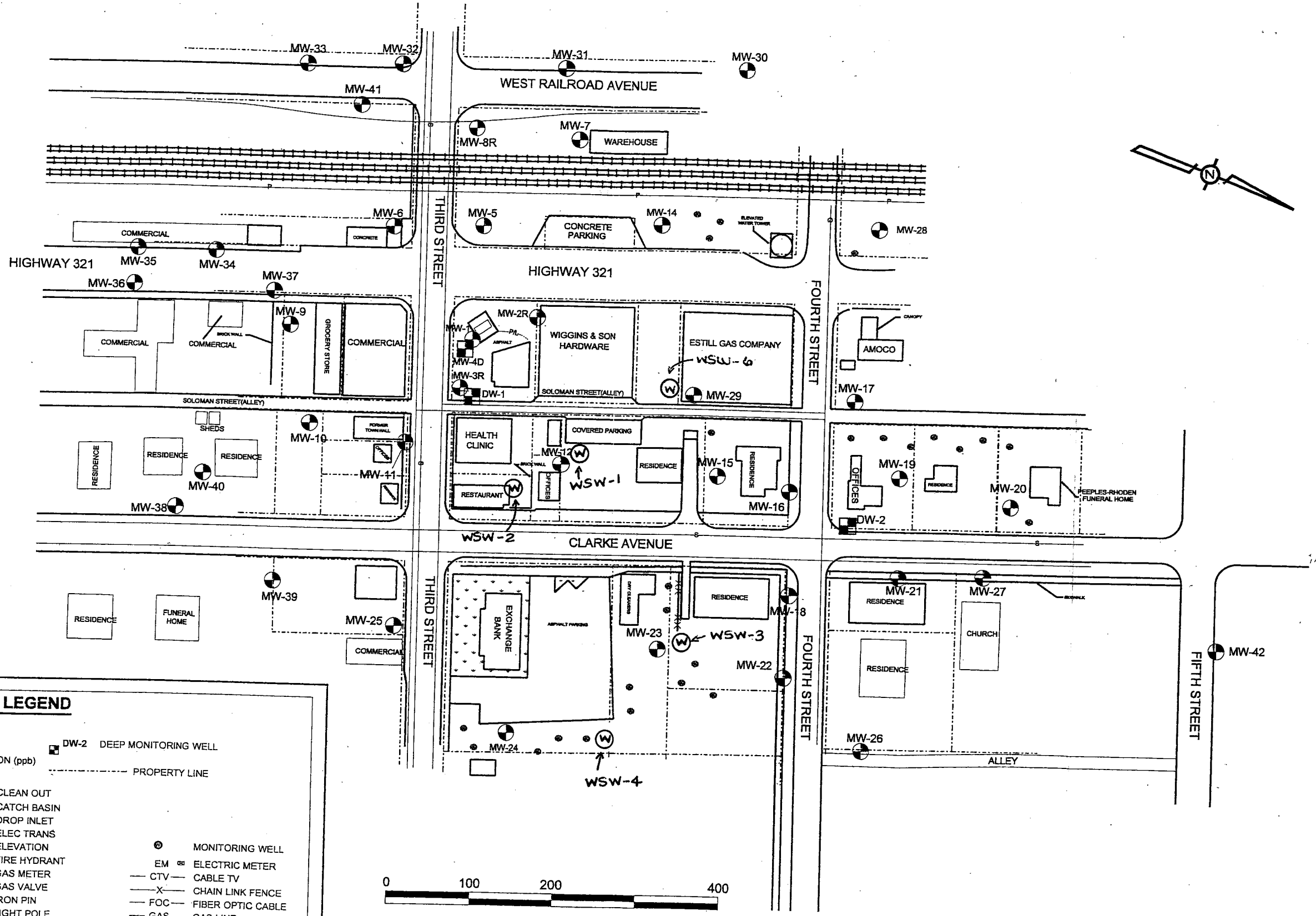
Ax:	4.7500
Ay:	1.5833
Az:	0.2375

Results:

C(x,y,z,t) :	0.0197587	[redacted] ug/L
C(x,y,z,t) :	19.7587	[redacted]

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LEGEND

MW-12 MONITORING WELL

DW-2 DEEP MONITORING WELL

CONTAMINANT CONCENTRATION (ppb)

PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	90.0	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD	GM	GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	GV	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	WV	WATER VALVE		

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DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

UST 19Feb DOCKETING

Nicklepumper #235
UST Permit #04877

	Tier I	Tier II	MR	AR	MR	MR	MR
MW-1	8/16/01	3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW	**FP**	**FP**	well	nm	**FP**	well	well
Benzene	(0.11')	(0.05')	not	ns	(0.32')	not	not
Toluene			accessible			accessible	accessible
Ethylbenzene							
Xylenes							
MTBE							
Naphthalene							
Lead							
DCA							
EDB							
TAA							

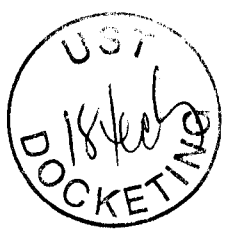
MW-2	8/16/01	3/28/02	3/2/04	10/24/07			
DTW	10.04	11.88	well	well			
Benzene	**110**	**22**	not	destroyed			
Toluene	<50	<1	accessible				
Ethylbenzene	13	1					
Xylenes	31	<3					
MTBE	<10	22					
Naphthalene	**26**	6					
Lead	**160**	**440**					
DCA	na	na					
EDB	**0.20**	<0.02					
TAA	na	na					

MW-2R				10/24/07	12/4/08	8/4/10	2/6/14
DTW				13.80	8.53	10.15	7.09
Benzene				2	<5	<5	<5
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				8	15	2	<5
Naphthalene				<5	<5	<5	<5
Lead				<10	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-3	8/16/01	3/28/02	3/2/04	10/24/07			
DTW	10.02	11.85	well	well			
Benzene	**4900**	**11100**	not	destroyed			
Toluene	280	**4430**	located				
Ethylbenzene	120	617					
Xylenes	270	2235					
MTBE	**620**	**1630**					
Naphthalene	**160**	**369**					
Lead	**74**	**710**					
DCA	na	na					
EDB	**10.00**	**42.6**					
TAA	na	na					

MW-3R				10/24/07	12/4/08	8/4/10	2/6/14
DTW				13.16	7.79	10.02	6.41
Benzene				**9000**	**8960**	**8570**	**3600**
Toluene				**1300**	823	241	<500
Ethylbenzene				**1400**	**1350**	**1180**	640
Xylenes				2200	1280	975	450
MTBE				**2500**	**296**	**348**	**58**
Naphthalene				**520**	**510**	**415**	**230**
Lead				<10	<5	<5	na
DCA				**680**	**56**	**<500**	**<500**
EDB				**7.60**	**2.50**	**2.40**	**0.23**
TAA				<25	na	na	**1800**

MW-4D		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		21.66	26.00	23.73	19.13	27.19	15.68
Benzene		**52**	<5	<1	<5	<5	<5
Toluene		188	<5	<1	<5	<5	<5
Ethylbenzene		32	<5	<1	<5	<5	<5
Xylenes		175	<15	<1	<10	<10	<5
MTBE		<5	<5	<1	<5	<5	<5
Naphthalene		14	<5	<5	<5	<5	<5
Lead		**16**	na	<10	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100



MW-5		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		9.94	15.00	12.86	6.10	9.02	well
Benzene		**10**	**21**	**7**	**8**	**<25**	not
Toluene		254	<10	26	46	107	located
Ethylbenzene		**799**	<10	**1700**	695	**841**	
Xylenes		1297	31	360	440	1190	
MTBE		<5	<10	<1	<25	<25	
Naphthalene		**343**	**190**	**460**	**320**	**321**	
Lead		**290**	na	**90**	<5	<5	
DCA		na	na	<5	**<25**	**<25**	
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	
TAA		na	na	<25	na	na	

MW-6		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		9.84	15.65	12.30	well	well	well
Benzene		**5**	**8**	<1	not	not	not
Toluene		<1	<5	<1	located	located	located
Ethylbenzene		137	<5	2			
Xylenes		<3	<15	1			
MTBE		<1	<5	<1			
Naphthalene		22	19	**80**			
Lead		**210**	na	**30**			
DCA		na	na	<5			
EDB		<0.02	<0.02	<0.02			
TAA		na	na	<25			

MW-7		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		9.81	15.40	17.25	5.92	8.81	5.85
Benzene		<1	<5	<1	<5	<5	<5
Toluene		<1	<5	3	<5	<5	<5
Ethylbenzene		<1	<5	2	<5	<5	<5
Xylenes		<3	<15	4	<10	<10	<5
MTBE		<1	<5	<1	15	<5	<5
Naphthalene		3	3	5	<5	<5	<5
Lead		**140**	na	<10	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-8		3/28/02	3/2/04	10/24/07			
DTW		8.54	well	well			
Benzene		**91**	not	destroyed			
Toluene		<5	located				
Ethylbenzene		137					
Xylenes		37					
MTBE		**85**					
Naphthalene		**75**					
Lead		**1400**					
DCA		na					
EDB		<0.02					
TAA		na					

MW-8R				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.20	5.73	8.80	5.55
Benzene				**14**	<10	<10	3
Toluene				1	<10	<10	<5
Ethylbenzene				18	105	38	23
Xylenes				4	<10	<10	<5
MTBE				20	<10	<10	<5
Naphthalene				17	**173**	**129**	**33**
Lead				**38**	<5	<5	<5
DCA				<5	<10	<10	<5
EDB				**0.08**	<0.02	<0.02	<0.02
TAA				200	na	na	<100

MW-9		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10*	2/6/14
DTW		9.76	15.25	12.75	well	nm	5.66
Benzene		**9800**	**220**	**3800**	not	**636**	**4400**
Toluene		**12300**	120	**8000**	located	200	**11000**
Ethylbenzene		**1990**	**910**	**2200**		443	**2200**
Xylenes		8940	2120	5400		1120	8100
MTBE		<5	<50	<10		<25	**<500**
Naphthalene		**484**	**640**	**640**		**256**	**410**
Lead		**24**	na	**55**		na	na
DCA		na	na	**<50**		**<25**	**<500**
EDB		**66.2**	**0.94**	**16.00**		**2.40**	**6.00**
TAA		na	na	<25		na	**980**

MW-10		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		8.33	15.80	11.20	4.44	7.44	4.21
Benzene		**4300**	**6600**	**9300**	**9660**	**8400**	**4500**
Toluene		**1860**	**1400**	**1700**	**1870**	**3400**	690
Ethylbenzene		440	240	**920**	**837**	**1370**	**1400**
Xylenes		1656	1180	2700	2580	4360	1400
MTBE		<1	<25	<1	**<50**	**<500**	**<500**
Naphthalene		**175**	**280**	**500**	**447**	**429**	**440**
Lead		7	na	<10	<5	<5	na
DCA		na	na	**100**	**74**	**<500**	**<500**
EDB		**8.20**	**4.10**	**6.10**	**4.50**	**4.70**	**0.51**
TAA		na	na	<25	na	na	**1300**

MW-11		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.03	15.40	15.25	6.08	8.97	6.09
Benzene		**1660**	<5	**5**	**182**	**702**	<1
Toluene		128	<5	<1	<5	<5	<5
Ethylbenzene		216	<5	<1	30	26	<5
Xylenes		479	<15	1	60	3	<5
MTBE		<1	<5	<1	<5	<5	<5
Naphthalene		**70**	<5	<5	10	**27**	3
Lead		**320**	na	<10	<5	<5	<5
DCA		na	na	<5	<5	3	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-12		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		11.17	well	14.00	7.26	well	well
Benzene		**848**	not	4	<5	not	not
Toluene		5	located	<1	<5	located	located
Ethylbenzene		30		<1	<5		
Xylenes		8		<1	<10		
MTBE		**65**		<1	<5		
Naphthalene		**27**		<5	<5		
Lead		<5		<10	<5		
DCA		na		<5	<5		
EDB		**0.85**		<0.02	<0.02		
TAA		na		<25	na		

MW-14		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.83	15.60	13.78	6.73	9.41	6.85
Benzene		<1	<5	<1	<5	<5	<5
Toluene		3	<5	<1	<5	<5	<5
Ethylbenzene		<1	<5	<1	<5	<5	<5
Xylenes		<3	<15	<1	<10	<10	<5
MTBE		<1	<5	<1	<5	<5	<5
Naphthalene		1	3	<5	<5	<5	<5
Lead		**500**	na	**75**	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-15		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.38	15.60	13.27	6.68	9.81	well
Benzene		**4380**	**4800**	**1300**	**923**	**635**	not
Toluene		320	<250	20	<25	14	located
Ethylbenzene		183	73	66	37	11	
Xylenes		270	<750	52	15	214	
MTBE		**1740**	**2500**	**460**	**383**	**110**	
Naphthalene		**167**	**<250**	**140**	**146**	**169**	
Lead		**17**	na	**17**	<5	<5	
DCA		na	na	<5	**31**	**11**	
EDB		**2.44**	**0.85**	<0.02	**0.16**	**0.13**	
TAA		na	na	<25	na	na	

MW-16		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.42	15.40	13.30	6.69	9.92	6.71
Benzene		**5570**	**3900**	**3900**	**2420**	**1080**	<5
Toluene		27	<250	<20	10	<50	<5
Ethylbenzene		106	85	170	149	50	<5
Xylenes		75	<750	<20	45	<100	<5
MTBE		**3190**	**2400**	**2600**	**1960**	**678**	1
Naphthalene		**148**	**180**	**190**	**229**	**77**	5
Lead		14	na	**33**	<5	<5	<5
DCA		na	na	**130**	**100**	**36**	<5
EDB		**1.45**	**0.70**	**0.13**	**0.11**	**0.17**	<0.02
TAA		na	na	<25	na	na	<100

MW-17		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		11.12	16.00	14.00	7.23	9.62	7.40
Benzene		<1	<5	<1	<5	<5	<5
Toluene		<1	<5	<1	<5	<5	<5
Ethylbenzene		6	<5	<1	<5	<5	<5
Xylenes		<3	<15	<1	<10	<10	<5
MTBE		<1	<5	<1	15	<5	<5
Naphthalene		7	<5	<5	<5	4	6
Lead		14	na	**179**	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-18		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.27	15.10	12.90	6.42	9.45	6.22
Benzene		**1040**	**64**	**130**	**130**	**330**	**44**
Toluene		2	<5	<1	<5	<5	<25
Ethylbenzene		<1	<5	<1	<5	<5	20
Xylenes		**3**	<15	<1	<10	<10	<25
MTBE		**468**	12	18	19	**79**	39
Naphthalene		**49**	3	<5	<5	7	24
Lead		<5	na	**16**	<5	<5	na
DCA		na	na	<5	4	20	9
EDB		**0.85**	<0.02	**0.17**	0.04	<0.02	**0.08**
TAA		na	na	<25	na	na	**740**

MW-19		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.56	15.50	13.40	6.80	9.61	6.95
Benzene		<1	<5	<1	<5	<5	<5
Toluene		<1	<5	<1	<5	<5	<5
Ethylbenzene		<1	<5	<1	<5	<5	<5
Xylenes		<3	<15	<1	<10	<10	<5
MTBE		<1	<5	<1	<5	<5	<5
Naphthalene		<1	<5	<5	<5	<5	<5
Lead		<5	na	12	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-20		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		9.72	16.50	12.30	7.35	9.72	6.11
Benzene		<1	<5	<1	<5	<5	<5
Toluene		<1	<5	<1	<5	<5	<5
Ethylbenzene		<1	<5	<1	<5	<5	<5
Xylenes		<3	<15	<1	<10	<10	<5
MTBE		3	2	<1	<5	<5	<5
Naphthalene		<1	<5	<5	<5	<5	<5
Lead		8	na	<10	<5	<5	<5
DCA		na	na	<5	<5	<5	<5
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
TAA		na	na	<25	na	na	<100

MW-21		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.50	15.35	12.80	6.54	9.31	6.74
Benzene		**813**	**380**	**41**	**18**	**2000**	**280**
Toluene		3	<5	<1	<5	2	<50
Ethylbenzene		<1	<5	<1	<5	<5	<50
Xylenes		38	<15	<1	<10	22	<50
MTBE		**374**	**620**	17	14	**671**	**340**
Naphthalene		13	<5	<5	<5	**31**	**230**
Lead		**29**	na	**15**	<5	<5	na
DCA		na	na	<5	<5	**76**	**47**
EDB		**0.79**	**0.90**	<0.02	<0.02	**0.57**	**0.20**
TAA		na	na	<25	na	na	**1800**

MW-22		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.02	15.90	12.68	6.47	8.99	well
Benzene		**52**	<5	<1	**27**	<5	not
Toluene		<1	<5	<1	<5	<5	located
Ethylbenzene		<1	<5	<1	<5	<5	
Xylenes		<3	<15	<1	<10	<10	
MTBE		<1	<5	<1	<5	<5	
Naphthalene		4	<5	<5	<5	4	
Lead		<5	na	<10	<5	<5	
DCA		na	na	<5	4	<5	
EDB		<0.02	<0.02	<0.02	<0.02	<0.02	
TAA		na	na	<25	na	na	

MW-23		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		9.83	16.30	12.33	5.95	well	well
Benzene		<1	<5	<1	<5	not	not
Toluene		<1	<5	<1	<5	located	located
Ethylbenzene		<1	<5	<1	<5		
Xylenes		<3	<15	<1	<10		
MTBE		<1	<5	<1	<5		
Naphthalene		<1	<5	<5	<5		
Lead		<5	na	**23**	<5		
DCA		na	na	<5	<5		
EDB		<0.02	<0.02	<0.02	<0.02		
TAA		na	na	<25	na		

MW-24		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW		10.44	well	13.13	6.46	well	6.15
Benzene		<1	not	<1	<5	not	<5
Toluene		<1	located	<1	<5	located	<5
Ethylbenzene		<1		<1	<5		<5
Xylenes		<3		<1	<10		<5
MTBE		<1		<1	<5		<5
Naphthalene		<1		<5	<5		<5
Lead		<5		14	<5		<5
DCA		na		<5	<5		<5
EDB		<0.02		<0.02	<0.02		<0.02
TAA		na		<25	na		<100

MW-25				10/24/07	12/4/08	8/4/10	2/6/14
DTW				12.30	5.43	8.36	5.27
Benzene				<1	<5	<5	<5
Toluene				1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				**108**	<5	4	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-26				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.85	5.34	8.13	5.49
Benzene				<1	<5	<5	<5
Toluene				1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	5
Lead				<10	<5	**33**	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-27				10/24/07	12/4/08	8/4/10	2/6/14
DTW				12.86	6.33	9.18	6.49
Benzene				**120**	<5	<5	<1
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				**46**	<5	27	1
Naphthalene				<5	<5	<5	<5
Lead				13	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-28				10/24/07	12/4/08	8/4/10	2/6/14
DTW				14.09	7.24	10.21	7.19
Benzene				<1	<5	<5	<5
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				**166**	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-29				10/24/07	12/4/08	8/4/10	2/6/14
DTW				14.00	well	well	well
Benzene				**55**	not	not	not
Toluene				<1	located	located	located
Ethylbenzene				<1			
Xylenes				<1			
MTBE				<1			
Naphthalene				<5			
Lead				**24**			
DCA				<5			
EDB				**0.10**			
TAA				<25			

MW-30				10/24/07	12/4/08	8/4/10	2/6/14
DTW				14.50	7.39	10.44	7.24
Benzene				<1	<5	<5	<5
Toluene				2	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				11	<5	7	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-31				10/24/07	12/4/08	8/4/10	2/6/14
DTW				13.63	6.77	9.75	6.61
Benzene				**67**	<5	<5	<5
Toluene				**2900**	7	<5	<5
Ethylbenzene				**1000**	<5	<5	<5
Xylenes				2700	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				**410**	<5	<5	5
Lead				**38**	<5	4	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-32				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.70	5.06	7.90	4.38
Benzene				**3600**	**4170**	**2770**	**3800**
Toluene				**78000**	**89600**	**86300**	**100000**
Ethylbenzene				**2300**	**3120**	**2780**	**3100**
Xylenes				**12000**	**12900**	**14500**	**16000**
MTBE				<1	**<100**	**<2500**	**<2500**
Naphthalene				**610**	**498**	**<2500**	**2600**
Lead				<15	<5	<5	na
DCA				<5	**<100**	**<2500**	**<2500**
EDB				**8.50**	**4.40**	**2.50**	**6.40**
TAA				**2300**	na	na	**54000**

MW-33				10/24/07	12/4/08	8/4/10	2/6/14
DTW				10.68	7.03	7.53	4.61
Benzene				<1	<5	<5	<5
Toluene				5	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				13	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-34				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.65	5.04	7.85	4.58
Benzene				**200**	**332**	**300**	**68**
Toluene				99	117	165	<500
Ethylbenzene				**1000**	**2150**	**3320**	**1500**
Xylenes				2300	4360	6560	1500
MTBE				<1	**<50**	**<100**	**<500**
Naphthalene				**270**	**755**	**1080**	**740**
Lead				**19**	<5	<5	na
DCA				<5	**<50**	**<100**	**<500**
EDB				**0.11**	<0.02	<0.02	**1.90**
TAA				<25	na	na	**<10000**

MW-35				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.10	5.09	7.35	3.99
Benzene				<1	<5	<5	<5
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				2	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				<10	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				**0.11**	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-36				10/24/07	12/4/08	8/4/10	2/6/14
DTW				10.65	5.17	6.03	3.54
Benzene				<1	<5	<5	<5
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				**18**	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	110

MW-37				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.70	5.02	**FP**	**FP**
Benzene				**9000**	**8310**	(0.05')	(0.01')
Toluene				**20000**	**19100**		
Ethylbenzene				**3900**	**2960**		
Xylenes				**17000**	**12600**		
MTBE				<1	**<50**		
Naphthalene				**730**	**867**		
Lead				**25**	**26**		
DCA				**<50**	**<50**		
EDB				**12.00**	**11.30**		
TAA				<25	na		

MW-38				10/24/07	12/4/08	8/4/10	2/6/14
DTW				10.59	5.06	6.75	3.49
Benzene				**55**	<5	4	**28**
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				7	<5	<5	3
Naphthalene				<5	<5	<5	5
Lead				**25**	<5	<5	<5
DCA				<5	<5	<5	1
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	120

MW-39				10/24/07	12/4/08	8/4/10	2/6/14
DTW				11.58	5.12	7.61	3.81
Benzene				1	<5	<5	<5
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	<5
MTBE				7	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				**83**	9	<5	<5
DCA				**8**	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

MW-40				10/24/07	12/4/08	8/4/10	2/6/14
DTW				10.48	2.64	6.41	3.28
Benzene				**470**	<5	<5	1
Toluene				1	<5	<5	<5
Ethylbenzene				31	<5	<5	<5
Xylenes				7	<10	<10	<5
MTBE				<1	<5	<5	<5
Naphthalene				10	<5	<5	<5
Lead				**39**	11	**22**	<5
DCA				<5	<5	<5	<5
EDB				**0.22**	<0.02	<0.02	<0.02
TAA				<25	na	na	23

MW-41				10/24/07	12/4/08	8/4/10	2/6/14
DTW				12.53	6.06	8.00	4.20
Benzene				**13**	**22**	4	1
Toluene				11	<5	<5	<5
Ethylbenzene				110	49	18	6
Xylenes				13	3	<10	<5
MTBE				5	17	3	2
Naphthalene				**160**	**42**	20	8
Lead				**57**	4	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	49

MW-42				10/24/07	12/4/08	8/4/10	2/6/14
DTW				12.99	6.54	9.47	6.86
Benzene				<1	<5	<5	**45**
Toluene				<1	<5	<5	<5
Ethylbenzene				<1	<5	<5	<5
Xylenes				<1	<10	<10	6
MTBE				<1	<5	<5	1
Naphthalene				<5	<5	<5	4
Lead				**64**	<5	<5	na
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	0.04
TAA				<25	na	na	42

DW-1				10/24/07	12/4/08	8/4/10	2/6/14
DTW				8.49	23.10	32.25	18.20
Benzene				<1	**7**	2	1
Toluene				<1	14	5	<5
Ethylbenzene				<1	4	2	<5
Xylenes				<1	20	8	<5
MTBE				<1	<5	<5	<5
Naphthalene				<5	<5	<5	<5
Lead				<10	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	<100

DW-2				10/24/07	12/4/08	8/4/10	2/6/14
DTW				27.35	21.79	31.96	17.72
Benzene				<1	**14**	<5	3
Toluene				<1	15	5	4
Ethylbenzene				<1	8	3	2
Xylenes				<1	36	13	11
MTBE				<1	8	4	2
Naphthalene				<5	7	<5	<5
Lead				<10	<5	<5	<5
DCA				<5	<5	<5	<5
EDB				<0.02	<0.02	<0.02	<0.02
TAA				<25	na	na	8

WSW-1		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		<2	<5	ns	<1	<1	<1
Toluene		<2	<5		<1	<1	<1
Ethylbenzene		<2	<5		<1	<1	<1
Xylenes		<2	<15		<2	<2	<1
MTBE		<2	<5		<1	<1	<1
Naphthalene		<5	<5		<1	<1	<1
Lead		na	na		na	na	na
DCA		na	na		na	<1	<1
EDB		<0.02	<0.02		<0.02	<0.02	<0.02
TAA		na	na		na	na	<100

WSW-2		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		<2	ns	ns	well	<1	<1
Toluene		<2			inactive	<1	<1
Ethylbenzene		<2				<1	<1
Xylenes		<2				<2	<1
MTBE		<2				<1	<1
Naphthalene		<5				<1	<1
Lead		na				na	na
DCA		na				<1	<1
EDB		<0.02				<0.02	<0.02
TAA		na				na	<100

WSW-3		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		<2	ns	ns	well	well	well
Toluene		<2			inactive	not	not
Ethylbenzene		<2				accessible	located
Xylenes		<2					
MTBE		<2					
Naphthalene		<5					
Lead		na					
DCA		na					
EDB		<0.02					
TAA		na					

WSW-4		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		<2	<5	ns	well	well	well
Toluene		<2	<5		not	not	not
Ethylbenzene		<2	<5		accessible	accessible	located
Xylenes		<2	<15				
MTBE		<2	<5				
Naphthalene		<5	<5				
Lead		na	na				
DCA		na	na				
EDB		<0.02	<0.02				
TAA		na	na				

WSW-5		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		<2	well	ns	ns	ns	ns
Toluene		<2	not				
Ethylbenzene		<2	accessible				
Xylenes		<2					
MTBE		<2					
Naphthalene		<5					
Lead		na					
DCA		na					
EDB		<0.02					
TAA		na					

WSW-6		3/28/02	3/2/04	10/24/07	12/4/08	8/4/10	2/6/14
DTW							
Benzene		ns	ns	ns	ns	ns	ns
Toluene							
Ethylbenzene							
Xylenes							
MTBE							
Naphthalene							
Lead							
DCA							
EDB							
TAA							

nm- not measured
ns- not sampled
na- not analyzed
nd- not detected
FP- free-phase product
* - Sample collected 9/15/10

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

MR ROBERT PUCCINI
GOLDEN ISLES PETROLEUM INC
PO BOX 15448
SAVANNAH GA 31416-5448

MAR 13 2014



Re: Monitoring report review
Nicklepumper #235, 25 East Railroad Avenue, Estill, SC
UST Permit #04877
Release reported January 8, 1993
Monitoring report received February 18, 2014
Hampton County

Dear Mr. Puccini:

The Underground Storage Tank (UST) Management Division has reviewed the referenced monitoring report that documents a ground-water sampling event conducted on February 6, 2013. The report shows that free-phase product and high concentrations of petroleum constituents persist in monitoring wells MW-32, MW-37, and in the source area of the Nicklepumper #235. A copy of the report is enclosed for your records.

The Division plans to install recovery wells (RW) near MW-32, MW-37 and in the source area in the near future. The RW will be used for future aggressive fluid and vapor recovery (AFVR) events.

On all correspondence concerning this site, please reference the UST Permit #04877. If you have any questions or comments, feel free to contact me by telephone at (803) 898-0655, by fax at (803) 898-0673, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

JPP/jpp
04877.cclet1

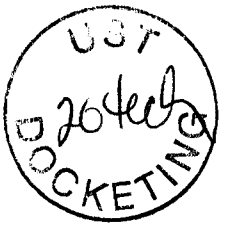
enc: Monitoring report
cc: Technical file (w/o enc)

D H E C
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

MR BRYAN SHANE PG
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071-0854

MAR 17 2014



Re: Notice to proceed for small scope- No site-specific work plan required
Nicklepumper #235, 25 East Railroad Avenue, Estill, SC
UST Permit #04877; CA #47732; MWA #UMW-25426
Solicitation #5400006561, PO #4600301871
Release reported January 8, 1993
Hampton County

Dear Mr. Shane:

In accordance with the bid solicitation #IFB-5400006561 and the UST Management Division Quality Assurance Program Plan (QAPP) Revision 2.0, recovery well installation at the referenced site may proceed. If a problem or problems occur, you must contact me within 24 hours by phone or e-mail. The final report must document the problem(s) and the mitigation action(s) taken.

A report meeting the contract specifications of Section 3.10, 3.11, or 3.12 and invoice are due sixty (60) days from the date of this letter. A monitoring well approval is enclosed. The solicitation requires adherence to all applicable South Carolina certification requirements for laboratory analyses, well installation, and report preparation.

Midlands Environmental Consultants, Inc. will perform services at the site on behalf of the UST owner/operator (O/O) and payment will be made from the SUPERB Account. The O/O has no obligation for payment of this scope of work. Please coordinate access to the facility and adjacent properties with the property owners. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below risk-Based Screening Levels.

On all correspondence, please reference UST Permit #04877. If you have any site-specific questions, please contact me by telephone at (803) 898-0655 or by e-mail at padgetjp@dhec.sc.gov. If you have any contract-specific questions, please contact Minda Hornosky by telephone at (803) 898-7542 or by e-mail at hornosms@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division

enc: Approved cost agreement (CA)
Monitoring well approval

cc: Minda Hornosky, Assessment Section, UST Management Division (w/ca copy)
Technical file (w/enc)

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

UNDERGROUND STORAGE TANK MANAGEMENT DIVISION
BUREAU OF LAND AND WASTE MANAGEMENT
2600 Bull Street, Columbia, South Carolina 29201
Telephone: 803-898-2544

MEMORANDUM

TO: Bryan Shane, Midlands Environmental Consultants, Inc.

FROM: Joel Padgett, P.G.

RE: **Notice to Proceed**

Facility Name: Nicklepumper #235

Permit Number: 04877

County: Hampton

Work To Be Completed: Install two 4" RW near MW-1, two 4" RW near MW-32, and two 4" RW near MW-37. Screen wells from 5-20'. Please coordinate RW installation wih all property owners.

CA# 47732

PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit # 04877

If you are the owner of the former or existing underground storage tanks or are designated as their authorized representative, but do not own the property, please complete this form.

I, Golden Isles, Inc certify that I am the legal owner of the underground storage tank(s) located at the facility identified below or serve as the authorized representative for the UST owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor to conduct assessment and corrective action activities, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Bureau of Underground Storage Tank Management in writing.

Name of Facility Nickel Pumper # 735 Phone # 803-625-4255

Street Address of Facility _____

Town, City, District, Suburb _____

Name of nearest intersecting street, road, highway, alley

_____

Is this facility within the city limits? (yes or no) yes

Does a public water or sewer utility service this facility? (yes or no) yes, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____,

phone number _____

Were underground storage tanks previously removed from the ground at this facility? (yes or no) No

If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation _____

Phone number _____

Is the property currently leased or rented to someone? (yes or no) No. If yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST owner (Please Print): Golden Isles Petroleum, Inc

Phone Number (home) 912-692-8070 (work) same

Signature of UST Owner: Golden Isles Petroleum, Inc By Robert H. Puccini President

Witness: Jamie L. Price

Date: 07 Month 19 Day 11 Year

RIGHT-OF-ENTRY FORM

PROPERTY OWNER

UST Permit # 04877

If you are the Property Owner or are the authorized representative for that person, please complete this form.

I, GOLDEN ISLES PETROLEUM INC By ROBERT PUCCINI, PRES, certify that I am the legal owner of the property identified below or serve as the authorized representative for the property owner. I authorize the South Carolina Department of Health and Environmental Control (SCDHEC), or a contractor selected by SCDHEC, to enter this property at reasonable times only to conduct assessment and corrective action activities, as required. The contractor will be designated as the contractor for the UST owner or operator for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC will notify me of all activities that are necessary prior to their initiation and will promptly provide to me a summary of the data upon request.

Name of Facility NICKELPUMPER #735 Phone # 803-625-4255

Street Address of Facility 35 EAST RAILROAD AVE

Town, City, District, Suburb ESTILL SOUTH CAROLINA 29918

Name of nearest intersecting street, road, highway, alley

HWY 321

Is this facility within the city limits? (yes or no) YES

Does a public water or sewer utility service this facility? (yes or no) YES If no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____

phone number _____

Were underground storage tanks previously removed from the ground at this facility? (yes or no) NO

If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation _____

Phone number _____

Is the property currently leased or rented to someone? (yes or no) NO If yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of Property owner (Please Print): GOLDEN ISLES PETROLEUM INC

Phone Number (home) 912-692-8070 (work) _____

Current Mailing Address: 7373 HODGSON MEMORIAL BLVD SAV GA 31406

Signature of Property Owner: [signature]

Witness: Jamie L. Pucci

Date: 12 Month JUNE Day 2001 Year

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

Promoting and protecting the health of the public and the environment

Monitoring Well Approval

Approval is hereby granted to:	Midlands Environmental Consultants, Inc.
(On behalf of):	Golden Isles Petroleum, Inc.
Facility:	Nicklepumper #235
UST Permit Number:	04877
County:	Hampton

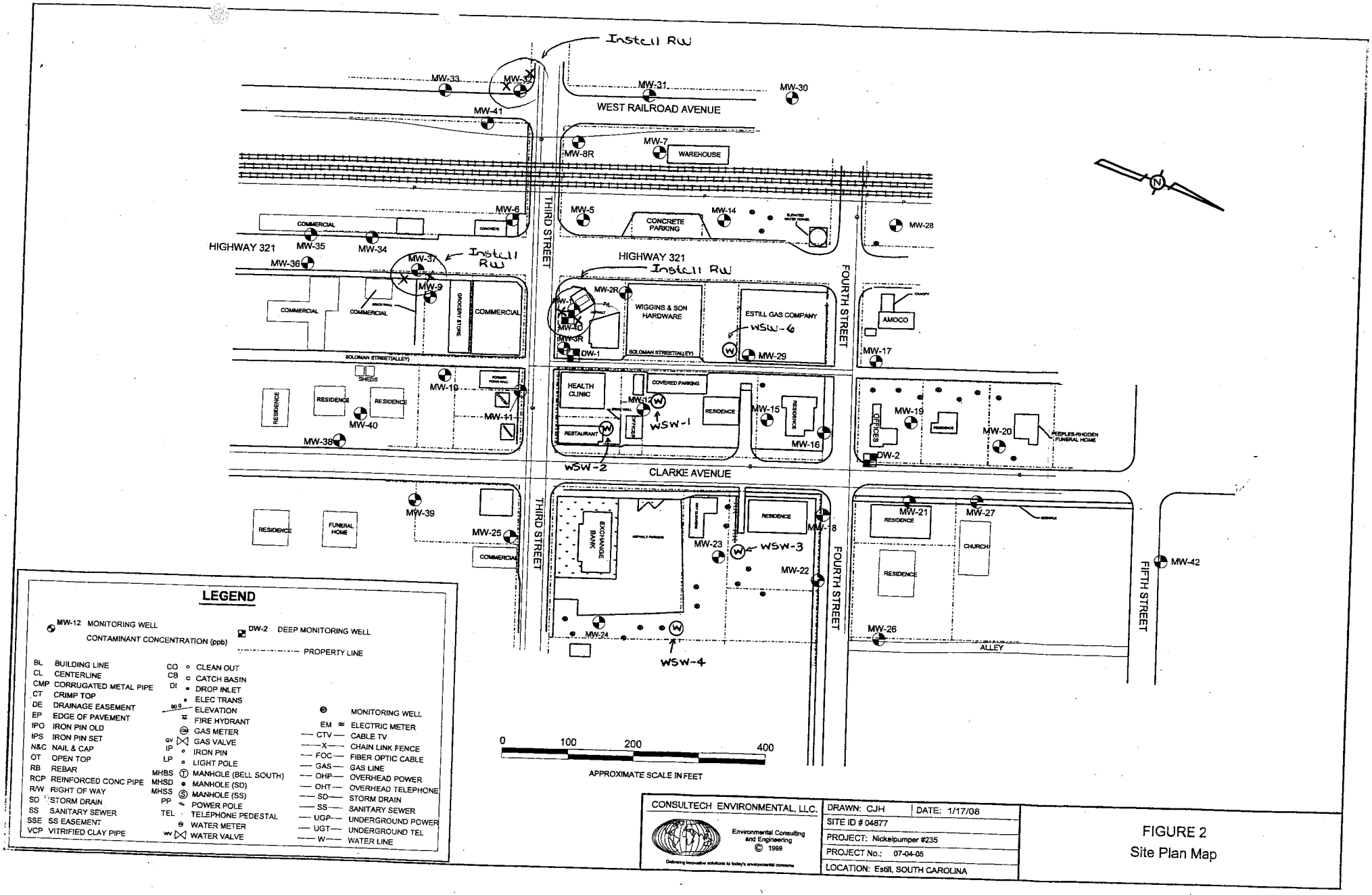
This approval is for the installation of six four-inch recovery wells. The wells are to be installed in the approved locations in accordance with the South Carolina Well Standards, R.61-71, and the applicable guidance documents. Please note that R.61-71 requires the following:

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the South Carolina Department of Health and Environmental Control (Agency) shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f.
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency required by R.61-71.H.1.d.
5. If any of the information provided to the Agency changes, notification to Joel Padgett (tel: (803) 896-6398 or e-mail: padgetjp@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
7. Agency approval is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Date of Issue: March 13, 2014 **Approval #:** UMW-25426

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management



LEGEND

MW-12 MONITORING WELL
CONTAMINANT CONCENTRATION (ppb)
DW-2 DEEP MONITORING WELL
PROPERTY LINE

BL	BUILDING LINE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CT	CRIMP TOP
DE	DRAINAGE EASEMENT
EP	EDGE OF PAVEMENT
IPO	IRON PIN OLD
IPS	IRON PIN SET
N&C	NAIL & CAP
OT	OPEN TOP
RB	REBAR
RCP	REINFORCED CONC PIPE
R/W	RIGHT OF WAY
SD	STORM DRAIN
SS	SANITARY SEWER
SSE	SS EASEMENT
VCP	VITRIFIED CLAY PIPE
CO	CLEAN OUT
CB	CATCH BASIN
DI	DROP INLET
	ELEC TRANS
90.0	ELEVATION
	FIRE HYDRANT
	GAS METER
GV	GAS VALVE
IP	IRON PIN
LP	LIGHT POLE
MHBS	MANHOLE (BELL SOUTH)
MHSD	MANHOLE (SD)
MHSS	MANHOLE (SS)
PP	POWER POLE
TEL	TELEPHONE PEDESTAL
	WATER METER
WV	WATER VALVE
	MONITORING WELL
EM	ELECTRIC METER
CTV	CABLE TV
X	CHAIN LINK FENCE
FOC	FIBER OPTIC CABLE
GAS	GAS LINE
OHP	OVERHEAD POWER
OHT	OVERHEAD TELEPHONE
SD	STORM DRAIN
SS	SANITARY SEWER
UGP	UNDERGROUND POWER
UGT	UNDERGROUND TEL
W	WATER LINE

CONSULTECH ENVIRONMENTAL, LLC.
Environmental Consulting and Engineering
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Delivering innovative solutions to today's environmental concerns

DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

UST Permit: 04877
Facility: Nicklepumper #235
County: Hampton

MW #	Screened Interval	TOC
MW-1	unk	unk
MW-2R	10-25'	100.60'
MW-3R	10-25'	100.03'
MW-4D	80-85'	100.32'
MW-5	15-25'	99.59'
MW-6	15-25'	99.43'
MW-7	15-25'	99.59'
MW-8R	10-25'	99.38'
MW-9	15-25'	99.40'
MW-10	15-25'	97.80'
MW-11	15-25'	99.37'
MW-12	15-25'	100.62'
MW-14	15-25'	100.38'
MW-15	15-25'	99.72'
MW-16	15-25'	99.86'
MW-17	15-25'	100.41'
MW-18	15-25'	99.50'
MW-19	15-25'	99.66'
MW-20	15-25'	9.858'
MW-21	15-25'	99.40'
MW-22	15-25'	98.98'
MW-23	15-25'	99.21'
MW-24	15-25'	99.50'
MW-25	5-20'	98.87'
MW-26	5-20'	97.93'
MW-27	5-20'	99.16'
MW-28	5-20'	100.50'
MW-29	5-20'	100.50'
MW-30	5-20'	100.67'
MW-31	5-20'	100.30'
MW-32	5-20'	98.54'
MW-33	5-20'	99.21'
MW-34	5-20'	98.28'
MW-35	5-20'	97.78'
MW-36	5-20'	97.44'
MW-37	5-20'	98.41'
MW-38	5-20'	97.18'
MW-39	5-20'	98.05'
MW-40	5-20'	97.23'
MW-41	5-20'	98.05'
MW-42	5-20'	98.83'
DW-1	90-95'	100.11'
DW-2	90-95'	99.64'

Approved Cost Agreement 47732

Facility: 04877 NICKELPUMPER 235

PADGETJP

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		A1	EQUIPMENT	1.0000	250.00	250.00
		B1	PERSONNEL	2.0000	200.00	400.00
09 WELL INSTALLATION						
		H1	RECOVERY WELL (4" DIA)	120.0000	28.00	3,360.00
16 SUBSEQUENT SURVEY						
		A1	SUBSEQUENT SURVEY	1.0000	300.00	300.00
17 DISPOSAL						
		AA	WASTEWATER	120.0000	1.25	150.00
		C1	SOIL TREATMENT DISPOSAL	2.5000	50.04	125.10
				Total Amount		4,585.10

FIELD ACTIVITY WORKSHEET ORDER

Date of Request: September 7 ~~August 13~~, 2010



Type of Request:

(Please indicate your request with a check mark)

Emergency	(<2 Working Days)	☐
Specific	(1-5 Working Days)	☐
Routine	(10 Working Days)	■

Please specify the type of work to be completed:

Locate and sample MW-9, MW-12, MW-29 for BTEX+naph+MtBE+DCA, EDB. Gauge MW-1 (pentagonal fixture on vault cover).

Facility Name: **Nicklepumper #235**

Permit Number: **04877**

Project Manager: J. Padgett

County: Hampton

(Field Staff Only)

Date Field Activity Completed: _____

Completed by Field Staff: _____

Date Field Notes Entered into EFIS: _____

Field Staff Comments:

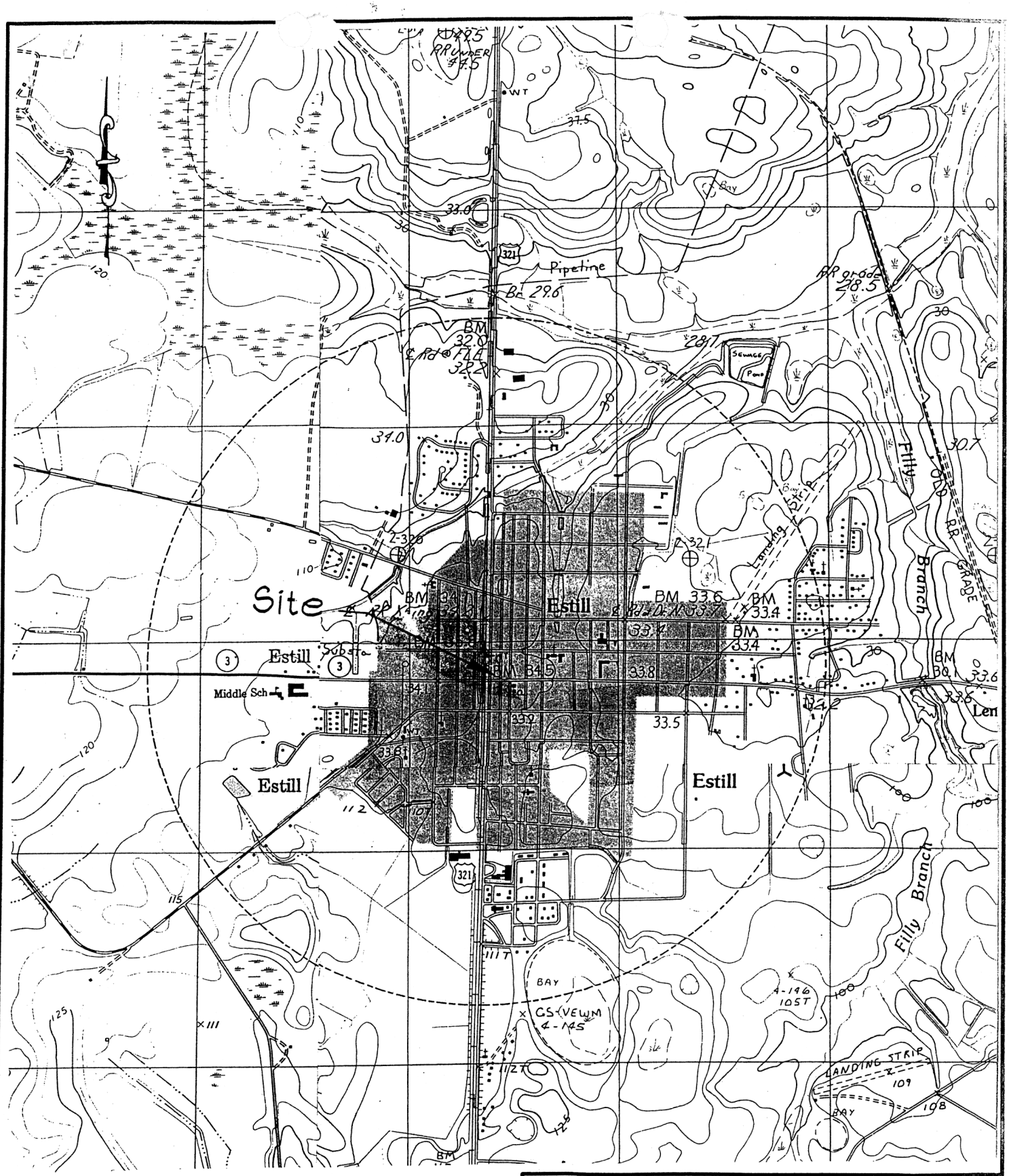
_____

_____

_____

REMEMBER TO ESTABLISH COST PROPOSALS

PACE CA#: 39982



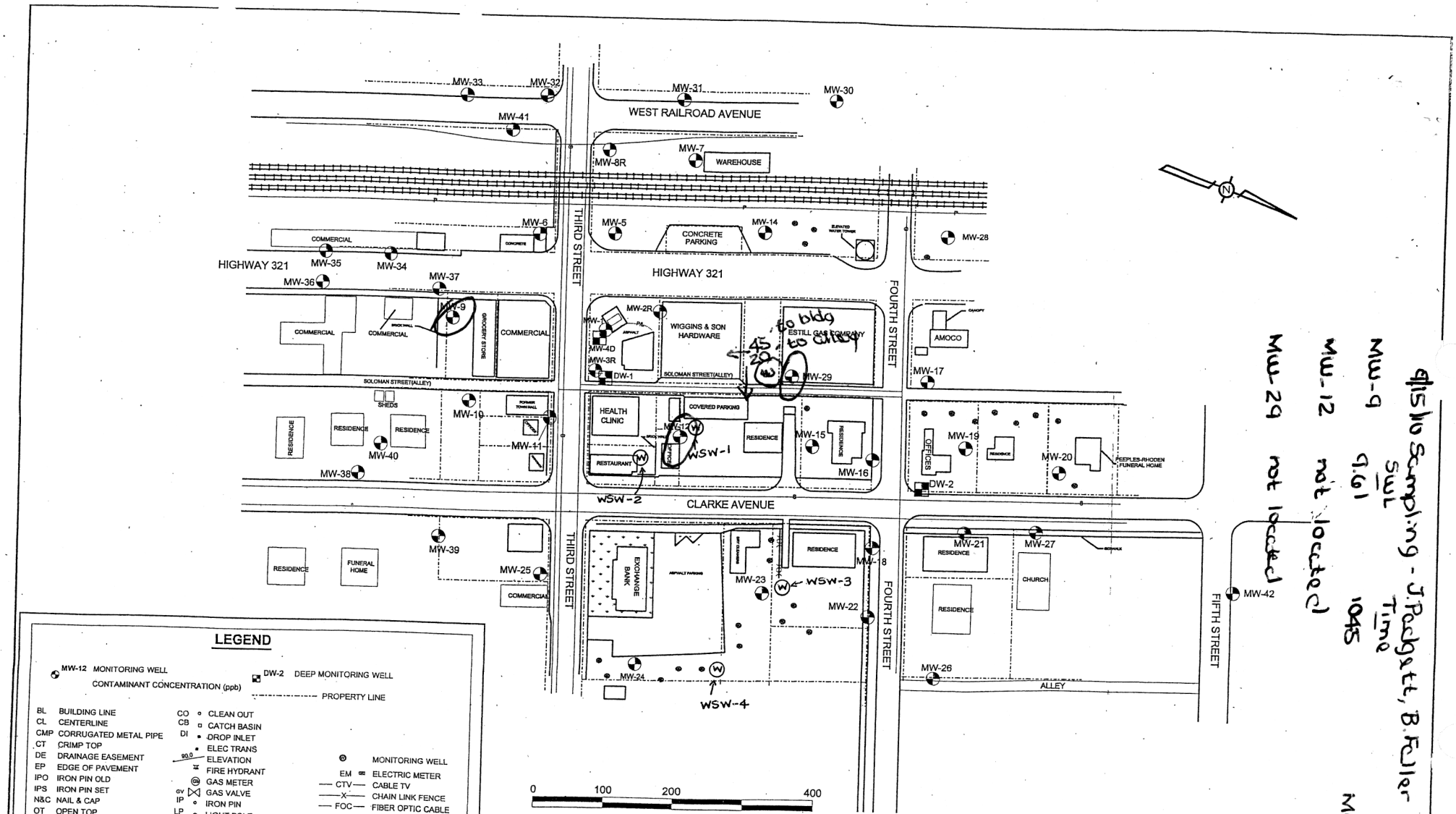
GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Gifford, SC
USGS 7.5 Min. Quad
Contour Interval 1.5 meters

Midlands Environmental Consultants, Inc.	Site Location
Nickelpumper #235 25 East Railroad Ave., Estill, SC SCDHEC Site ID# 04877	
Figure 1	MECI 01-389



LEGEND

MW-12 MONITORING WELL — CONTAMINANT CONCENTRATION (ppb)

DW-2 DEEP MONITORING WELL

PROPERTY LINE

BL	BUILDING LINE	CO	CLEAN OUT		MONITORING WELL
CL	CENTERLINE	CB	CATCH BASIN	EM	ELECTRIC METER
CMP	CORRUGATED METAL PIPE	DI	DROP INLET	CTV	CABLE TV
CT	CRIMP TOP		ELEC TRANS	X	CHAIN LINK FENCE
DE	DRAINAGE EASEMENT	90.0	ELEVATION	FOC	FIBER OPTIC CABLE
EP	EDGE OF PAVEMENT		FIRE HYDRANT	GAS	GAS LINE
IPO	IRON PIN OLD	GM	GAS METER	OHP	OVERHEAD POWER
IPS	IRON PIN SET	gv	GAS VALVE	OHT	OVERHEAD TELEPHONE
N&C	NAIL & CAP	IP	IRON PIN	SD	STORM DRAIN
OT	OPEN TOP	LP	LIGHT POLE	SS	SANITARY SEWER
RB	REBAR	MHBS	MANHOLE (BELL SOUTH)	UGP	UNDERGROUND POWER
RCP	REINFORCED CONC PIPE	MHSD	MANHOLE (SD)	UGT	UNDERGROUND TEL
R/W	RIGHT OF WAY	MHSS	MANHOLE (SS)	W	WATER LINE
SD	STORM DRAIN	PP	POWER POLE		
SS	SANITARY SEWER	TEL	TELEPHONE PEDESTAL		
SSE	SS EASEMENT		WATER METER		
VCP	VITRIFIED CLAY PIPE	wv	WATER VALVE		

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Delivering innovative solutions to today's environmental concerns

DRAWN: CJH	DATE: 1/17/08
SITE ID # 04877	
PROJECT: Nickelpumper #235	
PROJECT No.: 07-04-05	
LOCATION: Estill, SOUTH CAROLINA	

FIGURE 2
Site Plan Map

4/15/10 Sampling - J. Pachytt, B. Fuller
SWL
MW-9 9.61 Time 1045
MW-12 not located
MW-29 not located
MW-1
Could not open w/o pentagon key

Document Receipt Information

☒ Hard Copy ☒ CD ☐ Email

Date Received 6-5-14

Permit Number 64877

Project Manager Joel Padgett

Name of Contractor MECI

UST Certification Number

Docket Number 1 Utah

Scanned

Recovery Well Installation

REPORT OF RECOVERY WELL INSTALLATION

Nickelpumper 235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC SITE ID 04877
CA # 47732

Prepared By:

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

June 3, 2014

MECI Project No. 14-4774

Midlands Environmental Consultants, Inc.

June 3, 2014

Mr. Joel Padgett, P.G., Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Recovery Well Installation
Nickelpumper 235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID # 04877, CA # 47732
MECI Project Number 14-4774
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Padgett,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached recovery well installation report for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

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NOTE: ITEMS LISTED WITH AN ** BESIDE IT WERE NOT NEEDED AS A PART OF THIS SCOPE OF WORK

1.0 INTRODUCTION

A. **Owner/Operator Information**

Facility Name:	Nickelpumper 235	UST Permit #:	04877
Facility Address:	25 East Railroad Avenue, Estill, South Carolina		
Name:	Golden Isle Petroleum, Inc.		
Address:	P.O. Box 15448, Savannah GA, 31416		
Telephone #:	(912) 596-1697 (Mr. Robert Puccini) (803) 625-4255 (Store)		

B. **Property Owner Information**

Name	Golden Isles Petroleum, Inc.
Tax Map #:	Hampton Tax Map #: 068-04-02-005
Address	P.O. Box 15448, Savannah GA, 31416
Telephone #	(912) 596-1697 (Mr. Robert Puccini)

C. **Contractor Information**

Name:	Midlands Environmental Consultants, Inc.
Certification #:	9
Address:	P. O. Box 854, Lexington, SC 29071
Telephone #:	(803) 808-2043

D. **SCDHEC Certified Well Driller**

Name:	Environmental Drilling & Probing Services
Driller:	David Brown
Certification #:	B 02053
Address:	17539 Greenhill Road, Charlotte, North Carolina 28278
Telephone #:	(704) 607-7529

E. **SCDHEC Certified Laboratory**

Name:	N/A
Certification #:	N/A
Address:	N/A
Telephone #:	N/A

1.1 PROJECT INFORMATION

The subject site (Nickelpumper 235) is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The subject site currently maintains one 5,000 gallon diesel underground storage tanks (UST), one 8,000 gallon regular unleaded gasoline UST, one 8,000 gallon plus gasoline UST, and one 8,000 gallon premium gasoline UST. The subject tanks are currently in compliance with an issued compliance date of April 18, 2013. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in January of 1993 and confirmed the release in July of 1994. The site is currently classified as Class 2BB.

The South Carolina Department of Health and Environmental Control (SCDHEC) reported a second release of petroleum product from the subject tanks on April 04, 2008 and confirmed the release on April 25, 2008. The release was issued a No Further Action on April 25, 2008.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

2.0 SURROUNDING PROPERTY USAGE

The site is located in downtown Estill, in Hampton County, South Carolina. The site is located at the northeastern corner of U.S. Highway 321 and Third Street. There is currently one building on the subject site operating as a convenience store and gasoline station. Across U.S. Highway 321 are railroad tracks beyond which are a warehouse and parking. North, south, and east of the site are commercial properties. Three locations surrounding the subject reportedly maintained UST's in the past. One is located to the north, along US Highway 321, approximately 200 feet from the subject site. The second is south, along US Highway 321, approximately 200 feet. A third is located southwest of the subject site, across US Highway 321. One active gasoline service station is located beyond the commercial properties to the north, across Fourth Street, approximately 460 feet from the subject site.

3.0 FIELD EXPLORATION

A site visit was performed at the referenced site on March 24, 2014 to evaluate current site conditions, gain property access, and determine drilling accessibility. Field exploration conducted at the site included:

- Construction of six recovery wells; and,
- a subsequent survey of the subject site.

The monitoring well locations were selected based on the SCDHEC project manager, existing site conditions, and drilling accessibility. The well locations are presented on Figure 2.

3.1 RECOVERY WELL INSTALLATION

On April 14th and 15th, 2014, six single cased 4-inch recovery wells were installed at the subject site. These wells were installed by Environmental Drilling & Probing Services (EDPS) of Charlotte, NC (S.C. Driller Certification: David Brown # B 02053) using a ATV-mounted drilling rig employing 10.0-inch outer diameter hollow-stem auger to construct the borehole. The following table presents new well installation details:

Well Number	Single Cased	Well Diameter (inches)	Screened Interval (ft)	Total Depth (ft)
RW-1	X	4"	5.0-20.0	20.0
RW-2	X	4"	5.0-20.0	20.0
RW-3	X	4"	5.0-20.0	20.0
RW-4	X	4"	5.0-20.0	20.0
RW-5	X	4"	5.0-20.0	20.0
RW-6	X	4"	5.0-20.0	20.0

The soils encountered during drilling activities generally consisted of sandy clays and clayey sands of the Atlantic Coastal Plain Province. The soils encountered in this area are the product of successive advances and retreats of the ocean over the past several million years. Representative portions of soil samples were screened with a Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached in Appendix E.

Drill cuttings were containerized and transported on April 16, 2014 to Waste Management/Hickory Hill Landfill in Ridgeland, SC by MECI personnel. A total of 2.77 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the recovery wells, the wells were developed by purging until they were determined to be functioning properly and turbidity was reduced. These wells were developed utilizing a Whale-Mega Purger well pump. The drum of purge water was treated by MECI personnel using a granular activated carbon drum. A total of 90.0 gallons of purge/development water was disposed of in this manner. A disposal manifest for the treated purge water is presented in Appendix G.

3.2 SITE SURVEY

On May 6th, 2014, a subsequent survey was conducted by MECI personnel, utilizing a fiberglass rod, level, and tape to determine the horizontal and vertical position of the newly installed recovery wells. A TOC elevation of 100.32 for MW-4D and a TOC elevation of 100.11 for DW-1 were used as benchmarks for surveying the newly installed recovery wells RW-1 and RW-2. A TOC elevation of 98.28 for MW-34 and a TOC elevation of 98.41 for MW-37 were used as benchmarks for surveying the newly installed recovery wells RW-3 and RW-4. A TOC elevation of 99.38 for MW-8R and a TOC elevation of 99.21 for MW-33 were used as benchmarks for surveying the newly installed recovery wells RW-5 and RW-6. Elevations were based on site datum obtained from SCDHEC files. See Table 2 for potentiometric data for the entire monitoring well network.

4.0 AREA GEOLOGY AND HYDROGEOLOGY

The project site is located in the Atlantic Coastal Plain Physiographic Province. The soils in this province are generally interbedded silts, sands and clays that have been deposited during successive advances and retreats of the ocean over the past several million years. This interbedding can cause perched water and makes hydrogeological interpretation difficult.

In this geologic setting, the uppermost aquifer is the surficial aquifer of sands with lenses and layers of clays and silts. Water occupies the interstices between the formation particles and is in hydrostatic balance with the atmosphere at the water table surface.

Local precipitation is the source of freshwater recharge to the Coastal Plain formations. Groundwater recharge varies considerably over the region and is attributed to the differences in precipitation and to the variability in the infiltration rates.

Coastal Plain formations generally dip toward the Atlantic Ocean. Consequently, regional groundwater movement is to the southeast. On a regional scale, hydraulic gradients are relatively low.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent groundwater flow (Based on the hydraulic gradient determined during previous assessment activities) from the release is to the northeast toward an intermittent stream and wetlands associated with Black Creek.

4.1 LOCAL SUBSURFACE CONDITIONS

Coastal plain sediments were encountered during drilling activities conducted at the site. The soils encountered in our borings generally consisted of sandy clays and clayey sands. Test Boring Records, which depict the materials encountered in each boring, are located in Appendix E.

On May 6th, 2014, stabilized groundwater levels were measured in the newly installed recovery wells. Depth to groundwater ranged from 4.98 to 6.35 feet below top of casing in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

The above descriptions provide a general summary of the subsurface conditions encountered. The attached Test Boring Records (Appendix E) contain detailed information recorded at each new monitoring well location. The Test Boring Records represent our interpretation of the field logs based on examination of the field samples. The lines designating the interfaces between various strata represent approximate boundaries, and the transition between strata may be gradational.

5.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use of MECI and SCDHEC under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

-oOo-

TABLES

TABLE 2
PAGE 1 OF 2
MAY 6, 2014 GAUGING EVENT
POTENTIOMETRIC DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4774
SCDHEC SITE ID NUMBER 04877

Well Number	Sample Date	Screened Interval	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well-head Elevation	Groundwater Elevation
MW-1	5/6/2014	Unknown	NM	NM	NM	Unknown	NM
MW-2R	5/6/2014	10-25	NM	NM	NM	100.60	NM
MW-3R	5/6/2014	10-25	NM	NM	NM	100.03	NM
MW-4D	5/6/2014	80-85	NM	NM	NM	100.32	NM
MW-5	5/6/2014	15-25	NM	NM	NM	99.59	NM
MW-6	5/6/2014	15-25	NM	NM	NM	99.43	NM
MW-7	5/6/2014	15-25	NM	NM	NM	99.59	NM
MW-8R	5/6/2014	10-25	NM	NM	NM	99.38	NM
MW-9	5/6/2014	15-25	NM	NM	NM	99.40	NM
MW-10	5/6/2014	15-25	NM	NM	NM	97.80	NM
MW-11	5/6/2014	15-25	NM	NM	NM	99.37	NM
MW-12	5/6/2014	15-25	NM	NM	NM	100.62	NM
MW-14	5/6/2014	15-25	NM	NM	NM	100.38	NM
MW-15	5/6/2014	15-25	NM	NM	NM	99.72	NM
MW-16	5/6/2014	15-25	NM	NM	NM	99.86	NM
MW-17	5/6/2014	15-25	NM	NM	NM	100.41	NM
MW-18	5/6/2014	15-25	NM	NM	NM	99.50	NM
MW-19	5/6/2014	15-25	NM	NM	NM	99.66	NM
MW-20	5/6/2014	15-25	NM	NM	NM	98.58	NM
MW-21	5/6/2014	15-25	NM	NM	NM	99.40	NM
MW-22	5/6/2014	15-25	NM	NM	NM	98.98	NM
MW-23	5/6/2014	15-25	NM	NM	NM	99.21	NM
MW-24	5/6/2014	15-25	NM	NM	NM	99.50	NM
MW-25	5/6/2014	5-20	NM	NM	NM	98.87	NM

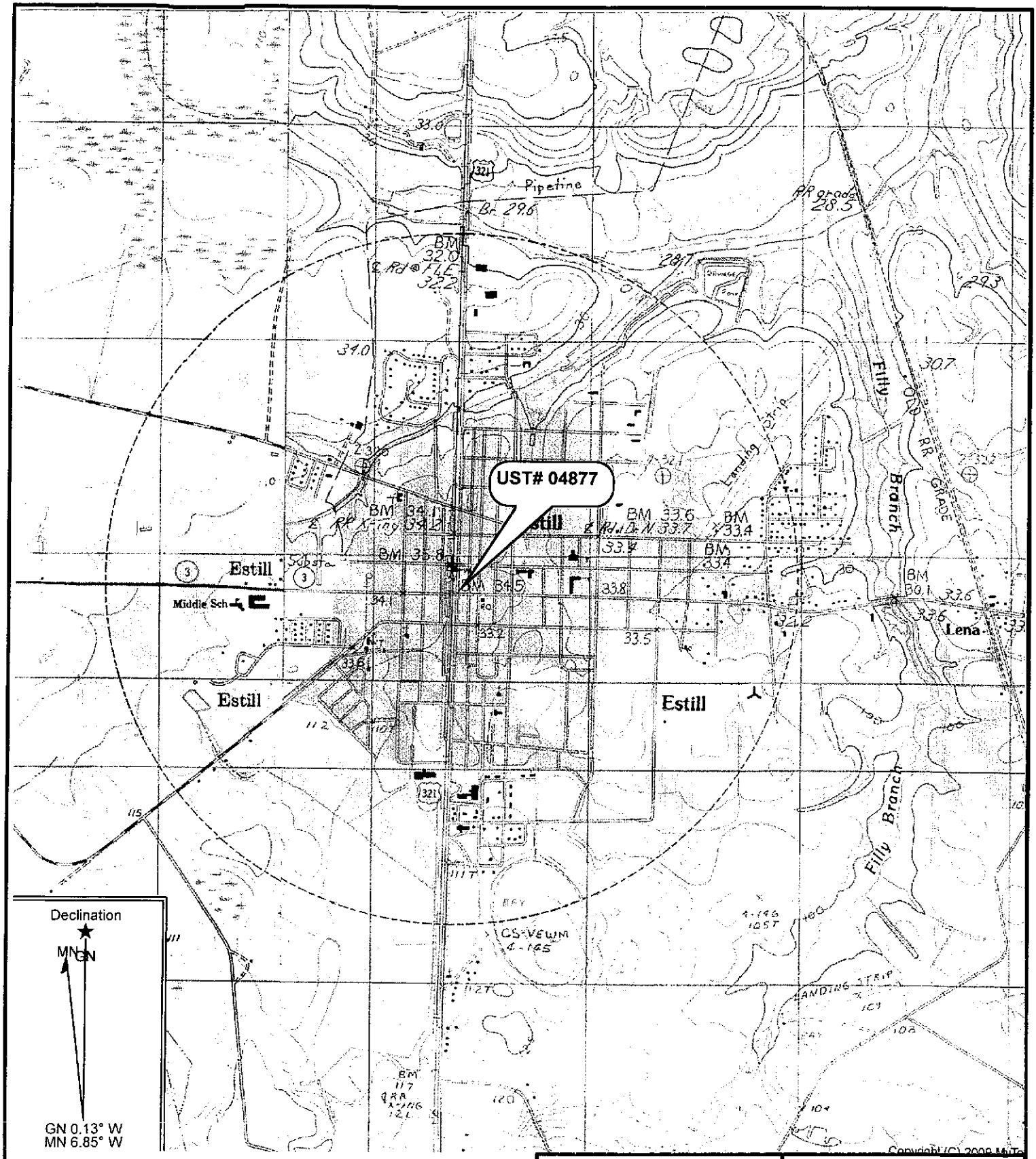
Notes:
1. Elevations based on site datum obtained from SCDHEC files.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Groundwater levels measured on 5/6/2014.
4. NM = Not Measured

TABLE 2
PAGE 2 OF 2
MAY 6, 2014 GAUGING EVENT
POTENTIOMETRIC DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
MECI PROJECT NUMBER 14-4774
SCDHEC SITE ID NUMBER 04877

Well Number	Sample Date	Screened Interval	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well-head Elevation	Groundwater Elevation
MW-26	5/6/2014	5-20	NM	NM	NM	97.93	NM
MW-27	5/6/2014	5-20	NM	NM	NM	99.16	NM
MW-28	5/6/2014	5-20	NM	NM	NM	100.50	NM
MW-29	5/6/2014	5-20	NM	NM	NM	100.50	NM
MW-30	5/6/2014	5-20	NM	NM	NM	100.67	NM
MW-31	5/6/2014	5-20	NM	NM	NM	100.30	NM
MW-32	5/6/2014	5-20	NM	NM	NM	98.54	NM
MW-33	5/6/2014	5-20	NM	NM	NM	99.21	NM
MW-34	5/6/2014	5-20	NM	NM	NM	98.28	NM
MW-35	5/6/2014	5-20	NM	NM	NM	97.78	NM
MW-36	5/6/2014	5-20	NM	NM	NM	97.44	NM
MW-37	5/6/2014	5-20	NM	NM	NM	98.41	NM
MW-38	5/6/2014	5-20	NM	NM	NM	97.18	NM
MW-39	5/6/2014	5-20	NM	NM	NM	98.05	NM
MW-40	5/6/2014	5-20	NM	NM	NM	97.23	NM
MW-41	5/6/2014	5-20	NM	NM	NM	98.05	NM
MW-41	5/6/2014	5-20	NM	NM	NM	98.83	NM
DW-1	5/6/2014	90-95	NM	NM	NM	100.11	NM
DW-2	5/6/2014	90-95	NM	NM	NM	99.64	NM
RW-1	5/6/2014	5-20	6.28	6.35	0.07	100.57	94.28
RW-2	5/6/2014	5-20	***	6.31	***	100.49	94.18
RW-3	5/6/2014	5-20	***	5.36	***	98.84	93.48
RW-4	5/6/2014	5-20	***	5.32	***	98.75	93.43
RW-5	5/6/2014	5-20	***	4.98	***	98.49	93.51
RW-6	5/6/2014	5-20	***	5.07	***	98.85	93.78

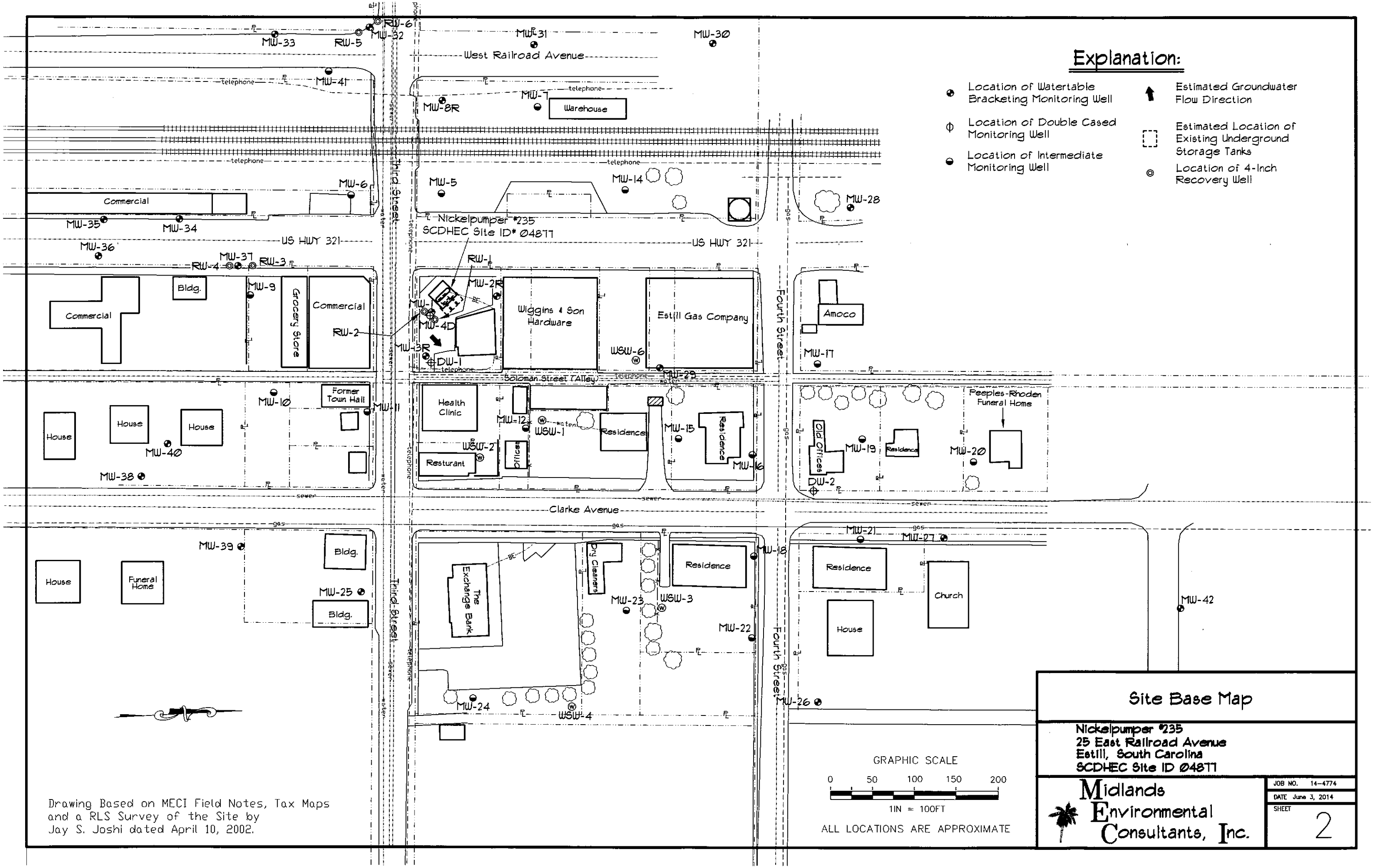
Notes:
1. Elevations based on site datum obtained from SCDHEC files.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Groundwater levels measured on 5/6/2014.
4. NM = Not Measured

FIGURES



Reference: Gifford, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 1.5 Meters

Midlands Environmental Consultants, Inc.	Site Location
Nickelpumper 235 25 East Railroad Avenue, Estill, SC SCDHEC Site ID# 04877	
Figure 1	MECI 14-4774



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE

0 50 100 150 200

1IN = 100FT

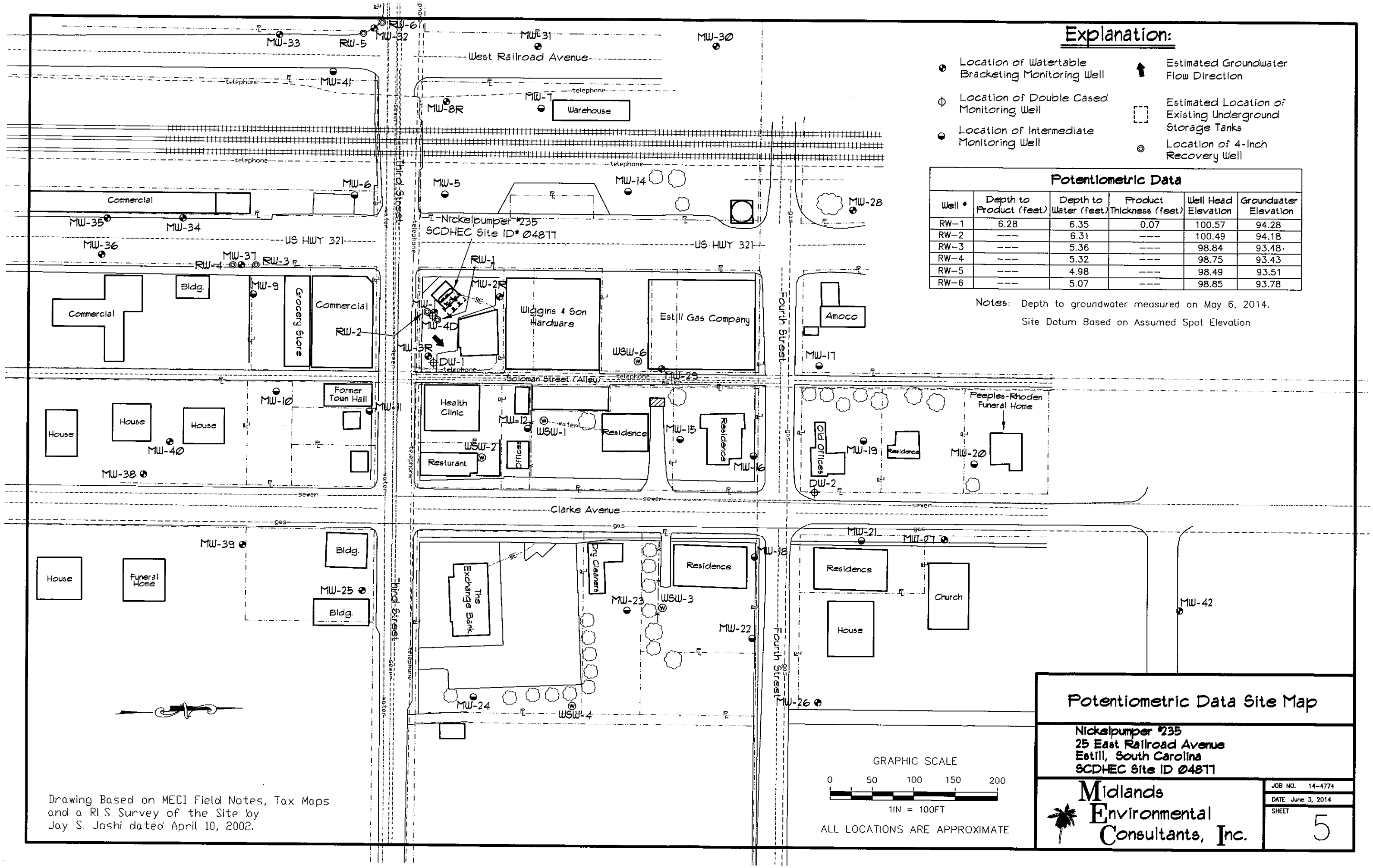
ALL LOCATIONS ARE APPROXIMATE

Site Base Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID 04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 2



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Potentiometric Data

Well #	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	---	6.31	---	100.49	94.18
RW-3	---	5.36	---	98.84	93.48
RW-4	---	5.32	---	98.75	93.43
RW-5	---	4.98	---	98.49	93.51
RW-6	---	5.07	---	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID 04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 5

APPENDIX A:

SITE SURVEY

(Not Applicable)

APPENDIX B:

SAMPLING LOGS, LABORATORY DATA SHEETS, & CHAIN-OF-CUSTODY FORMS

(Not Applicable)

APPENDIX C:

TAX MAP

(Not Applicable)

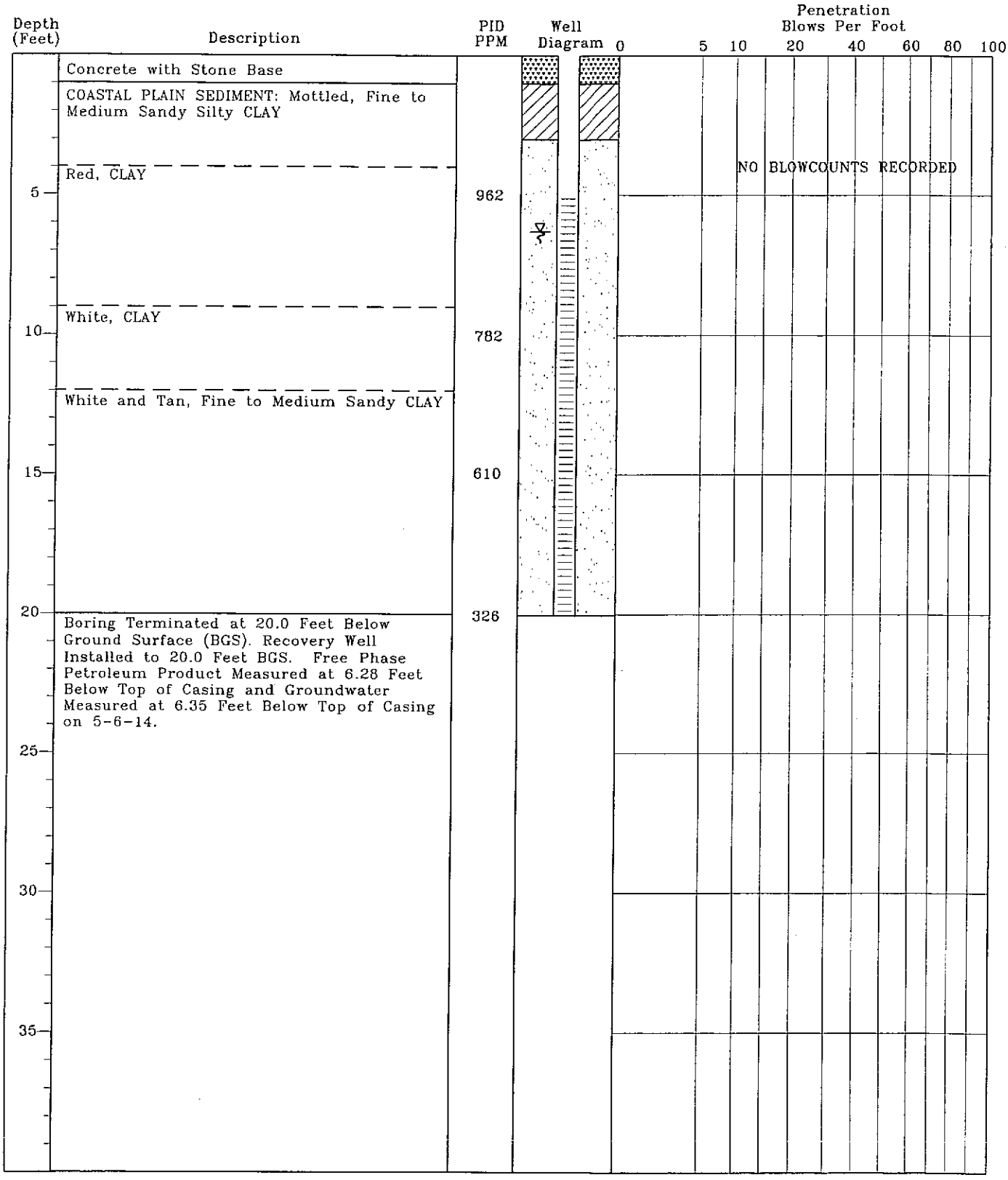
APPENDIX D:

SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS

(Not Applicable)

APPENDIX E:

WELL COMPLETION LOGS & 1903 FORMS



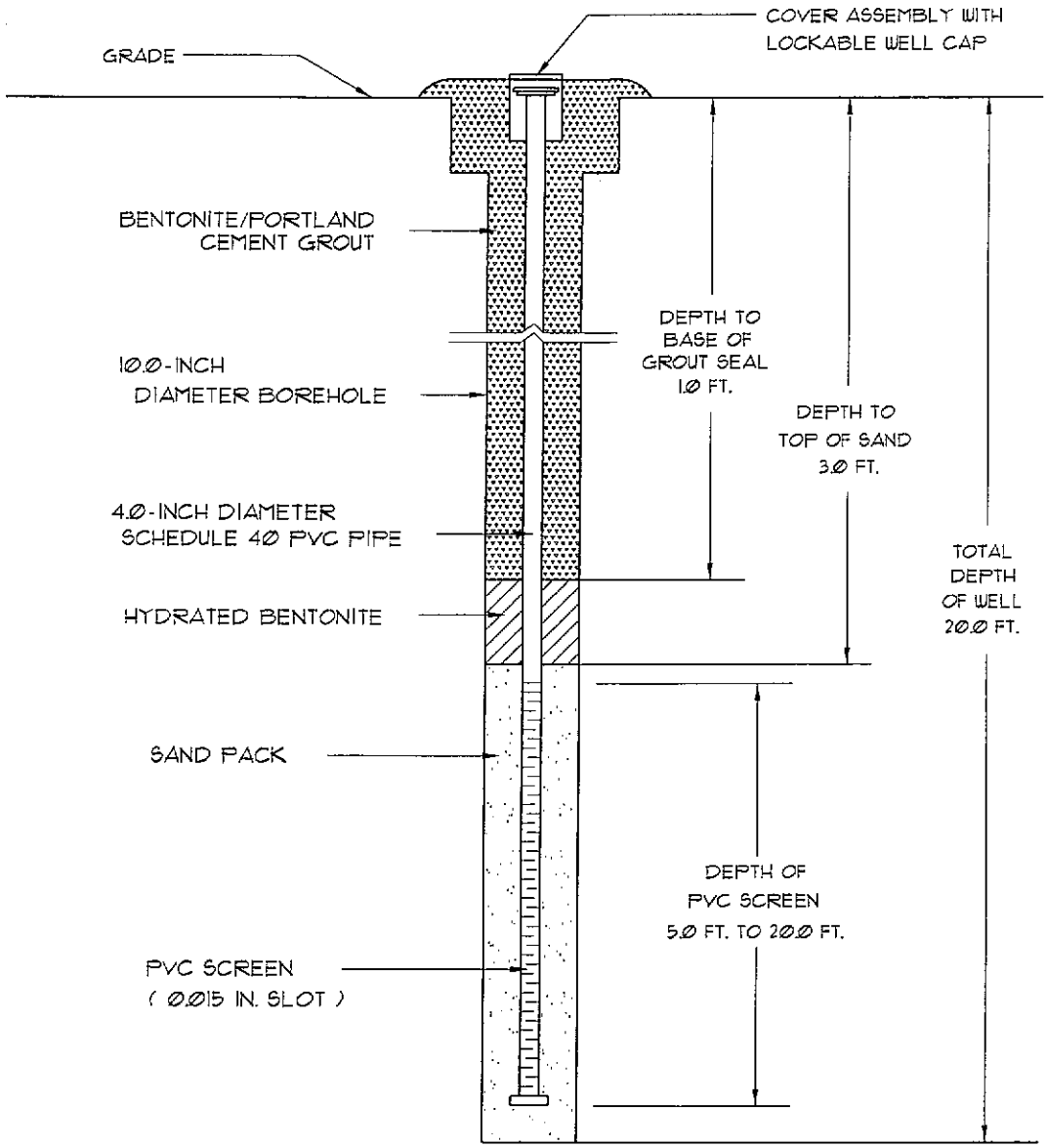
TEST BORING RECORD
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-1 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

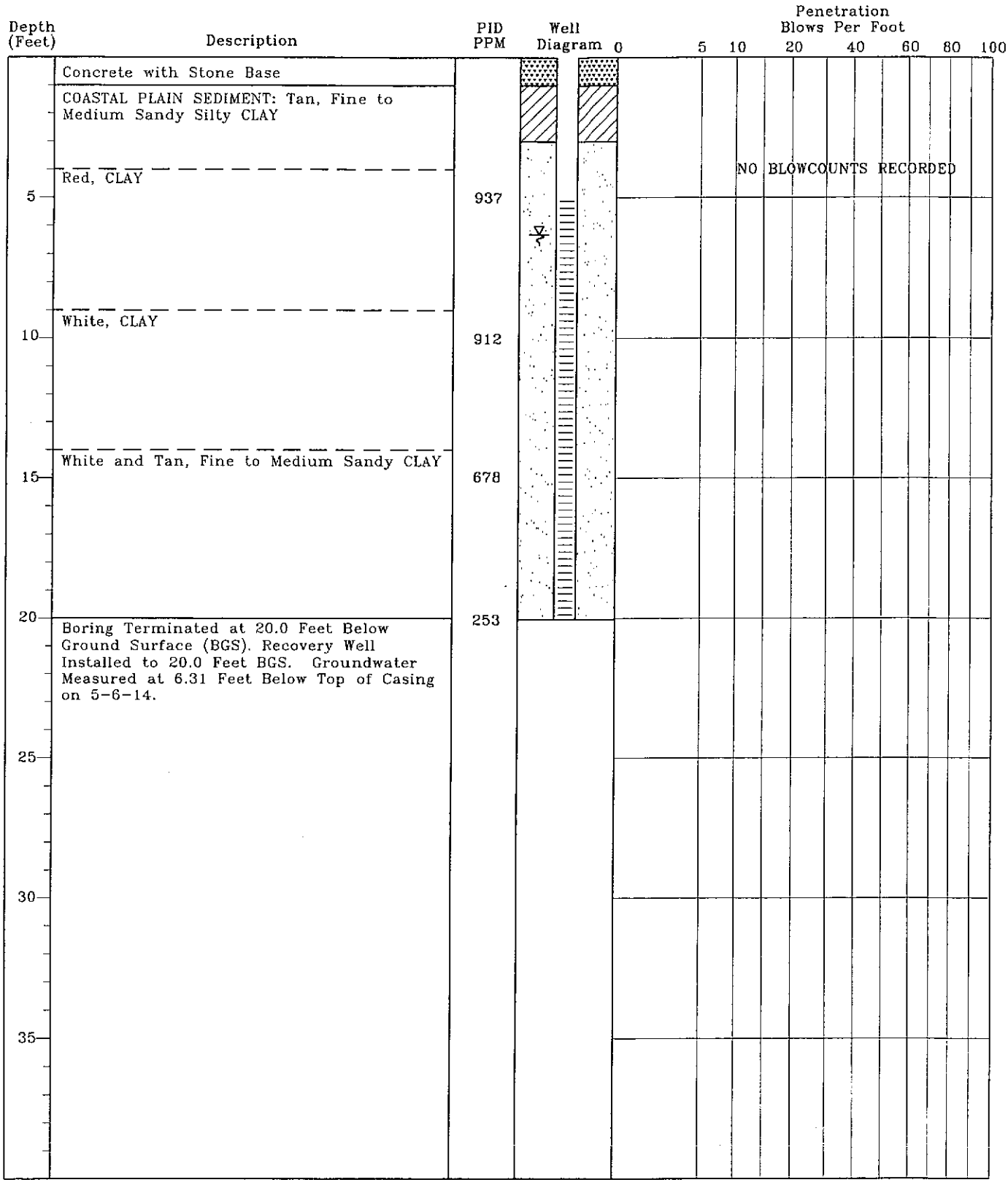
MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774



Well Number:	RW-1 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.#: B 02053
Logged By:	P. Boylan

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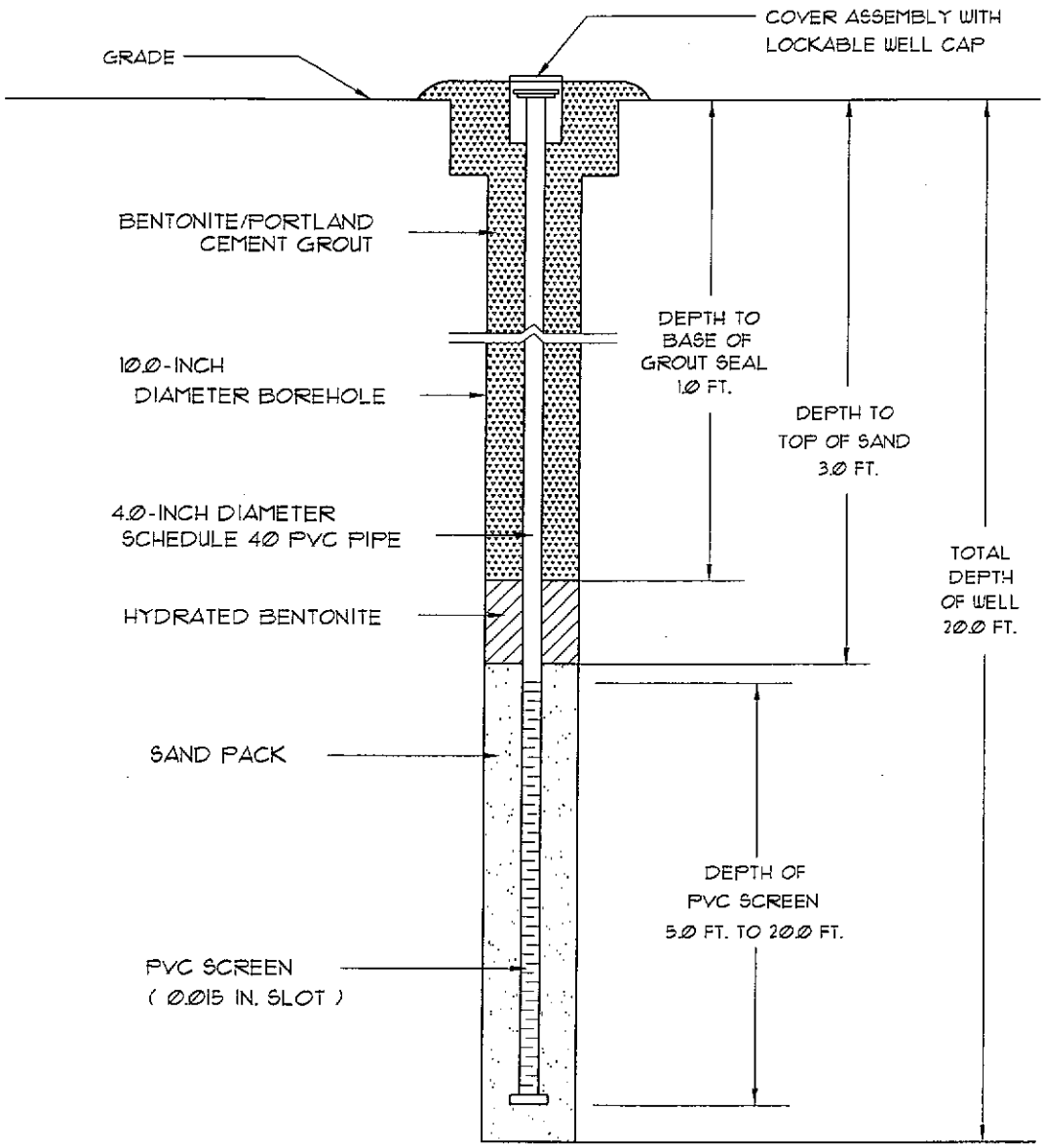
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Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-2 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

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Lexington, South Carolina 29073
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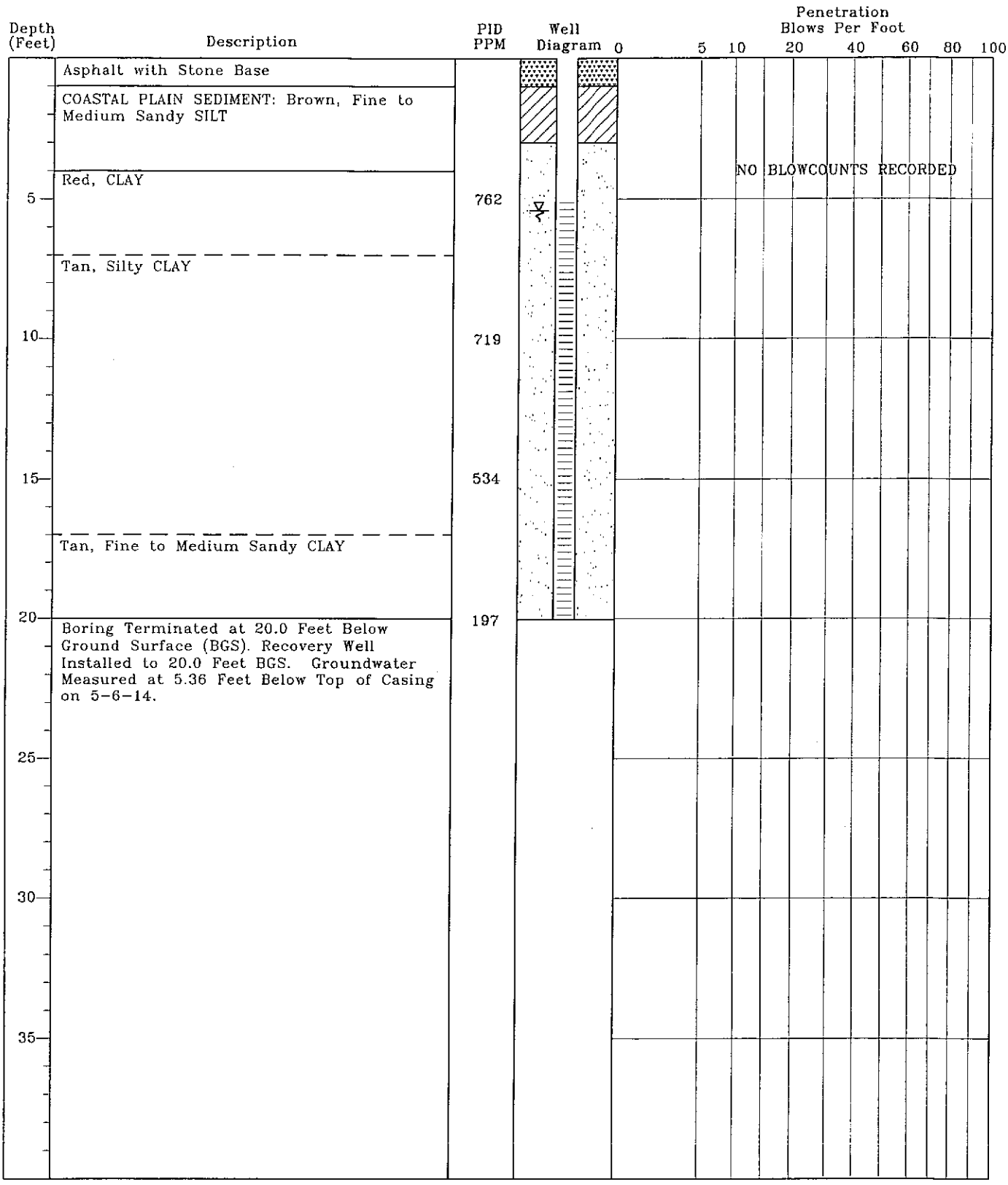
MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774



Well Number:	RW-2 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.#: B 02053
Logged By:	P. Boylan

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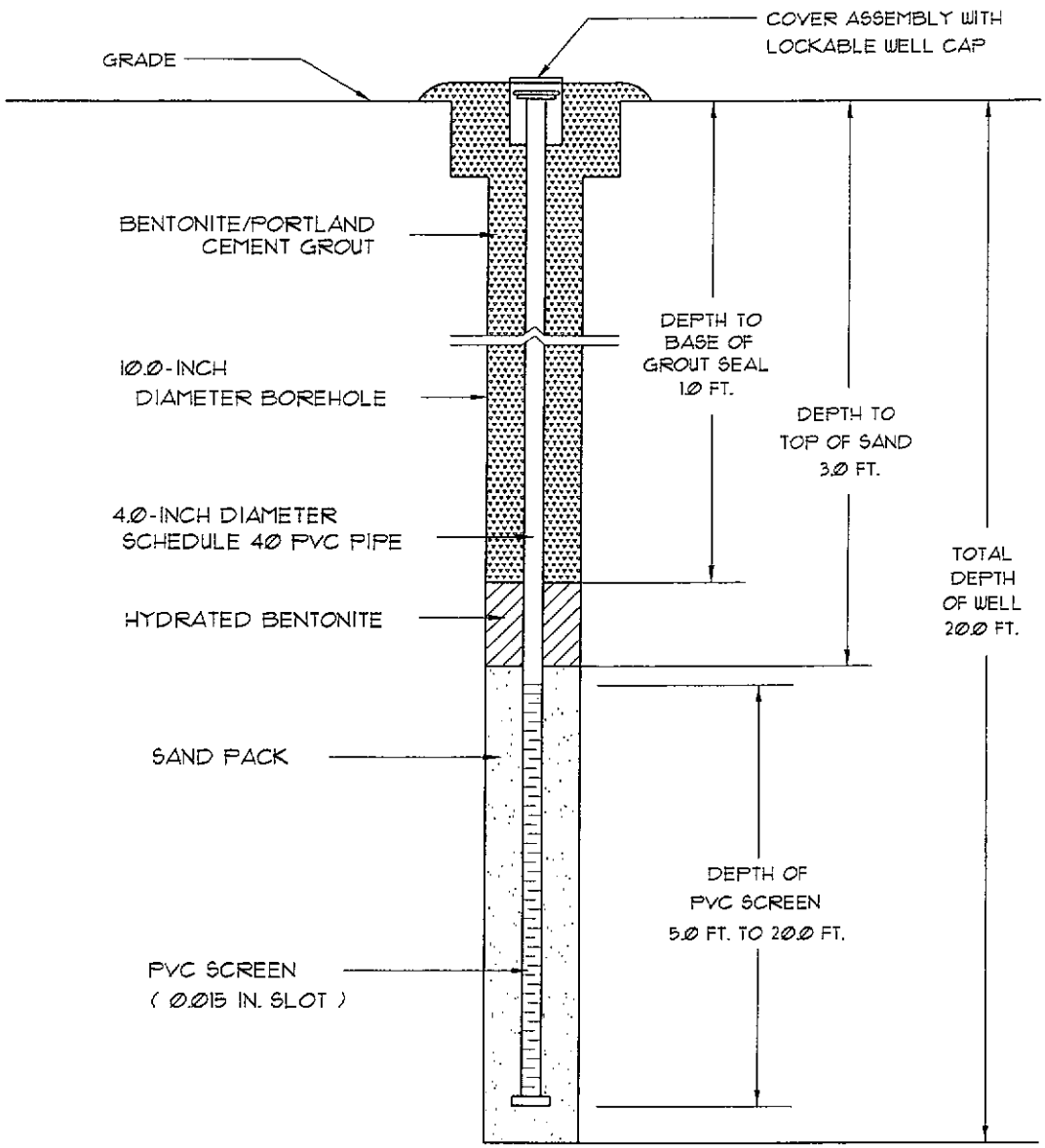
TEST BORING RECORD
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-3 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

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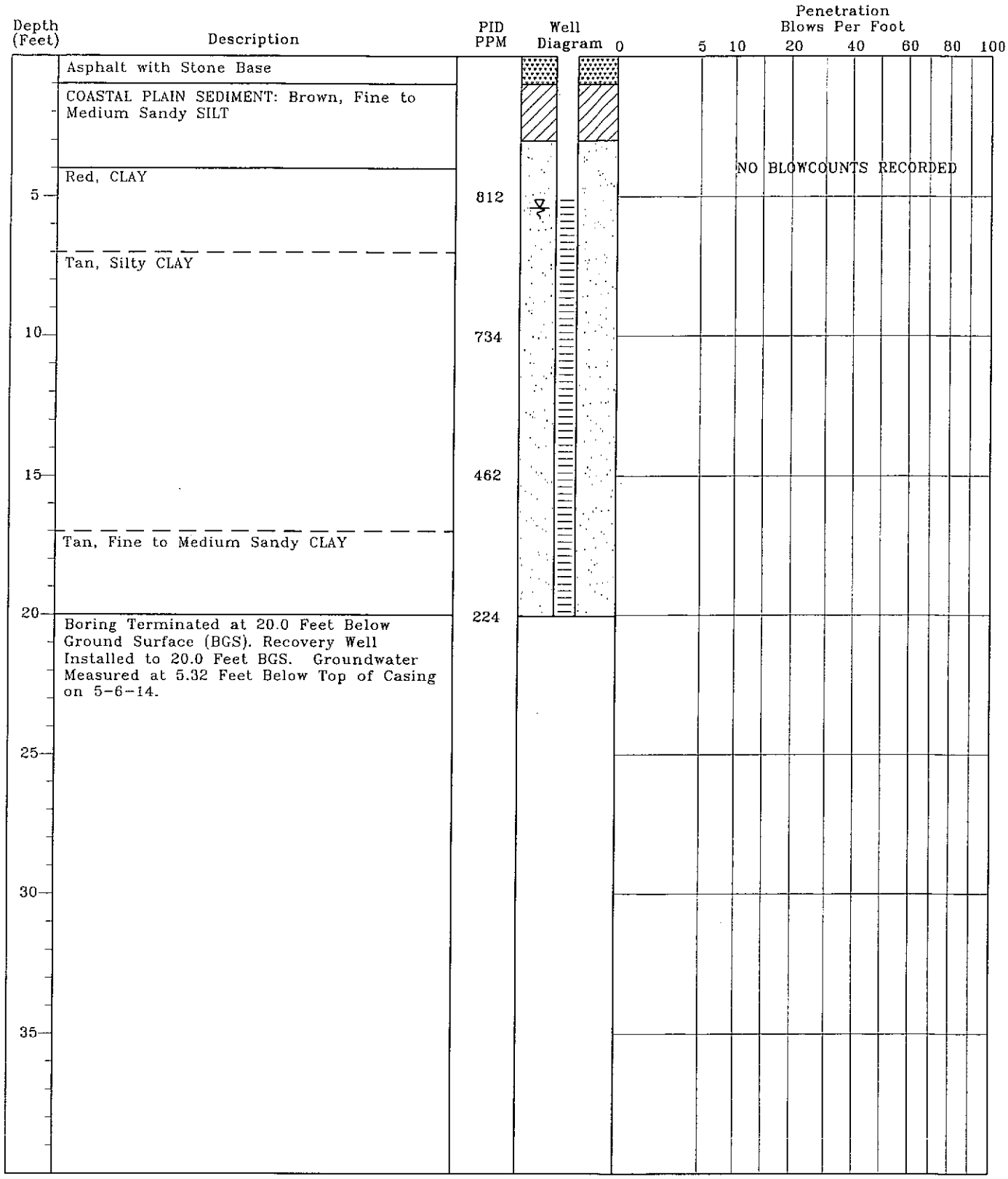
MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774



Well Number:	RW-3 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.#: B 02053
Logged By:	P. Boylan

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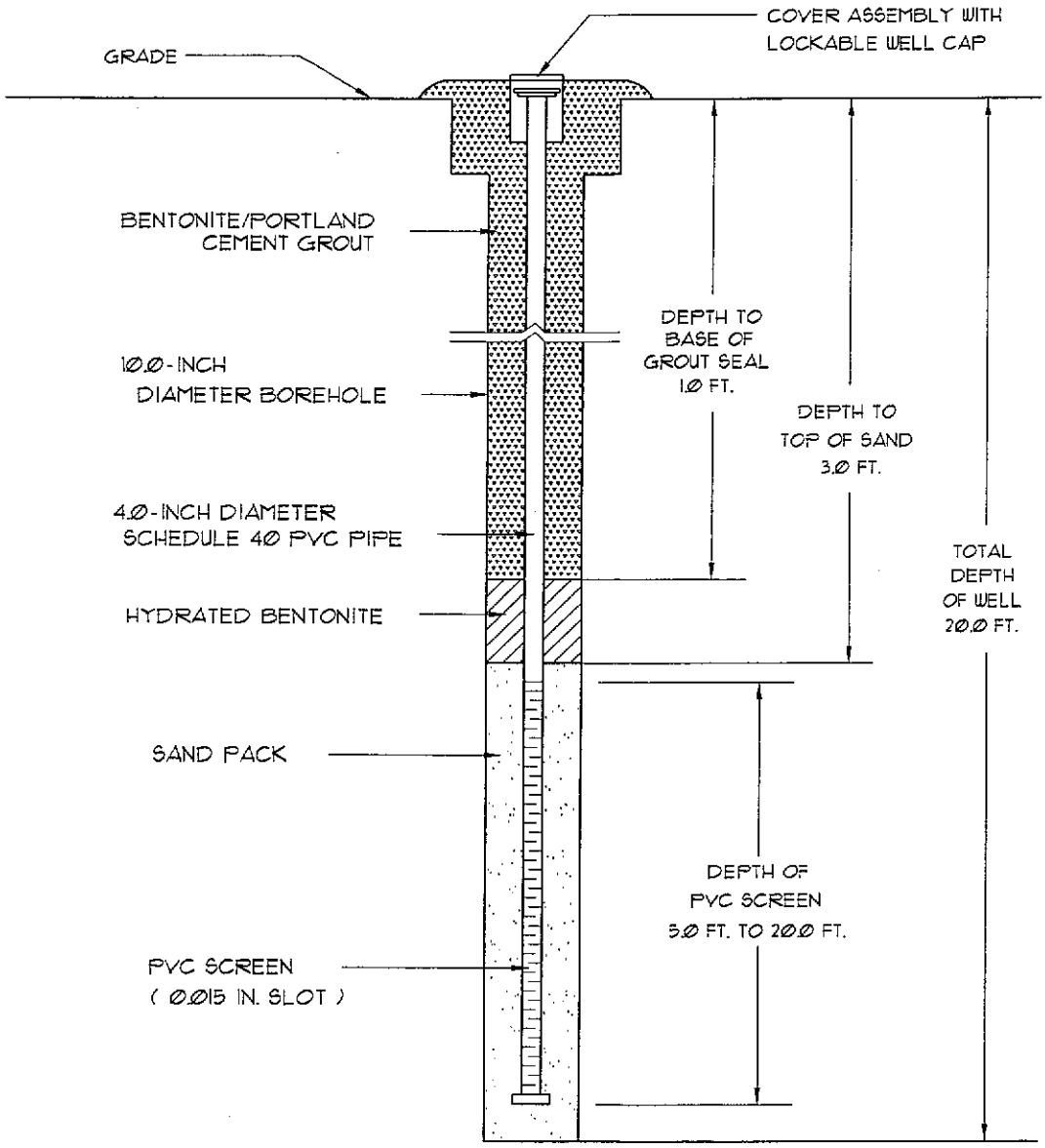
TEST BORING RECORD
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-4 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

Prepared By:
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Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

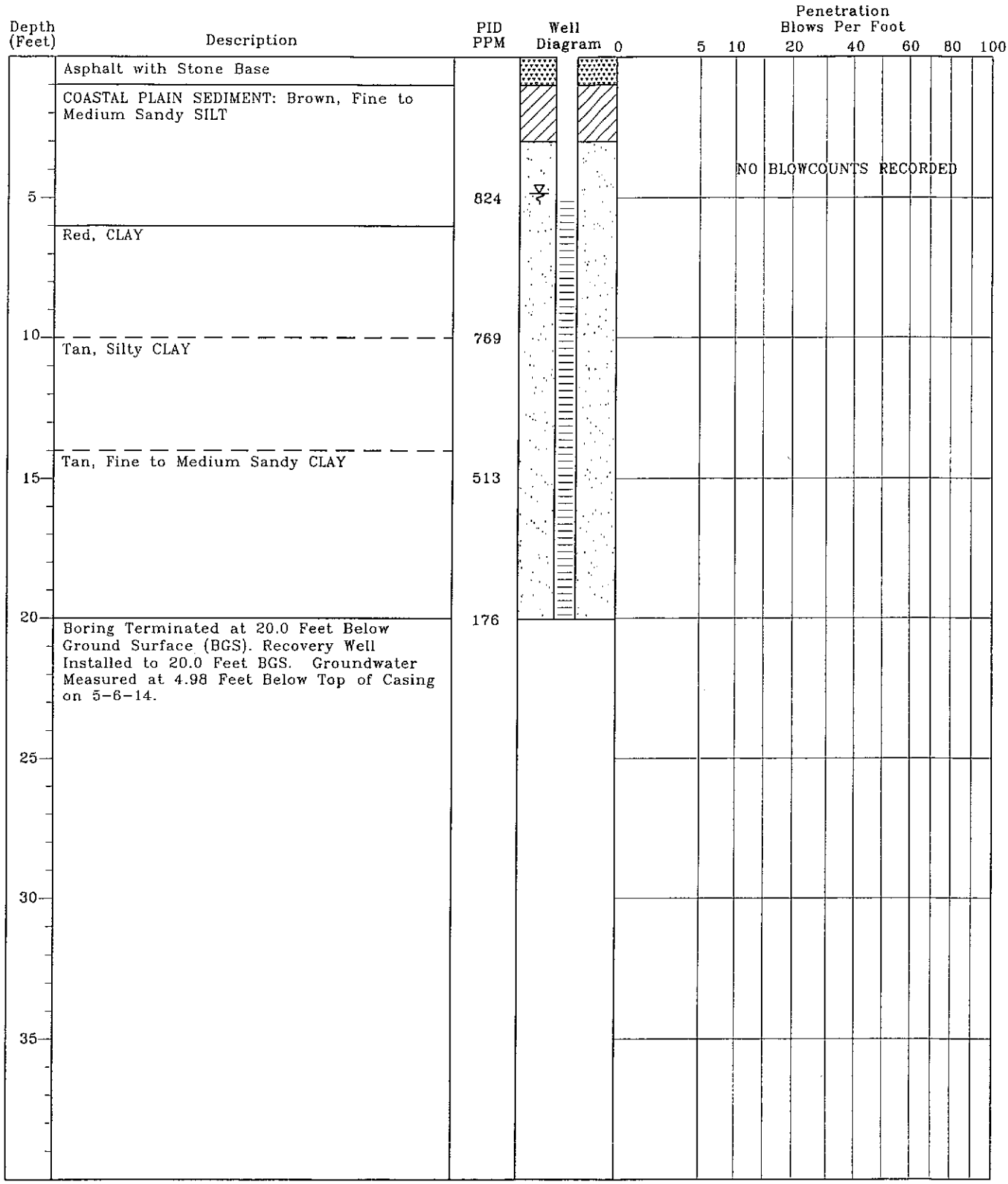
MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID* 04877
MECI Project Number 14-4774



Well Number:	RW-4 (04877)
Date Drilled:	4/15/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.*: B 02053
Logged By:	P. Boylan

Prepared By:
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(803) 808-2043 fax: 808-2048



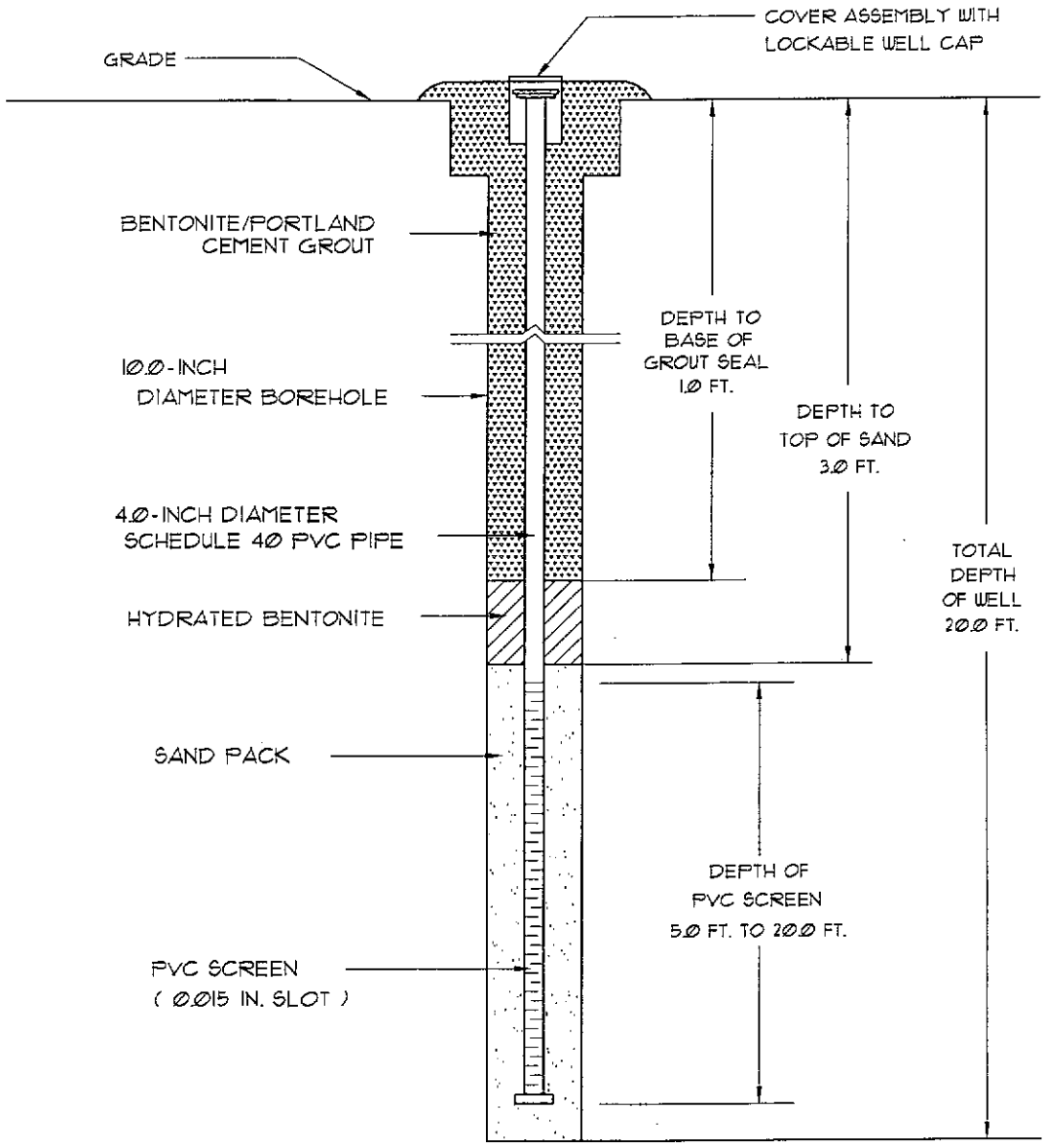
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Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-5 (04877)
Date Drilled:	4/14/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

Prepared By:
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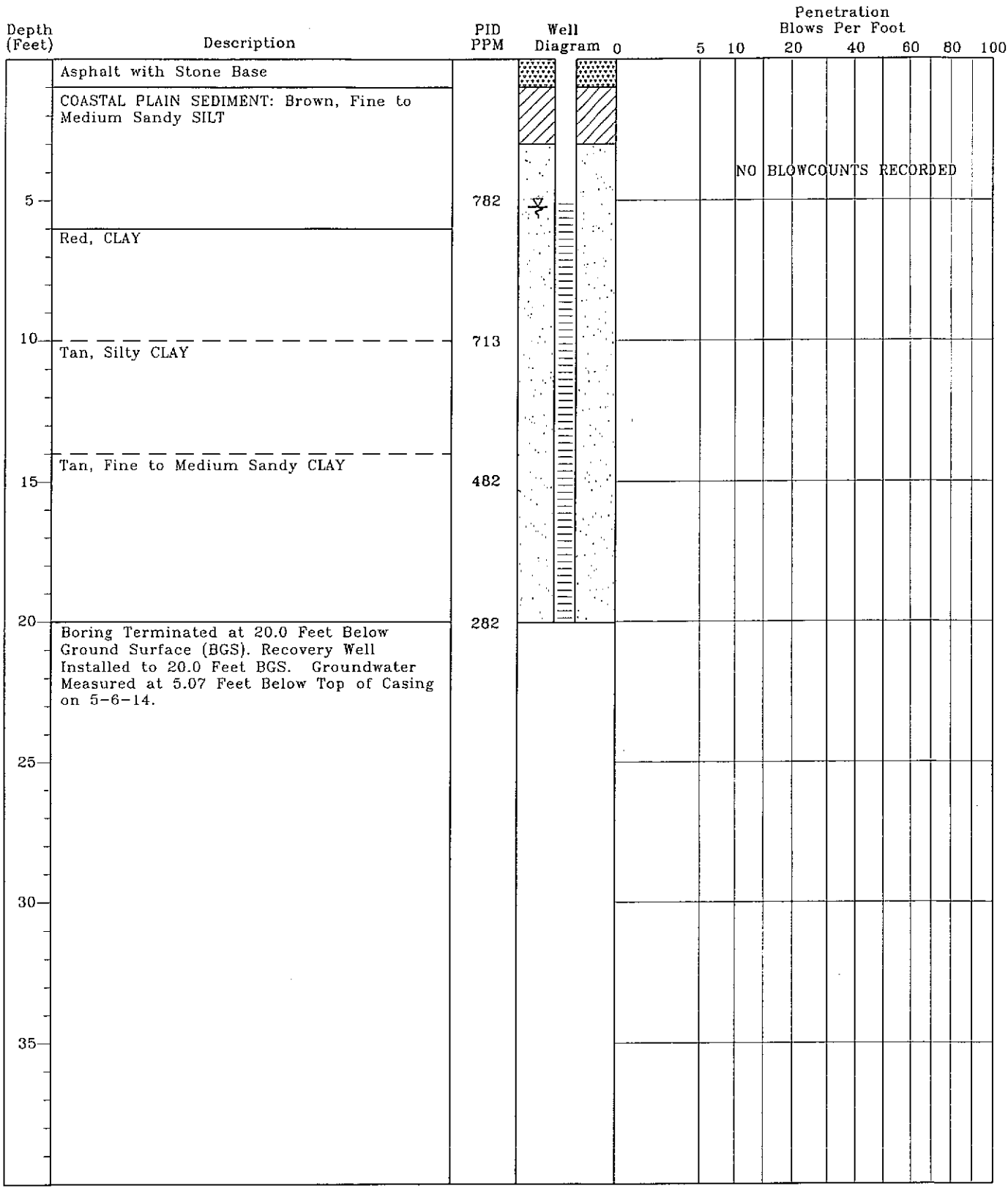
MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774



Well Number:	RW-5 (04877)
Date Drilled:	4/14/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.#: B 02053
Logged By:	P. Boylan

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



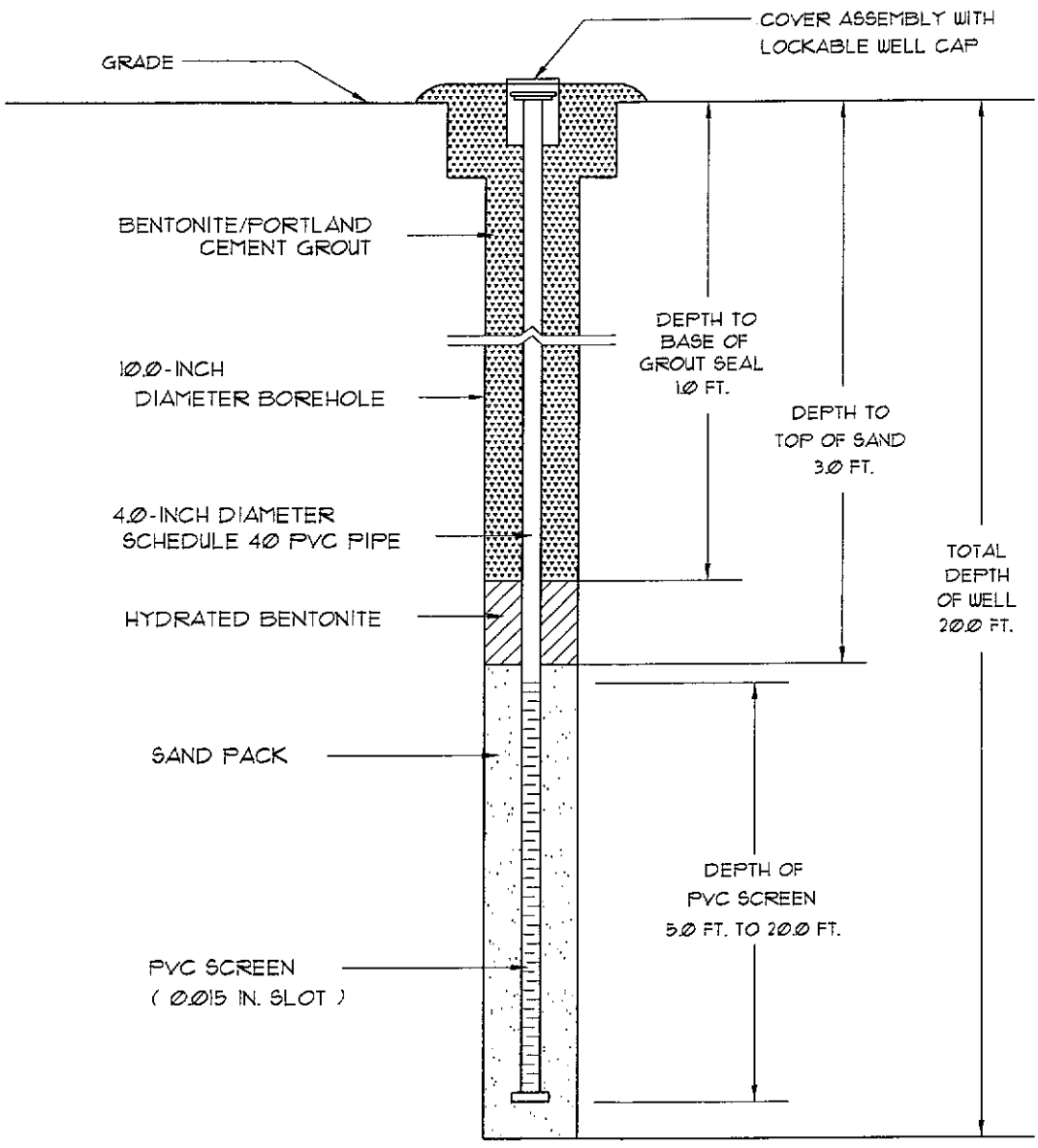
TEST BORING RECORD
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774

Boring Number:	RW-6 (04877)
Date Drilled:	4/14/2014
Drilled By:	Environmental Drilling & Probing Services
Logged By:	P. Boylan

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

MONITORING WELL INSTALLATION RECORD

Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID# 04877
MECI Project Number 14-4774



Well Number:	RW-6 (04877)
Date Drilled:	4/14/2014
Drilled By:	Environmental Drilling & Probing Services
Driller: D. Brown	S.C. I.D.#: B 02053
Logged By:	P. Boylan

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2048

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: **COUNTY:** Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-4

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Asphalt/Stone	0.5	0.5
Brown, Sandy SILT	3.5	4.0
Red, CLAY	3.0	7.0
Tan, Silty CLAY	10.0	17.0
Tan, Sandy CLAY	3.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-4

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/15/2014 Date Completed: 4/15/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 5.32 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 5-9-14
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: **COUNTY:** Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-1

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Concrete/Stone	0.5	0.5
Mottled, Sandy Silty CLAY	3.5	4.0
Red, CLAY	5.0	9.0
White, CLAY	3.0	12.0
White/Tan, Sandy CLAY	8.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-1

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/15/2014 Date Completed: 4/15/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 6.35 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown Date: 5-9-14
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: COUNTY: Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-6

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Asphalt/Stone	0.5	0.5
Brown, Sandy SILT	5.5	6.0
Red, CLAY	4.0	10.0
Tan, Silty CLAY	4.0	14.0
Tan, Sandy CLAY	6.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-6

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/14/2014 Date Completed: 4/14/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 5.07 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown Date: 5-9-14
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: **COUNTY:** Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-3

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Asphalt/Stone	0.5	0.5
Brown, Sandy SILT	3.5	4.0
Red, CLAY	3.0	7.0
Tan, Silty CLAY	10.0	17.0
Tan, Sandy CLAY	3.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-3

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/15/2014 Date Completed: 4/15/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 5.36 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 5-9-14

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: **COUNTY:** Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-2

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Concrete/Stone	0.5	0.5
Mottled, Sandy Silty CLAY	3.5	4.0
Red, CLAY	5.0	9.0
White, CLAY	5.0	14.0
White/Tan, Sandy CLAY	6.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-2

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/15/2014 Date Completed: 4/15/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 6.31 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown Well Driller Date: 5-9-14

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

Water Well Record
Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

1. WELL OWNER INFORMATION:
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

2. LOCATION OF WELL: **COUNTY:** Hampton
Name: Nickelpumper 235
Street Address: 25 East Railroad Avenue
City: Estill Zip: 29918-5239
Latitude: Longitude:

3. PUBLIC SYSTEM NAME: 04877 **PUBLIC SYSTEM NUMBER:** RW-5

4. ABANDONMENT: ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

Formation Description	*Thickness of Stratum	Depth to Bottom of Stratum
Asphalt/Stone	0.5	0.5
Brown, Sandy SILT	5.5	6.0
Red, CLAY	4.0	10.0
Tan, Silty CLAY	4.0	14.0
Tan, Sandy CLAY	6.0	20.0
*Indicate Water Bearing Zones (Use a 2nd sheet if needed)		

5. REMARKS:
RW-5

6. TYPE: ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

7. PERMIT NUMBER: UMW-25426

8. USE:
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

9. WELL DEPTH (completed) 20.0 ft. Date Started: 4/14/2014 Date Completed: 4/14/2014

10. CASING: ☑ Threaded ☐ Welded
Diam.: 4 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
4.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

11. SCREEN:
Type: Schedule 40 PVC Diam.: 4 Inch
Slot/Gauge: 0.015 Length: 15.0 Feet
Set Between: 5.0 ft. and 20.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

12. STATIC WATER LEVEL 4.98 ft. below land surface after 24 hours

13. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

14. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

15. ARTIFICIAL FILTER (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 20.0 ft.
Effective size _____ Uniformity Coefficient _____

16. WELL GROUTED? ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

17. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

18. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

19. WELL DRILLER: David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

20. WATER WELL DRILLER'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown Well Driller Date: 5-9-14

If D Level Driller, provide supervising driller's name:

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

APPENDIX F:

AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS

(Not Applicable)

APPENDIX G:

DISPOSAL MANIFEST

Midlands
Environmental
Consultants, Inc.

June 3, 2014

Re: Treatment of Purge Water
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 14-4774

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

90.0 Gallons were treated on April 15, 2014 during the development of the newly installed monitoring wells at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,

Midlands Environmental Consultants, Inc.

Jeff L. Coleman
Senior Scientist

WASTE MANAGEMENT

Hickory Hill Landfill
2621 LOW COUNTRY DRIVE
RIDGELAND, SC, 29936
Ph: 843-987-4643

Original
Ticket# 732102

Customer Name MIDLANDSENV_586 MIDLANDS ENVI
Ticket Date 04/16/2014
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest various
Destination
PO
Profile VA2718 (SOIL FROM UST ASSESSMENT)
Generator 126-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Carrier Midlands Envir consu PU truck and t
Vehicle# PU and trailer Volume
Container
Driver
Check#
Billing # 00000586
Gen EPA ID

	Time	Scale	Operator		
In	04/16/2014 07:44:24	scale2	jcofield	Gross	14780 lb
Out	04/16/2014 07:54:31	scale2	jcofield	Tare	9240 lb
				Net	5540 lb
				Tons	2.77

Comments

	Product	LD%	Qty	UOM	Rate	Fee	Amount	Origin
1	Cont Soil Snd-Tons	100	2.77	Tons				BEAUFORT
2	FUEL-Fuel Surcharg	100		%				BEAUFORT
3	EVF-P-Standard Env	100		%				BEAUFORT
4	RCR-P-Regulatory C	100		%				BEAUFORT

Total Fees
Total Ticket

Nickel pumper 233 100%

403WM

SPECIAL WASTE MANIFEST

WASTE ID NUMBER **VA2718**	*Hickory Hill Landfill* 2621 Low Country Drive Ridgeland, SC 29936
EXPIRATION DATE **December 11, 2016**	Special Waste Phone: 843-548-6004 Fax: 843-987-8594
Prepared by:	**Sandra Reeves**

GENERATOR OF WASTE: MIDLANDS ENV. CONSULTANTS, INC. - VARIOUS

CUSTOMER: MIDLANDS ENV. CONSULTANTS, INC. **ACCOUNT NUMBER:** 210-586

LOCATION OF WASTE:

CITY: Various **COUNTY:** Various

PHONE NUMBER: 803-808-2043 **CONTACT:** LYNN SHANE

FAX NUMBER: 803-808-2048

GENERATOR'S SIGNATURE Lynn Shane **DATE:** 4-16-14

TRANSPORTER OF WASTE: Midlands Environmental Consultants

DATE: 4/16/14 **TRUCK NUMBER:** 3975

DRIVER'S SIGNATURE Patrick Bolen

****** TO BE COMPLETED BY RICHLAND LANDFILL********

DISPOSAL SITE: HICKORY HILL LANDFILL, RIDGELAND, SC

Waste Class: SOIL

DESCRIPTION OF WASTE: SOIL FROM UST ASSESSMENT

TICKET NUMBER: 732102 **TONNAGE:** 2.77

RECEIVED BY: Toni Canfield

APPENDIX H:

LOCAL ZONING REGULATIONS

(Not Applicable)

APPENDIX I:
FATE AND TRANSPORT MODELING
(Not Applicable)

APPENDIX J:
ACCESS AGREEMENTS

PERMISSION FORM

UNDERGROUND STORAGE TANK OWNER

UST Permit # 04877

If you are the owner of the former or existing underground storage tanks or are designated as their authorized representative, but do not own the property, please complete this form.

I, Golden Isles, Inc certify that I am the legal owner of the underground storage tank(s) located at the facility identified below or serve as the authorized representative for the UST owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor to conduct assessment and corrective action activities, as required. The contractor will be designated as my contractor for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC will be responsible for obtaining right-of-entry from the property owner and notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Bureau of Underground Storage Tank Management in writing.

Name of Facility Nickel Pumper # 735 Phone # 803-625-4255

Street Address of Facility _____

Town, City, District, Suburb _____

Name of nearest intersecting street, road, highway, alley

_____

Is this facility within the city limits? (yes or no) yes

Does a public water or sewer utility service this facility? (yes or no) yes, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____.

phone number _____

Were underground storage tanks previously removed from the ground at this facility? (yes or no) No

If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation _____

Phone number _____

Is the property currently leased or rented to someone? (yes or no) NO. If yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST owner (Please Print): Golden Isles Petroleum, Inc

Phone Number (home) 912-692-8070 (work) same

Signature of UST Owner: Golden Isles Petroleum, Inc By Robert H. Puccini President

Witness: Jamie L. Price

Date: 07 Month 19 Day 11 Year

RIGHT-OF-ENTRY FORM

PROPERTY OWNER

UST Permit # 04877

If you are the Property Owner or are the authorized representative for that person, please complete this form.

I, GOLDEN ISLES PETROLEUM, INC By ROBERT PUCCINI, PRES, certify that I am the legal owner of the property identified below or serve as the authorized representative for the property owner. I authorize the South Carolina Department of Health and Environmental Control (SCDHEC), or a contractor selected by SCDHEC, to enter this property at reasonable times only to conduct assessment and corrective action activities, as required. The contractor will be designated as the contractor for the UST owner or operator for only the required environmental site rehabilitation activities. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC will notify me of all activities that are necessary prior to their initiation and will promptly provide to me a summary of the data upon request.

Name of Facility NICKELPUMPER #735 Phone # 803-625-4255

Street Address of Facility 75 EAST RAILROAD AVE

Town, City, District, Suburb ESTILL SOUTH CAROLINA 29918

Name of nearest intersecting street, road, highway, alley

HWY 321

Is this facility within the city limits? (yes or no) YES

Does a public water or sewer utility service this facility? (yes or no) YES, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____

phone number _____

Were underground storage tanks previously removed from the ground at this facility? (yes or no) NO

If yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation _____

Phone number _____

Is the property currently leased or rented to someone? (yes or no) NO. If yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of Property owner (Please Print): GOLDEN ISLES PETROLEUM, INC

Phone Number (home) 912-642-8070 (work) _____

Current Mailing Address: 7373 HODGSON MEMORIAL BLVD SAV GA 31406

Signature of Property Owner: [signature]

Witness: Janice L. Pucci

Date: 12 Month JUNE Day 2001 Year

Application for Encroachment Permit

S.C. Department of Transportation
Form 637 (Rev 05/2013)

Form Use Instructions

Contact Information

Applicant: Midlands Environmental Consultants, Inc.

Street: 231 Dooley Road

City: Lexington

State: SC **Zip Code:** 29073

Phone: (803) 808-2043 **Fax:** (803) 808-2048

Email: jlc@meci.net

Contact: Ryan Ariail

Project Location

Primary County: Hampton *SCDOT Street Finder*

County	Road Name	
Hampton	RAILROAD AVE, ESTILL	Delete
Hampton	COLUMBIA HWY.	Delete

Add Road

1. Type of Encroachment: ENVIRONMENTAL

Installation of four groundwater monitoring well for SCDHEC.

2. Description of Location:

Two monitoring well will be installed alongside Railroad Ave. and two monitoring wells alongside Columbia Hwy in SCDOT "right of way" out of wheel path.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

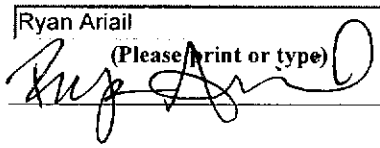
Customer Agreement

3. **The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to**

comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way. DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT harmless from and against any and all claims for personal injury and/or property damage which may be sustained by person by reason of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

Applicant's Name: Ryan Ariail (Please print or type) **Date:** 3/28/2014

Applicant's Sig:  **Title:** Staff Biologist

For Office Use Only

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to:

☐ **See Attached Special Provision and/or Permit Requirements**

NPDES Permit Nbr:

(Date received by res. Maint. Engr.)	(SCDOT Approval)	(Date)
☐ Resident Maintenance Engineer		☐ Deputy Secretary for Engineering
☐ District Engineering Administrator		☐ District Maint./Constr. Engineer

General Provisions

Application for Encroachment Permit
General Provisions

1. **DEFINITIONS: The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.**
2. **NOTICE PRIOR TO STARTING WORK: Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.**
3. **PERMIT SUBJECT TO INSPECTION: This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.**
4. **PROTECTION OF HIGHWAY TRAFFIC: The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.**
5. **STANDARDS OF CONSTRUCTION: All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.**
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES: If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.**
7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES: If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.**
8. **COSTS: All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.**
9. **ADDITIONAL PERMISSIONS: (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners. (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities. (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except**

with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.

10. ADDITIONAL WORK PERFORMANCE: (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
(b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing. (c) No pavement shall be cut unless specifically authorized herein. (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.
(e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing. (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. ACCESS:
(a) Permittee is responsible for maintaining reasonable access to private driveways during construction. (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. DRIVEWAYS:
(a) The existing crown of the highway shall be continued to the outside shoulder line of the highway. (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.
13. BEAUTIFICATION:
(a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.
(b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.
14. AS-BUILT PLANS:
(a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".

Subject: Monitoring Wells
From: <GosnellPJ@scdot.org>
Date: 4/4/2014 2:19 PM
To: <jlc@meci.net>

Review of your encroachment permit application is complete and has been approved. Your encroachment permit number is: 167447_Attached are the approved permit documents including any special provisions or other accompanying documents. Please review the complete package and contact the County Permit Manager if you have any questions. You may contact the County Permit Manager by e-mail at: _____gosnellpj@scdot.org or by phone at: (803___) _943__-3721___ . Please reference your Permit # in any correspondence. Please also remember to contact the County Permit Manager prior to beginning construction of this encroachment. Thank you!

Attachments:

MidlandsEnvironmentalConsultantsInc3-28-2014T1_53PM473.pdf	73.3 KB
MidlandsEnvironmentalConsultantsInc3-28-2014T1_53PM473-Encroachment Permit-1.pdf	1.4 MB
MidlandsEnvironmentalConsultantsInc3-28-2014T1_53PM473-Encroachment Application.pdf	330 KB
MidlandsEnvironmentalConsultantsInc3-28-2014T1_53PM473-Encroachment Permit.pdf	295 KB

Application for Encroachment Permit

S.C. Department of Transportation
Form 637 (Rev 05/2013)

Contact Information

Applicant:	Midlands Environmental Consultants, Inc.		
Street:	231 Dooley Road		
City:	Lexington		
State:	SC	**Zip Code:**	29073
Phone:	(803) 808-2043	**Fax:**	(803) 808-2048
Email:	jlc@meci.net		
Contact:	Ryan Ariail		

Project Location

Primary County: Hampton

County	Road Name
Hampton, SC	RAILROAD AVE, ESTILL
Hampton, SC	COLUMBIA HWY.

1. Type of Encroachment: ENVIRONMENTAL

Installation of four groundwater monitoring well for SCDHEC.

2. Description of Location:

Two monitoring well will be installed alongside Railroad Ave. and two monitoring wells alongside Columbia Hwy in SCDOT "right of way" out of wheel path.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way. DISCHARGES OF STORM WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department?s Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health

and Environmental Control.

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT harmless from and against any and all claims for personal injury and/or property damage which may be sustained by person by reason of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

Applicant's Name: Ryan Ariail (Please print or type) **Date:** 3/28/2014

Applicant's Sig: _____ **Title:** Staff Biologist

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to:

☐ **See attached Special Provision and/or Permit Requirements**

NPDES Permit Nbr: _____

_____	_____	_____
(Date received by res. Maint. Engr.)	**(SCDOT Approval)**	**(Date)**
☐ **Resident Maintenance Engineer**		☐ **Deputy Secretary for Engineering**
☐ **District Engineering Administrator**		☐ **District Maint./Constr. Engineer**

Application for Encroachment Permit
General Provisions

DEFINITIONS: The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.

1. **NOTICE PRIOR TO STARTING WORK: Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.**
2. **PERMIT SUBJECT TO INSPECTION: This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.**
3. **PROTECTION OF HIGHWAY TRAFFIC: The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.**
4. **STANDARDS OF CONSTRUCTION: All work shall conform to the Department?s standards of**

construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.

6. FUTURE MOVING OF PHYSICAL APPURTENANCES: If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.
7. RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES: If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.
8. COSTS: All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.
9. ADDITIONAL PERMISSIONS:
   (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
   (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities
   (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.
10. ADDITIONAL WORK PERFORMANCE
    (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
    (b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.
    (c) No pavement shall be cut unless specifically authorized herein.
    (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized
    herein.
    (e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in
    writing.
    (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. ACCESS:
    (a) Permittee is responsible for maintaining reasonable access to private driveways during construction. (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. DRIVEWAYS:
    (a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.
    (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall be a bituminous expansion joint,

not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.

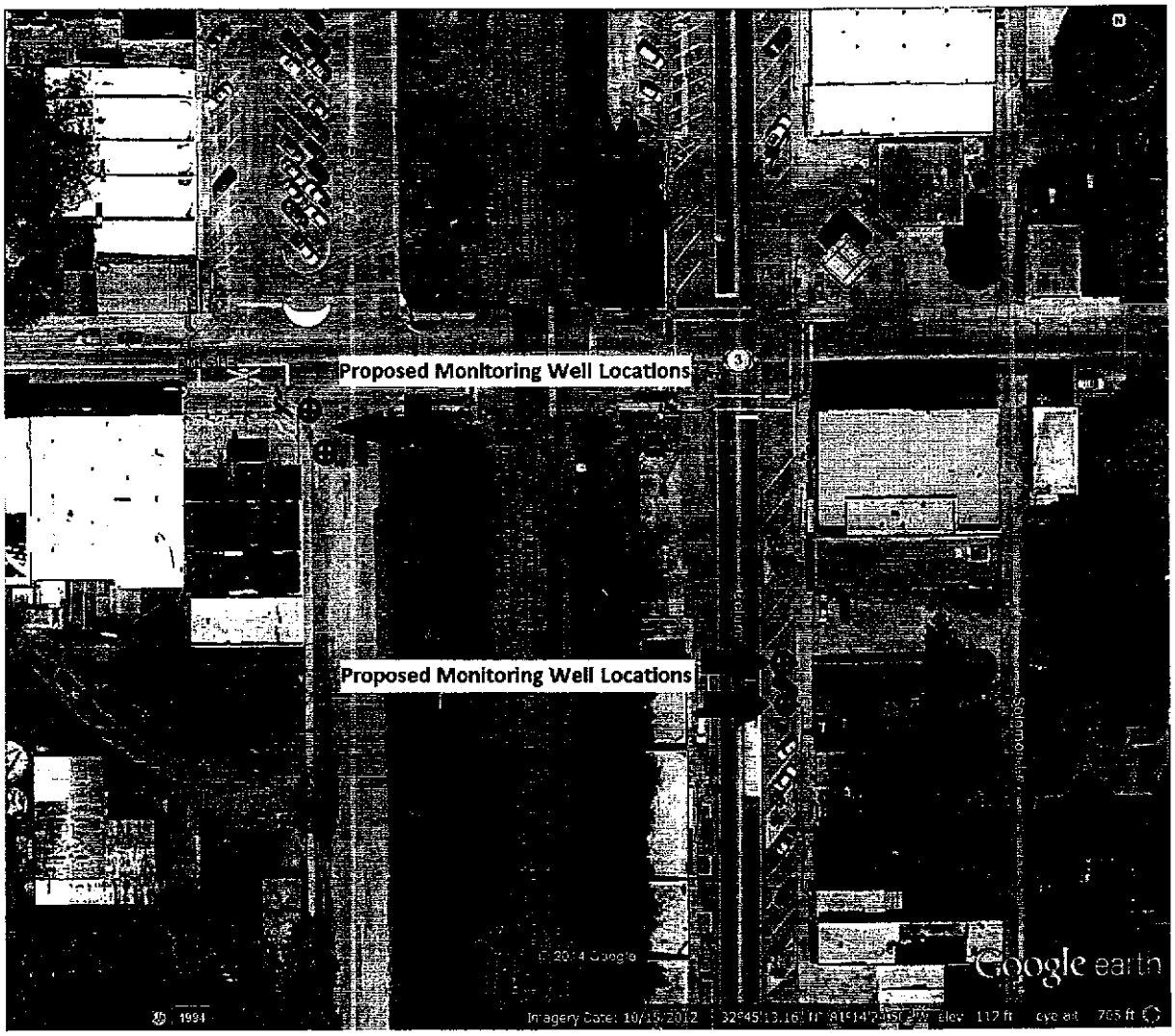
13. BEAUTIFICATION:

(a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.

(b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.

14. AS-B PLANS:

(a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".


Proposed Monitoring Well Locations
Proposed Monitoring Well Locations
© 2014 Google
Google earth
1994
Imagery Date: 10/15/2012

APPENDIX K:
DATA VERIFICATION CHECKLIST

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Are Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?	X		
3	Is name, address, & phone number of current property owner provided?	X		
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?	X		
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?			X
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?	X		
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?	X		
11	Has the site-specific geology and hydrogeology been described?	X		
12	Has the primary soil type been described?	X		
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?	X		
17	Has the method of well development been detailed?	X		
18	Has justification been provided for the locations of the monitoring wells?	X		
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?	X		
20	Has the groundwater sampling methodology been detailed?			X
21	Have the groundwater sampling dates and groundwater measurements been provided? (Table 2 & Figure 5)			X
22	Has the purging methodology been detailed?			X
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? (Appendix B)			X
24	If free-product is present, has the thickness been provided?	X		
25	Does the report include a brief discussion of the assessment done and the results?	X		
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)	X		
34	Has the current and historical laboratory data been provided in tabular format? (Tables 3 & 3A)			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F)			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figures 3, 4)			X
40	Has the site potentiometric map been provided? (Figure 5)	X		
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)			X
45	Is the laboratory performing the analyses properly certified?			X
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)	X		
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? (Appendix G)	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)	X		
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided? (Appendix K)	X		

D H E C

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Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

04877

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

SEP 09 2015

UST 22Hetrick DOCKETING

Re: **Site Specific Work Plan Request**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600422513

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 2.0 it is requested that you submit a Site Specific Work Plan for each site listed below. The plans must be submitted **within 15 business days** to my attention. The project manager for each site will issue a notice to proceed once the plan has been reviewed and approved.

UST Permit	Site Name	County	# samples and requested analysis*	Project Manager
12974	Pic N Pay	Hampton	19-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
11776	Munn E Saver Coastal Mart 105	Sumter	37-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
08911	Rembert Grocery	Sumter	38-BTEXMN, DCA, Oxygenates, & EDB	M. Hetrick
01769	SCDOT-Specialized Bridge Division	Charleston	3-BTEXMN, DCA, Oxygenates, EDB and Total Lead	M. Hornosky
11774	A & P Coastal Mart	Sumter	32-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
09089	Pressely & Son Variety Store	Williamsburg	20-BTEXMN, DCA, Oxygenates & EDB	J. Martin
02093	Fort Lawn Marathon	Chester	49-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
06346	Kountry Mart	Marlboro	21-BTEXMN, DCA, Oxygenates & EDB	J. Martin
04877	Nickelpumper 235	Hampton	51-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
02439 & 02452	Waters Way Market & Jones Grocery	Clarendon	(02439) 24 -BTEXMN, DCA, Oxygenates & EDB (02452) 37- BTEXNM, DCA, Oxygenates & EDB	A. Thrash
17238	Dick's Station	Berkeley	28-BTEXMN, DCA, & Oxygenates	A. Thrash

UST Permit	Site Name	County	# samples and requested analysis*	Project Manager
18038	Plantation Station	Beaufort	17-BTEXMN, DCA, Oxygenates & EDB	J. Bryant
02906	Stricklands Exxon	Dillon	29-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
08795	Blue Ridge Transfer	Sumter	25-BTEXMN, DCA, Oxygenates, & EDB	M. Hetrick
02607	Darlington County School Bus Shop	Darlington	8-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
14472	Southside Grocery	Chester	19-BTEXMN, DCA, Oxygenates & EDB	M. Hetrick
10217	Cypress Mart	Berkeley	16-BTEXMN, DCA, Oxygenates & EDB	A. Thrash

*The number of samples do not include trip blanks, field blanks, or field duplicate

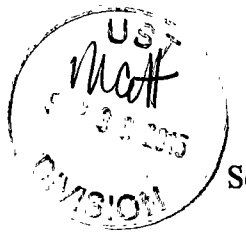
Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Site Information Packages
cc: Technical Files

Midlands
Environmental
Consultants, Inc.



September 30, 2015

Mr. John Bryant, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Site-Specific Work Plan
Nicklepumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 15-5311
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On September 21, 2015, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff E. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

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Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Mr. Matt Hetrick (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Nicklepumper #235 UST Permit #: 04877
Facility Address: 25 East Railroad Avenue, Estill, SC 29918
Responsible Party: Golden Isles Petroleum, Inc. Phone: 912-598-4102
RP Address: P.O. Box 15448, Savannah, GA 31416
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Active Gas Station

Scope of Work (Please check all that apply)

☐ IGWA ☐ Tier II ☑ Groundwater Sampling ☐ GAC
☐ Tier I ☐ Monitoring Well Installation ☐ Other _____

Analyses (Please check all that apply)

Groundwater/Surface Water:

☑ BTEXNMDCA (8260B) ☐ Lead ☐ BOD ☐ Methane
☑ Oxygenates (8260B) ☐ 8 RCRA Metals ☐ Nitrate ☐ Ethanol
☑ EDB (8011) ☐ TPH ☐ Sulfate ☐ Dissolved Iron
☐ PAH (8270D) ☐ pH ☐ Other _____

Soil:

☐ BTEXN ☐ 8 RCRA Metals ☐ TPH-DRO (3550B/8015B) ☐ Grain Size
☐ PAH ☐ Oil & Grease (9071) ☐ TPH-GRO (5030B/8015B) ☐ TOC

Air:

☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

_____ Soil 2 Water Supply Wells _____ Air 2 Field Blank
49 Monitoring Wells _____ Surface Water 3 Duplicate 2 Trip Blank

Field Screening Methodology

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

of shallow points proposed: _____ Estimated Footage: _____ feet per point
of deep points proposed: _____ Estimated Footage: _____ feet per point
Field Screening Methodology: _____

Permanent Monitoring Wells

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

of shallow wells: _____ Estimated Footage: _____ feet per point
of deep wells: _____ Estimated Footage: _____ feet per point
of recovery wells: _____ Estimated Footage: _____ feet per point
Monitoring Well development method (consistent with SOP): _____
Comments, if warranted:

_____
_____
_____

UST Permit #: 04877 Facility Name: Nicklepumper #235

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 9/30/2015 Field Work Completion: 10/30/2015
Report Submittal: 11/30/2015 # of Copies Provided to Property Owners: _____

Aquifer Characterization
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal
Soil: _____ Tons Purge Water: 400.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

Additional Details For This Scope of Work
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
-During the initial site visit, monitoring wells MW-5, MW-6, MW-12, MW-15, MW-22, MW-23 and MW-29 were not located. If any of these wells are located during sampling activities, they will be sampled accordingly.
-Last sampling event was conducted in February of 2014, therefore all monitoring wells will be purged prior to sample collection.
-All samples will be analyzed for BTEXNM, DCA, Oxy's, and EDB.

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

N/A Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

No Other variations from ACQAP. Please describe below.

Attachments
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

D H E C

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South Carolina Department of Health and Environmental Control

ASSESSMENT COMPONENT INVOICE

SOUTH CAROLINA

Department of Health and Environmental Control

Underground Storage Tank Management Division

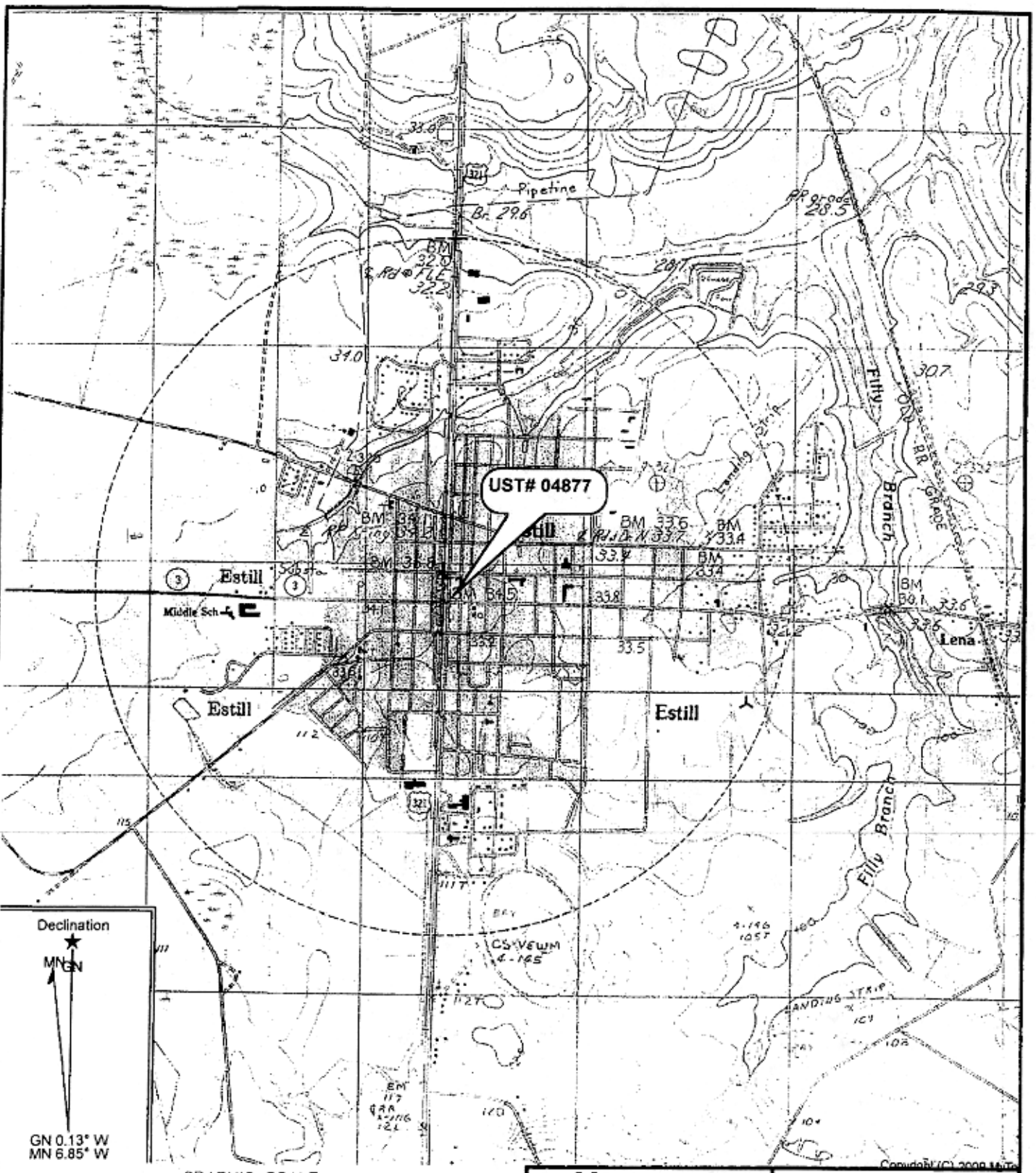
State Underground Petroleum Environmental Response Bank Account

CONTRACT PO NUMBER 4600328425

Facility Name: Nicklepumper 235

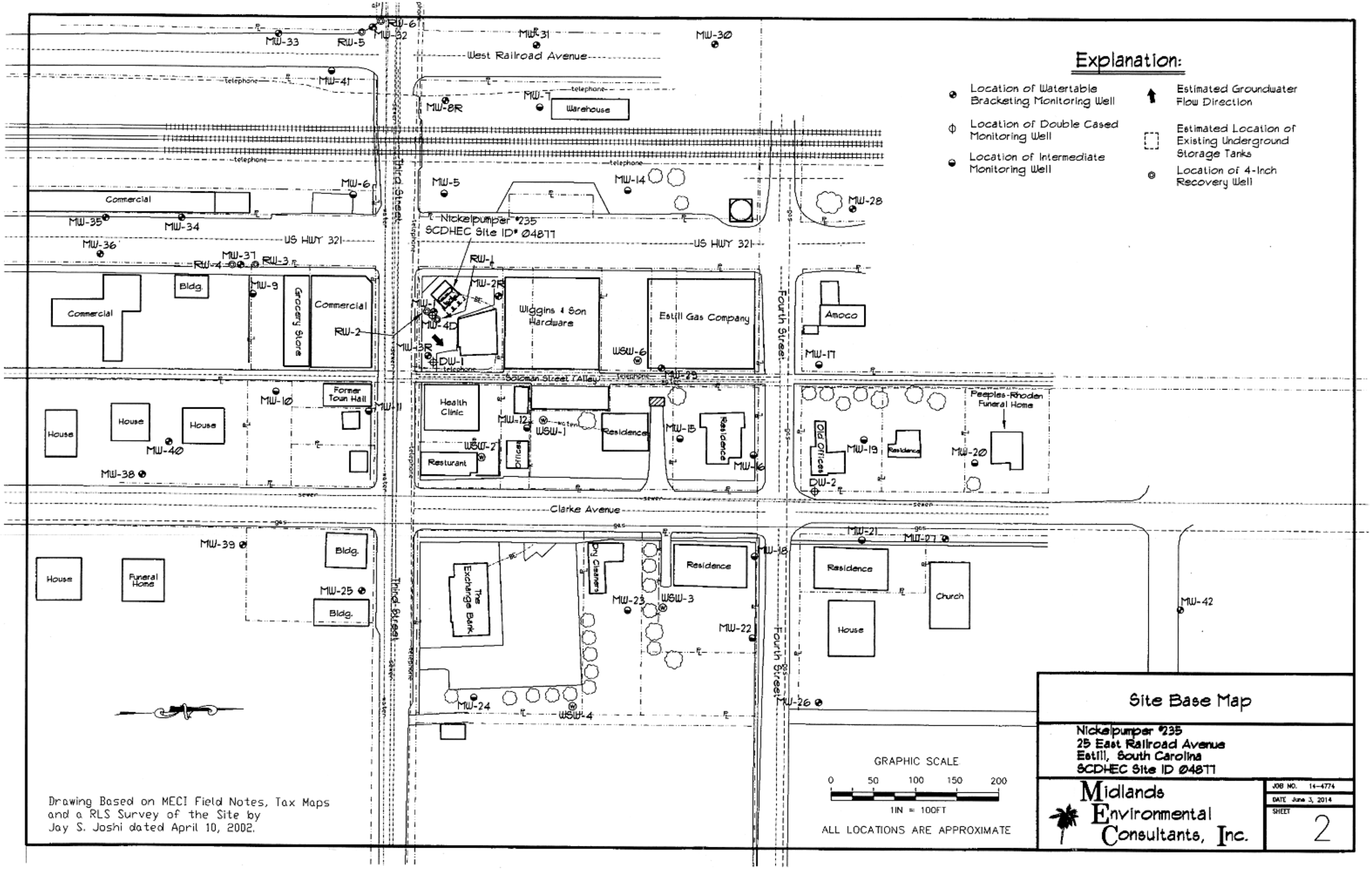
UST Permit #: 04877 **Cost Agreement #:** Proposal

ITEM	QUANTITY	UNIT	UNIT PRICE		TOTAL
1. **Plan***					
A1. Site Specific Work Plan	1	each	$0.00		$0.00
C1. QAPP Appendix B		each	$0.00		$0.00
2. A1. Receptor Survey		each	$0.00		$0.00
4. **Mob/Demob**					
B1. Personnel	3	each	$350.00		$1,050.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Product (Each)**					
A1. Groundwater Purge	49	per well	$16.00		$784.00
B1. Air or Vapors		samples	$0.00		$0.00
C1. Water Supply	2	samples	$5.00		$10.00
D1. Groundwater No Purge		per well	$8.00		$0.00
E1. Gauge Well only		per well	$0.00		$0.00
F1. Sample Below Product		per well	$0.00		$0.00
G1. Pasive Diffusion Bag		each	$20.00		$0.00
H1. Field Blank	2	each	$10.00		$20.00
17. **Disposal* (gallons or tons)**					
AA. Disposal/Water	400	gallons	$1.00		$400.00
BB. Free Product		gallons	$0.00		$0.00
Note: Rate includes costs or rental of suitable container(s)					
23. D. Site Reconnaissance		each	$0.00		$0.00
18. **Miscellaneous (attach receipts)**					
GW Contour Map		each	$25.00		$0.00
Isopleth Map		each	$25.00		$0.00
High-Strength Well Pad Replacement		each	$75.00		$0.00
Trip Blank	2	each	$10.00		$20.00
Data Table		each	$25.00		$0.00
25. **Well Repair**					
B1. Repair 2x2 MW Pad		each	$75.00		$0.00
C1. Repair 4x4 MW Pad		each	$75.00		$0.00
D1. Replace Well Vault		each	$75.00		$0.00
E. Replace well cover		each	$25.00		$0.00
F1. Replace well cover bolts		each	$2.60		$0.00
G. Replace locking well cap & lock		each	$15.00		$0.00
K1. Replace Missing Well ID Plate		each	$10.00		$0.00
TOTAL					$2,284.00



Reference: Gifford, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 1.5 Meters

Midlands Environmental Consultants, Inc.	Site Location
Nickelpumper 235 25 East Railroad Avenue, Estill, SC SCDHEC Site ID# 04877	
Figure 1	MECI 14-4714



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE

0 50 100 150 200

1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Site Base Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID #04877

Midlands Environmental Consultants, Inc.

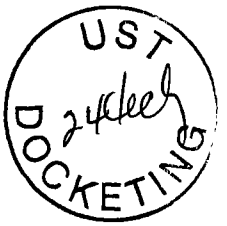
JOB NO. 14-4774
DATE June 3, 2014
SHEET 2

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

OCT 15 2015

Re: **Notice to Proceed-Site Specific Work Plan Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600445246
Nickelpumper 235
UST Permit #04877; CA #50969 (Pace CA #50970)
Hampton County

Dear Mr. Shane:

In accordance with bid solicitation #IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Work Plan has been reviewed and approved. In accordance with the approved ACQAP, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

Please note, sampling should be conducted within 15 calendar days from the date of this letter. The final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed. The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to John Bryant, the contract manager.

If you have any site-specific questions, please contact me at (803) 898-0610 or via e-mail at hetricml@dhec.sc.gov. If you have any contract specific questions, please contact John Bryant at (803) 898-0606 or via e-mail at bryantjc@dhec.sc.gov.

Sincerely,

Matthew Lee Hetrick

Matthew L. Hetrick, Hydrogeologist
Assessment/Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved Cost Agreements (both CAs)

cc: John Bryant, Corrective Action Section, UST Management Division (w/o encs.)
Trey Carter, Pace Analytical Services, 9800 Kincey Ave, Ste 100, Huntersville, NC, 28078 (w/ approved CA)
Technical Files (w/ encs.)

Approved Cost Agreement 50970

Facility 04877 NICKELPUMPER 235

HETRICML

PO Number

Task / Description	Categories	Item Description	Qty / Pct	Unit Price	Amount
11 ANALYSES					
	GW GROUNDWATER	A2 BTEXNM+OXYGS+1,2-DCA+ETH-8260B	58.0000	19.00	1,102 00
		F1 EDB BY 8011	56 0000	18.00	1,008 00
			Total Amount		2,110 00

Approved Cost Agreement 50969

Facility 04877 NICKELPUMPER 235

HETRICML

PO Number

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B1	PERSONNEL	3.0000	350.00	1,050 00
10 SAMPLE COLLECTION						
		A1	GROUNDWATER (PURGE)	49 0000	16.00	784 00
		C1	WATER SUPPLY	2 0000	5 00	10 00
		D1	GROUNDWATER NO PURGE/DUPLICATE	3 0000	8 00	24 00
		H1	FIELD BLANK	2 0000	10 00	20 00
17 DISPOSAL						
		AA	WASTEWATER	400.0000	1 00	400 00
18 MISCELLANEOUS						
			SITE SPECIFIC WORK PLAN	1 0000	0 00	0 00
			TRIP BLANK	2 0000	10 00	20 00
				Total Amount		2,308 00

UST
Matt
NOV 18 2015
DIVISION

Midlands
Environmental
Consultants, Inc.

November 11, 2015

Mr. John Bryant, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST
25 Hick
DOCKETING

Subject: Report of Groundwater Sampling
Nickelpumper 235
25 East Railroad Ave
Estill, South Carolina
SCDHEC Site ID Number 04877; CA #50969
MECI Project Number 15-5311
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Nickelpumper 235) is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The subject site currently maintains one 5,000 gallon diesel underground storage tanks (UST), one 8,000 gallon regular unleaded gasoline UST, one 8,000 gallon plus gasoline UST, and one 8,000 gallon premium gasoline UST. The subject tanks are currently in compliance with an issued compliance date of April 18, 2013. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in January of 1993 and confirmed the release in July of 1994. The site is currently classified as Class 2BB.

The South Carolina Department of Health and Environmental Control (SCDHEC) reported a second release of petroleum product from the subject tanks on April 04, 2008 and confirmed the release on April 25, 2008. The release was issued a No Further Action on April 25, 2008.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On November 9, 2015, MECI personnel collected groundwater samples from thirty-nine (39) monitoring wells, and five (5) water supply wells at the subject site. Recovery wells RW-1 and RW-2 were gauged and found to contain measurable free phase petroleum product. There were seven (7) monitoring wells that were unable to be located. MECI personnel were unable to open the well lid of monitoring well MW-1, and was unable to sample well. WSW-3 and WSW-4 were not sampled due to both wells locked inside well houses. MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Based on a request by SCDHEC personnel, all of the wells were to be purged prior to sampling. Thirty-nine (39) monitoring wells were purged prior to sample collection. Purging was completed by bailing at least five well volumes of water from the well, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSIPro20 meter for DO (mg/L) and temperature readings (°C), YSIPro1030 meters for pH and conductivity (uS) readings and a MicroTPI/TPW turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Revision 2.0) and MECI's Standard Operating Procedures (MECI SOP, January 2014).

Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006001) for analysis.

The following sampling matrix contains well development and requested analyses for each well during the sampling event:

Monitoring Well	Purge	Not Sampled	Gauged Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
MW-1		X												
MW-2R	X				X	X	X	X						
MW-3R	X				X	X	X	X						
MW-4D	X				X	X	X	X						
MW-5				X										
MW-6				X										
MW-7	X				X	X	X	X						
MW-8R	X				X	X	X	X						
MW-9	X				X	X	X	X						
MW-10	X				X	X	X	X						
MW-11	X				X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

Nickelpumper 235
Estill, South Carolina

November 11, 2015
MECI Job #: 15-5311

Monitoring Well	Purge	Not Sampled	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
MW-12				X										
MW-14	X				X	X	X	X						
MW-15				X										
MW-16	X				X	X	X	X						
MW-17	X				X	X	X	X						
MW-18	X				X	X	X	X						
MW-19	X				X	X	X	X						
MW-20	X				X	X	X	X						
MW-21	X				X	X	X	X						
MW-22				X										
MW-23				X										
MW-24	X				X	X	X	X						
MW-25	X				X	X	X	X						
MW-26	X				X	X	X	X						
MW-27	X				X	X	X	X						
MW-28	X				X	X	X	X						
MW-29				X										
MW-30	X				X	X	X	X						
MW-31	X				X	X	X	X						
MW-32	X				X	X	X	X						
MW-33	X				X	X	X	X						
MW-34	X				X	X	X	X						
MW-35	X				X	X	X	X						
MW-36	X				X	X	X	X						
MW-37	X				X	X	X	X						
MW-38	X				X	X	X	X						
MW-39	X				X	X	X	X						
MW-40	X				X	X	X	X						
MW-41	X				X	X	X	X						
MW-42	X				X	X	X	X						
DW-1	X				X	X	X	X						
DW-2	X				X	X	X	X						
RW-1			X											
RW-2			X											
RW-3	X				X	X	X	X						
RW-4	X				X	X	X	X						
RW-5	X				X	X	X	X						
RW-6	X				X	X	X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons

Monitoring Well	Purge	Not Sampled	Gauge Only	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	Sulfate (EPA Method 375.2)	Nitrate (EPA Method 335.2)	Methane (RSK Method)	PAH's (EPA Method 8270)	Ferrous Iron (Field Test)
					Analyte Sampled									
WSW-1					X	X	X	X						
WSW-2					X	X	X	X						
WSW-3		X												
WSW-4		X												
WSW-5					X	X	X	X						
WSW-6					X	X	X	X						
WSW-7					X	X	X	X						
MW-3R Duplicate					X	X	X	X						
MW-9 Duplicate					X	X	X	X						
MW-37 Duplicate					X	X	X	X						
Field Blank					X	X	X	X						
Trip Blank					X		X	X						
Trip Blank 2					X		X	X						

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 624.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Frank M. Mitlin
Staff Hydrogeologist

Jeff L. Coleman
Senior Scientist

Attachments:

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: F.M., P.W., J.P., B.G., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	11/9/15	***	UNK	***	***	***	***	***	Not Sampled; Could Not Open Well Lid
MW-2R	Y	11/9/15	12:30	10-25	***	6.51	***	2.76	15.5	No Odor
MW-3R	Y	11/9/15	13:06	10-25	***	5.89	***	1.51	6.0	Strong Odor; Sheen
MW-4D	Y	11/9/15	12:54	80-85	***	19.40	***	5.26	20.0	No Odor
MW-5	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-6	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-7	Y	11/9/15	11:54	15-25	***	5.85	***	5.10	16.0	No Odor
MW-8R	Y	11/9/15	10:55	10-25	***	5.15	***	1.35	16.5	Odor
MW-9	Y	11/9/15	11:07	15-25	***	5.26	***	3.13	12.0	Odor
MW-10	Y	11/9/15	11:25	15-25	***	3.88	***	2.84	7.0	Slight Odor
MW-11	Y	11/9/15	11:43	15-25	***	5.54	***	3.62	11.0	No Odor
MW-12	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-14	Y	11/9/15	10:20	15-25	***	6.35	***	5.60	15.5	No Odor
MW-15	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Possibly Under Trailer
MW-16	Y	11/9/15	12:07	15-25	***	5.98	***	4.72	15.0	No Odor
									134 5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: F.M., P.W., J.P., B.G., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-17	Y	11/9/15	11:43	15-25	***	6.72	***	3.82	15.0	No Odor
MW-18	Y	11/9/15	12:04	15-25	***	5.93	***	2.98	13.5	No Odor
MW-19	Y	11/9/15	10:31	15-25	***	6.58	***	4.08	15.0	No Odor
MW-20	Y	11/9/15	9:56	15-25	***	5.41	***	3.81	16.0	No Odor
MW-21	Y	11/9/15	10:53	15-25	***	6.05	***	4.41	15.5	No Odor
MW-22	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-23	N	11/9/15	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-24	Y	11/9/15	12:39	15-25	***	5.62	***	3.19	13.0	No Odor
MW-25	Y	11/9/15	12:52	5-20	***	4.86	***	3.47	7.0	No Odor
MW-26	Y	11/9/15	12:20	5-20	***	4.72	***	2.78	12.0	No Odor
MW-27	Y	11/9/15	10:11	5-20	***	5.68	***	3.06	11.5	No Odor
MW-28	Y	11/9/15	10:32	5-20	***	3.45	***	5.60	14.0	No Odor
MW-29	N	11/9/15	***	5-20	***	***	***	***	***	Not Located; Possibly Behind Locked Fenced in Area
MW-30	Y	11/9/15	11:40	5-20	***	6.69	***	5.15	11.0	No Odor
MW-31	Y	11/9/15	11:17	5-20	***	6.16	***	5.06	11.5	No Odor
									155.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: F.M., P.W., J.P., B.G., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-32	Y	11/9/15	12:25	5-20	***	4.22	***	Sheen	13.0	Odor; Sheen
MW-33	Y	11/9/15	13:45	5-20	***	4.15	***	3.87	13.0	No Odor
MW-34	Y	11/9/15	13:27	5-20	***	4.30	***	2.51	7.0	Odor
MW-35	Y	11/9/15	13:42	5-20	***	3.55	***	4.02	8.0	No Odor
MW-36	Y	11/9/15	9:35	5-20	***	3.12	***	3.31	14.0	No Odor
MW-37	Y	11/9/15	9.54	5-20	***	4.18	***	Sheen	8.0	Strong Odor; Sheen
MW-38	Y	11/9/15	8:54	5-20	***	3.07	***	2.94	7.0	No Odor
MW-39	Y	11/9/15	13:08	5-20	***	2.28	***	2.75	8.0	No Odor
MW-40	Y	11/9/15	9:09	5-20	***	3.09	***	4.57	8.0	No Odor
MW-41	Y	11/9/15	14:08	5-20	***	3.41	***	1.01	14.0	No Odor
MW-42	Y	11/9/15	9:36	5-20	***	6.10	***	3.62	7.0	No Odor
DW-1	Y	11/9/15	13:32	90-95	***	23.21	***	2.96	22.0	No Odor
DW-2	Y	11/9/15	11:21	90-95	***	22.75	***	2.87	20.0	No Odor
RW-1	N	11/9/15	***	5-20	6.06	6.67	0.61	***	***	Petroleum Product Present
RW-2	N	11/9/15	***	5-20	6.07	6.49	0.32	***	***	Petroleum Product Present
									149.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: F.M., P.W., J.P., B.G., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
RW-3	Y	11/9/15	10:44	5-20	***	3.19	***	0.79	40.0	4' Well; Strong Odor
RW-4	Y	11/9/15	10:50	5-20	***	4.44	***	Sheen	45.0	4' Well; Strong Odor; Sheen
RW-5	Y	11/9/15	13:24	5-20	***	5.10	***	0.66	49.0	4' Well; Odor
RW-6	Y	11/9/15	15:09	5-20	***	4.12	***	0.91	52.0	4' Well; No Odor
WSW-1	Y	11/9/15	13:45	***	***	***	***	***	***	Taken from spigot on well
WSW-2	Y	11/9/15	13:40	***	***	***	***	***	***	Taken from spigot near well
WSW-3	N	11/9/15	***	***	***	***	***	***	***	Well House Locked; Unable to Sample
WSW-4	N	11/9/15	***	***	***	***	***	***	***	Well House Locked; Unable to Sample
WSW-5	Y	11/9/15	13:15	***	***	***	***	***	***	Taken from spigot on well
WSW-6	Y	11/9/15	13:25	***	***	***	***	***	***	Taken from spigot on well
WSW-7	Y	11/9/15	13.30	***	***	***	***	***	***	Taken from spigot on well house
MW-3R Dup.	Y	11/9/15	13:06	***	***	***	***	***	***	Duplicate Sample
MW-9 Dup.	Y	11/9/15	11:07	***	***	***	***	***	***	Duplicate Sample
MW-37 Dup.	Y	11/9/15	9:54	***	***	***	***	***	***	Duplicate Sample
Field Blank	Y	11/9/15	13:10	***	***	***	***	***	***	Field Blank
									186.0	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: F.M., P.W., J.P., B.G., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
Trip Blank	Y	11/9/15	13:11	***	***	***	***	***	***	Trip Blank
Trip Blank 2	Y	11/9/15	13:12	***	***	***	***	***	***	Trip Blank 2
									0.0	TOTAL GALLONS PURGED

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-2R	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	10-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	6.51	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.49	*1 casing volume (CV = LWC x C) (gals.):*	3.01	*5 casing volumes (5 x CV) (gals.):*	15.07

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.01	6.03	9.04	12.06	15.07		
Time (military)	12:15	12:18	12:21	12:24	12:27	12:30		
PH (s.u.)	6.17	6.39	6.47	6.42	6.31	6.30		
Specific Conductivity (µS/cm)	96.7	72.8	79.6	84.2	91.7	87.1		
Water Temperature (°C)	23.1	21.7	21.6	21.4	21.4	21.3		
Dissolved Oxygen (mg/L)	2.76	3.01	3.27	3.07	2.91	2.94		
Turbidity (NTU)	11.12	126.8	271.6	241.9	179.8	152.6		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:30	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	15.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-3R	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	10-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.89	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.11	*1 casing volume (CV = LWC x C) (gals.):*	3.11	*5 casing volumes (5 x CV) (gals.):*	15.57

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.11	6.23	9.34	12.46	15.57		6.00
Time (military)	13:00	13:03						13:06
PH (s.u.)	6.18	Sheen						Sheen
Specific Conductivity (µS/cm)	179.2	Sheen						Sheen
Water Temperature (°C)	22.8	Sheen						Sheen
Dissolved Oxygen (mg/L)	1.51	Sheen						Sheen
Turbidity (NTU)	15.62	Sheen						Sheen

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:06	*Duplicate: Y or N*	Y	*If yes, Duplicate Time:*	13:06	*Total Gallons Purged:*	6.00

Notes: Dry @ 6 Gallons; Duplicated Sample

Strong Odor; Sheen= Noticeable Petroleum Sheen Observed

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-4D	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	80-85	*Total Well Depth (TWD) (ft.):*	85
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	19.4	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	65.6	*1 casing volume (CV = LWC x C) (gals.):*	10.69	*5 casing volumes (5 x CV) (gals.):*	53.46

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	10.69	21.39	32.08	42.77	53.46		20.00
Time (military)	12:35	12:45						12:54
PH (s.u.)	6.91	6.94						6.97
Specific Conductivity (µS/cm)	196.2	206.2						211.5
Water Temperature (°C)	22.4	20.0						19.8
Dissolved Oxygen (mg/L)	5.26	5.44						5.21
Turbidity (NTU)	12.04	21.62						30.74

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:54	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	20.00

Notes: Dry @ 20 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-7	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.85	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.15	**1 casing volume (CV = LWC x C) (gals.):**	3.12	**5 casing volumes (5 x CV) (gals.):**	15.61

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	3.12	6.24	9.36	12.49	15.61		
Time (military)	11:42	11:44	11:46	11:48	11:50	11:54		
PH (s.u.)	4.65	4.50	4.61	4.58	4.40	4.32		
Specific Conductivity (µS/cm)	174.5	172.1	178.9	171.1	170.9	168.1		
Water Temperature (°C)	24.5	25.2	25.6	25.0	23.2	24.0		
Dissolved Oxygen (mg/L)	5.10	5.02	5.21	5.06	5.22	5.05		
Turbidity (NTU)	30.05	36.25	42.95	50.51	70.21	76.72		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	11:54	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	16.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60		
Quality Assurance									
Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		
Well Information									
Well ID:	MW-8R	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**		0.163		**Method of Purging/Sample Collection**	Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**		10-25		**Total Well Depth (TWD) (ft.):**	25		
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**		5.15		**Free Product Thickness (ft.):**	Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	19.85	**1 casing volume (CV = LWC x C) (gals.):**		3.24		**5 casing volumes (5 x CV) (gals.):**	16.18		

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.24	6.47	9.71	12.94	16.18		
Time (military)	10:40	10:43	10:45	10:48	10:50	10:55		
PH (s.u.)	5.31	5.38	5.34	5.31	5.26	5.15		
Specific Conductivity (µS/cm)	80.5	90.3	87.7	86.2	85.1	83.2		
Water Temperature (°C)	22.9	24.1	24.4	24.5	24.7	24.8		
Dissolved Oxygen (mg/L)	1.35	1.14	1.03	1.06	1.08	1.17		
Turbidity (NTU)	37.62	226.8	209.3	222.7	224.8	232.9		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	10:55	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	16.50

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-9	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.26	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.74	*1 casing volume (CV = LWC x C) (gals.):*	3.22	*5 casing volumes (5 x CV) (gals.):*	16.09

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.22	6.44	9.65	12.87	16.09		12.00
Time (military)	10:55	10:58	11:01	11:04				11:07
PH (s.u.)	6.51	6.79	6.84	6.77				6.68
Specific Conductivity (µS/cm)	126.8	147.2	129.7	124.1				120.9
Water Temperature (°C)	22.2	20.6	20.4	20.4				20.3
Dissolved Oxygen (mg/L)	3.13	2.68	2.79	2.84				2.81
Turbidity (NTU)	12.27	166.4	257.1	206.4				170.8

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	11:07	*Duplicate: Y or N*	Y	*If yes, Duplicate Time:*	11:07	*Total Gallons Purged:*	12.00

Notes: Dry @ 12 Gallons; Odor

Duplicated Sample

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-10	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.88	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	21.12	*1 casing volume (CV = LWC x C) (gals.):*	3.44	*5 casing volumes (5 x CV) (gals.):*	17.21

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.44	6.89	10.33	13.77	17.21		7.00
Time (military)	11:15	11:18	11:21					11:25
PH (s.u.)	6.91	6.84	6.77					6.62
Specific Conductivity (µS/cm)	107.6	102.4	115.9					127.0
Water Temperature (°C)	22.4	21.0	20.9					21.0
Dissolved Oxygen (mg/L)	2.84	2.71	2.57					2.44
Turbidity (NTU)	15.52	149.8	241.7					178.8

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	11:25	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	7.00

Notes: Dry @ 7 Gallons; Slight Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-11	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.54	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.46	*1 casing volume (CV = LWC x C) (gals.):*	3.17	*5 casing volumes (5 x CV) (gals.):*	15.86

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.17	6.34	9.52	12.69	15.86		11.00
Time (military)	11:30	11:33	11:36	11:39				11:43
PH (s.u.)	7.17	7.24	7.19	7.27				7.34
Specific Conductivity (µS/cm)	102.6	91.8	87.1	89.4				90.5
Water Temperature (°C)	21.7	19.9	19.8	19.7				19.7
Dissolved Oxygen (mg/L)	3.62	3.96	4.07	4.17				4.11
Turbidity (NTU)	16.88	104.6	97.12	129.6				136.4

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	11:43	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	11.00

Notes: Dry @ 11 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Helrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-14	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	6.35	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.65	*1 casing volume (CV = LWC x C) (gals.):*	3.04	*5 casing volumes (5 x CV) (gals.):*	15.20

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.04	6.08	9.12	12.16	15.20		
Time (military)	10:00	10:05	10:09	10:12	10:15	10:20		
PH (s.u.)	5.65	4.85	4.69	4.46	4.31	4.25		
Specific Conductivity (µS/cm)	89.0	82.1	81.4	80.0	78.0	79.0		
Water Temperature (°C)	20.7	20.9	21.0	21.5	21.7	21.8		
Dissolved Oxygen (mg/L)	5.60	5.26	5.01	4.90	4.45	4.51		
Turbidity (NTU)	8.81	214.7	191.9	164.4	174.1	182.2		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	10:20	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	15.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-16	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.98	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.02	*1 casing volume (CV = LWC x C) (gals.):*	3.10	*5 casing volumes (5 x CV) (gals.):*	15.50

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.10	6.20	9.30	12.40	15.50		
Time (military)	11:52	11:55	11:58	12:01	12:04	12:07		
PH (s.u.)	6.62	6.79	6.86	6.91	6.82	6.77		
Specific Conductivity (µS/cm)	57.8	71.6	79.8	70.4	68.7	62.1		
Water Temperature (°C)	23.2	21.7	21.6	21.5	21.4	21.4		
Dissolved Oxygen (mg/L)	4.72	5.06	5.21	4.96	4.98	4.89		
Turbidity (NTU)	17.64	126.2	204.7	315.9	271.1	240.0		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:07	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	16.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-17	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.72	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.28	**1 casing volume (CV = LWC x C) (gals.):**	2.98	**5 casing volumes (5 x CV) (gals.):**	14.90

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.98	5.96	8.94	11.92	14.90		
Time (military)	11:25	11:28	11:31	11:34	11:37	11:43		
PH (s.u.)	6.59	6.67	6.62	6.54	6.50	6.56		
Specific Conductivity (µS/cm)	44.1	50.3	47.2	41.0	45.8	53.9		
Water Temperature (°C)	23.5	23.5	23.6	23.5	23.4	23.4		
Dissolved Oxygen (mg/L)	3.82	3.73	3.68	3.76	3.85	3.79		
Turbidity (NTU)	37.61	62.11	75.40	88.37	94.24	108.3		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	11:43	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-18	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.93	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.07	*1 casing volume (CV = LWC x C) (gals.):*	3.11	*5 casing volumes (5 x CV) (gals.):*	15.54

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.11	6.22	9.33	12.43	15.54		13.50
Time (military)	11:50	11:53	11:56	11:59	12:02			12:04
PH (s.u.)	6.42	6.34	6.46	6.55	6.50			6.49
Specific Conductivity (µS/cm)	74.6	79.3	76.2	70.3	69.4			73.3
Water Temperature (°C)	21.9	21.8	21.9	22.1	22.0			22.0
Dissolved Oxygen (mg/L)	2.98	2.87	2.91	2.85	2.94			2.96
Turbidity (NTU)	30.49	26.21	38.64	50.13	57.84			70.46

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:04	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	13.50

Notes: Dry @ 13.5 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-19	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.58	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.42	**1 casing volume (CV = LWC x C) (gals.):**	3.00	**5 casing volumes (5 x CV) (gals.):**	15.01

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	3.00	6.00	9.01	12.01	15.01		
Time (military)	10:15	10:18	10:21	10:24	10:27	10:31		
PH (s.u.)	5.87	5.82	5.73	5.69	5.74	5.65		
Specific Conductivity (µS/cm)	81.7	88.3	84.9	76.2	72.4	78.8		
Water Temperature (°C)	22.4	22.5	22.3	22.3	22.1	22.1		
Dissolved Oxygen (mg/L)	4.08	4.14	4.05	4.01	4.04	4.16		
Turbidity (NTU)	11.63	18.52	21.74	29.31	38.79	46.82		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	10:31	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-20	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.41	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.59	*1 casing volume (CV = LWC x C) (gals.):*	3.19	*5 casing volumes (5 x CV) (gals.):*	15.97

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.19	6.39	9.58	12.77	15.97		
Time (military)	9:40	9:43	9:46	9:49	9:52	9:56		
PH (s.u.)	6.71	6.63	6.75	6.81	6.83	6.78		
Specific Conductivity (µS/cm)	41.7	56.8	45.3	50.9	57.1	63.6		
Water Temperature (°C)	23.5	23.3	23.2	23.1	23.1	23.1		
Dissolved Oxygen (mg/L)	3.81	3.67	3.74	3.79	3.86	3.65		
Turbidity (NTU)	25.69	38.72	44.31	50.64	68.58	87.31		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	9:56	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	16.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-21	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	6.05	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.95	*1 casing volume (CV = LWC x C) (gals.):*	3.09	*5 casing volumes (5 x CV) (gals.):*	15.44

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.09	6.18	9.27	12.36	15.44		
Time (military)	10:35	10:38	10:41	10:44	10:47	10:53		
PH (s.u.)	6.31	6.24	6.28	6.36	6.43	6.39		
Specific Conductivity (µS/cm)	26.7	31.5	24.8	29.6	34.3	39.8		
Water Temperature (°C)	22.9	23.0	22.8	22.8	22.8	22.8		
Dissolved Oxygen (mg/L)	4.41	4.35	4.48	4.53	4.46	4.39		
Turbidity (NTU)	16.82	25.31	40.65	54.27	61.58	69.41		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	10:53	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	15.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-24	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	15-25	*Total Well Depth (TWD) (ft.):*	25
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.62	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	19.38	*1 casing volume (CV = LWC x C) (gals.):*	3.16	*5 casing volumes (5 x CV) (gals.):*	15.79

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	3.16	6.32	9.48	12.64	15.79		13.00
Time (military)	12:25	12:28	12:31	12:34	12:37			12:39
PH (s.u.)	6.46	6.58	6.53	6.41	6.48			6.50
Specific Conductivity (µS/cm)	38.2	30.0	34.7	41.3	36.1			43.2
Water Temperature (°C)	23.4	23.5	23.4	23.2	23.2			23.1
Dissolved Oxygen (mg/L)	3.19	3.26	3.22	3.31	3.38			3.24
Turbidity (NTU)	25.81	32.65	39.27	46.32	61.48			72.51

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:39	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	13.00

Notes: Dry @ 13 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-25	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.86	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.14	*1 casing volume (CV = LWC x C) (gals.):*	2.47	*5 casing volumes (5 x CV) (gals.):*	12.34

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.47	4.94	7.40	9.87	12.34		7.00
Time (military)	12:45	12:47	12:50					12:52
PH (s.u.)	6.88	6.75	6.69					6.71
Specific Conductivity (µS/cm)	58.4	63.6	69.5					72.1
Water Temperature (°C)	23.2	23.3	23.3					23.2
Dissolved Oxygen (mg/L)	3.47	3.56	3.44					3.58
Turbidity (NTU)	71.01	65.43	62.81					74.62

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:52	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	7.00

Notes: Dry @ 7 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-26	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.72	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.28	*1 casing volume (CV = LWC x C) (gals.):*	2.49	*5 casing volumes (5 x CV) (gals.):*	12.45

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.49	4.98	7.47	9.96	12.45		12.00
Time (military)	12:10	12:12	12:14	12:16	12:18			12:20
PH (s.u.)	6.82	6.87	6.83	6.78	6.73			6.76
Specific Conductivity (µS/cm)	28.3	36.4	41.5	43.8	38.2			35.9
Water Temperature (°C)	24.0	24.0	24.1	24.0	23.9			23.8
Dissolved Oxygen (mg/L)	2.78	2.65	2.69	2.75	2.81			2.77
Turbidity (NTU)	36.21	45.80	53.35	64.11	70.38			82.71

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	12:20	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	12.00

Notes: Dry @ 12 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-27	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	5.68	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.32	*1 casing volume (CV = LWC x C) (gals.):*	2.33	*5 casing volumes (5 x CV) (gals.):*	11.67

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.33	4.67	7.00	9.34	11.67		
Time (military)	10:00	10:02	10:04	10:07	10:09	10:11		
PH (s.u.)	6.21	6.13	6.05	6.18	6.26	6.16		
Specific Conductivity (µS/cm)	61.3	66.9	73.6	63.8	69.2	70.4		
Water Temperature (°C)	22.8	22.8	22.7	22.6	22.5	22.5		
Dissolved Oxygen (mg/L)	3.06	3.10	3.03	3.12	3.08	3.15		
Turbidity (NTU)	29.74	38.20	51.77	69.41	75.83	90.60		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	10:11	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	11.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		
Quality Assurance									
Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		
Well Information									
Well ID:	MW-28	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*		0.163		*Method of Purging/Sample Collection*	Bailer		
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*		5-20		*Total Well Depth (TWD) (ft.):*	20		
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*		3.45		*Free Product Thickness (ft.):*	Not Detected		
Length of water column (LWC = TWD – DGW) (ft.):	16.55	*1 casing volume (CV = LWC x C) (gals.):*		2.70		*5 casing volumes (5 x CV) (gals.):*	13.49		

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.70	5.40	8.09	10.79	13.49		
Time (military)	10:20	10:22	10:24	10:26	10:28	10:32		
PH (s.u.)	5.29	4.91	4.70	4.51	4.40	4.32		
Specific Conductivity (µS/cm)	86.4	84.1	83.2	81.1	80.5	82.7		
Water Temperature (°C)	21.0	21.3	21.5	21.8	21.5	21.5		
Dissolved Oxygen (mg/L)	5.60	5.31	5.19	4.96	5.09	4.92		
Turbidity (NTU)	9.90	157.2	164.7	178.9	168.9	165.90		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	10:32	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	14.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-30	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.69	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	13.31	**1 casing volume (CV = LWC x C) (gals.):**	2.17	**5 casing volumes (5 x CV) (gals.):**	10.85

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.17	4.34	6.51	8.68	10.85		
Time (military)	11:28	11:30	11:32	11:34	11:36	11:40		
PH (s.u.)	4.47	4.43	4.40	4.40	4.42	4.42		
Specific Conductivity (µS/cm)	130.5	135.1	83.1	138.8	143.6	150.1		
Water Temperature (°C)	25.1	26.1	26.0	25.9	26.1	26.1		
Dissolved Oxygen (mg/L)	5.15	5.01	5.24	5.18	5.27	4.92		
Turbidity (NTU)	18.11	110.5	92.9	466.1	231.2	144.3		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	11:40	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	11.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-31	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	6.16	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	13.84	*1 casing volume (CV = LWC x C) (gals.):*	2.26	*5 casing volumes (5 x CV) (gals.):*	11.28

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.26	4.51	6.77	9.02	11.28		
Time (military)	11:02	11:05	11:07	11:10	11:12	11:17		
PH (s.u.)	4.69	4.45	4.45	4.91	4.40	4.38		
Specific Conductivity (µS/cm)	123.0	175.0	175.1	172.2	171.0	150.1		
Water Temperature (°C)	24.6	25.3	25.5	25.0	23.4	24.0		
Dissolved Oxygen (mg/L)	5.06	5.12	5.02	5.21	5.01	5.25		
Turbidity (NTU)	30.33	37.75	42.96	50.56	70.12	75.54		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	11:17	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	11.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-32	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.22	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.78	**1 casing volume (CV = LWC x C) (gals.):**	2.57	**5 casing volumes (5 x CV) (gals.):**	12.86

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.57	5.14	7.72	10.29	12.86		
Time (military)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		
PH (s.u.)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		
Specific Conductivity (µS/cm)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		
Water Temperature (°C)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		
Dissolved Oxygen (mg/L)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		
Turbidity (NTU)	Sheen	Sheen	Sheen	Sheen	Sheen	Sheen		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	12:25	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.00

Notes: Odor; Sheen

Sheen = Noticeable Petroleum Sheen Observed

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-33	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.15	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.85	*1 casing volume (CV = LWC x C) (gals.):*	2.58	*5 casing volumes (5 x CV) (gals.):*	12.92

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.58	5.17	7.75	10.33	12.92		
Time (military)	13:27	13:30	13:33	13:36	13:39	13:45		
PH (s.u.)	5.62	5.41	5.37	5.22	5.29	5.29		
Specific Conductivity (µS/cm)	169.10	155.2	162.2	161.5	159.2	160.2		
Water Temperature (°C)	23.5	23.7	23.8	23.9	24.0	24.1		
Dissolved Oxygen (mg/L)	3.87	3.92	3.91	4.10	4.08	4.07		
Turbidity (NTU)	27.10	42.25	50.07	70.17	100.1	105.2		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:45	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	13.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-34	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.30	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.70	*1 casing volume (CV = LWC x C) (gals.):*	2.56	*5 casing volumes (5 x CV) (gals.):*	12.80

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.56	5.12	7.68	10.24	12.80		7.00
Time (military)	13:20	13:22	13:24					13:27
PH (s.u.)	7.12	7.17	7.24					7.31
Specific Conductivity (µS/cm)	136.1	117.0	124.1					130.8
Water Temperature (°C)	21.7	20.0	19.9					19.9
Dissolved Oxygen (mg/L)	2.51	2.30	2.19					2.22
Turbidity (NTU)	18.44	166.4	207.1					153.8

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:27	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	7.00

Notes: Dry @ 7 Gallons; Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-35	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.55	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.45	*1 casing volume (CV = LWC x C) (gals.):*	2.68	*5 casing volumes (5 x CV) (gals.):*	13.41

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.68	5.36	8.04	10.73	13.41		8.00
Time (military)	13:32	13:35	13:38					13:42
PH (s.u.)	7.21	7.36	7.44					7.29
Specific Conductivity (µS/cm)	102.6	96.1	90.5					92.6
Water Temperature (°C)	21.8	20.1	20.0					19.9
Dissolved Oxygen (mg/L)	4.02	3.64	3.72					3.86
Turbidity (NTU)	17.26	122.2	179.1					150.8

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:42	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	8.00

Notes: Dry @ 8 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-36	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	3.12	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.88	**1 casing volume (CV = LWC x C) (gals.):**	2.75	**5 casing volumes (5 x CV) (gals.):**	13.76

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.75	5.50	8.25	11.01	13.76		
Time (military)	9:20	9:23	9:26	9:29	9:32	9:35		
PH (s.u.)	5.79	5.86	6.04	6.00	5.92	5.94		
Specific Conductivity (µS/cm)	61.1	87.9	94.6	100.2	91.9	90.5		
Water Temperature (°C)	24.0	22.6	22.4	22.3	22.2	22.1		
Dissolved Oxygen (mg/L)	3.31	3.57	3.69	3.77	3.62	3.61		
Turbidity (NTU)	17.63	149.2	176.1	237.9	201.6	184.9		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	9:35	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-37	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.18	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.82	*1 casing volume (CV = LWC x C) (gals.):*	2.58	*5 casing volumes (5 x CV) (gals.):*	12.89

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.58	5.16	7.74	10.31	12.89		8.00
Time (military)	9:42	9:45	9:48	9:51				9:54
PH (s.u.)	Sheen	Sheen	Sheen	Sheen				Sheen
Specific Conductivity (µS/cm)	Sheen	Sheen	Sheen	Sheen				Sheen
Water Temperature (°C)	Sheen	Sheen	Sheen	Sheen				Sheen
Dissolved Oxygen (mg/L)	Sheen	Sheen	Sheen	Sheen				Sheen
Turbidity (NTU)	Sheen	Sheen	Sheen	Sheen				Sheen

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	9:54	*Duplicate: Y or N*	Y	*If yes, Duplicate Time:*	9:54	*Total Gallons Purged:*	8.00

Notes: Dry @ 8 Gallons; Strong Odor; Sheen; Duplicated Sample

Sheen = Noticeable Petroleum Sheen Observed

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-38	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.07	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.93	*1 casing volume (CV = LWC x C) (gals.):*	2.76	*5 casing volumes (5 x CV) (gals.):*	13.80

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.76	5.52	8.28	11.04	13.80		7.00
Time (military)	8:45	8:48	8:51					8:54
PH (s.u.)	6.54	6.47	6.32					6.39
Specific Conductivity (µS/cm)	62.8	47.1	50.9					52.6
Water Temperature (°C)	23.1	21.9	21.8					21.8
Dissolved Oxygen (mg/L)	2.94	2.62	2.87					2.51
Turbidity (NTU)	12.01	176.8	279.0					201.6

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	8:54	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	7.00

Notes: Dry @ 7 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-39	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	2.28	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.72	*1 casing volume (CV = LWC x C) (gals.):*	2.89	*5 casing volumes (5 x CV) (gals.):*	14.44

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.89	5.78	8.67	11.55	14.44		8.00
Time (military)	13:00	13:03	13:06					13:08
PH (s.u.)	6.94	7.02	7.15					7.07
Specific Conductivity (µS/cm)	62.8	57.2	53.1					56.7
Water Temperature (°C)	23.6	23.5	23.5					23.4
Dissolved Oxygen (mg/L)	2.75	2.83	2.88					2.79
Turbidity (NTU)	43.70	56.85	68.21					80.73

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:08	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	8.00

Notes: Dry @ 8 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-40	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.09	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.91	*1 casing volume (CV = LWC x C) (gals.):*	2.76	*5 casing volumes (5 x CV) (gals.):*	13.78

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.76	5.51	8.27	11.03	13.78		8.00
Time (military)	9:00	9:03	9:06					9:09
PH (s.u.)	6.41	6.54	6.57					6.64
Specific Conductivity (µS/cm)	58.1	76.1	70.9					68.2
Water Temperature (°C)	22.6	21.2	21.2					21.1
Dissolved Oxygen (mg/L)	4.57	4.17	4.26					4.39
Turbidity (NTU)	13.70	211.1	191.5					152.6

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	9:09	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	8.00

Notes: Dry @ 8 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-41	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.41	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.59	*1 casing volume (CV = LWC x C) (gals.):*	2.70	*5 casing volumes (5 x CV) (gals.):*	13.52

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.70	5.41	8.11	10.82	13.52		
Time (military)	13:50	13:53	13:56	13:59	14:02	14:08		
PH (s.u.)	5.80	5.62	5.41	5.40	5.39	5.39		
Specific Conductivity (µS/cm)	122.8	142.1	142.0	150.2	153.2	149.5		
Water Temperature (°C)	22.5	22.7	23.0	23.1	23.1	23.2		
Dissolved Oxygen (mg/L)	1.01	1.03	1.05	1.12	1.15	1.17		
Turbidity (NTU)	11.23	35.21	52.15	60.17	94.12	102.5		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	14:08	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	14.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	MW-42	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	6.10	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	13.90	*1 casing volume (CV = LWC x C) (gals.):*	2.27	*5 casing volumes (5 x CV) (gals.):*	11.33

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	2.27	4.53	6.80	9.06	11.33		7.00
Time (military)	9:30	9:32	9:34	9:35				9:36
PH (s.u.)	6.37	6.44	6.46	6.41				6.49
Specific Conductivity (µS/cm)	86.5	93.0	89.2	96.3				92.8
Water Temperature (°C)	23.5	23.4	23.3	23.3				23.4
Dissolved Oxygen (mg/L)	3.62	3.76	3.84	3.69				3.71
Turbidity (NTU)	19.48	24.37	36.21	50.46				76.25

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	9:36	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	7.00

Notes: Dry @ 7 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60		

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	DW-1	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	90-95	*Total Well Depth (TWD) (ft.):*	95
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	23.21	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	71.79	*1 casing volume (CV = LWC x C) (gals.):*	11.70	*5 casing volumes (5 x CV) (gals.):*	58.51

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	11.70	23.40	35.11	46.81	58.51		22.00
Time (military)	13:10	13:21						13:32
PH (s.u.)	6.81	6.89						6.79
Specific Conductivity (µS/cm)	217.6	246.0						211.5
Water Temperature (°C)	22.0	19.6						19.4
Dissolved Oxygen (mg/L)	2.96	3.07						2.84
Turbidity (NTU)	10.71	29.82						34.61

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	13:32	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	22.00

Notes: Dry @ 22 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	DW-2	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.163	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	*Screened Interval (ft.):*	90-95	*Total Well Depth (TWD) (ft.):*	95
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	22.75	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	72.25	*1 casing volume (CV = LWC x C) (gals.):*	11.78	*5 casing volumes (5 x CV) (gals.):*	58.88

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	11.78	23.55	35.33	47.11	58.88		20.00
Time (military)	11:00	11:12						11:21
PH (s.u.)	7.18	7.06						7.13
Specific Conductivity (µS/cm)	54.1	52.8						57.3
Water Temperature (°C)	22.1	22.1						22.0
Dissolved Oxygen (mg/L)	2.87	2.99						2.81
Turbidity (NTU)	13.48	16.11						24.92

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	11:21	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	20.00

Notes: Dry @ 20 Gallons; No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Helrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	RW-1	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	6.06	**Depth to Groundwater (DGW) (ft.):**	6.67	**Free Product Thickness (ft.):**	0.61
Length of water column (LWC = TWD – DGW) (ft.):	13.33	**1 casing volume (CV = LWC x C) (gals.):**	8.69	**5 casing volumes (5 x CV) (gals.):**	43.46

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	8.69	17.38	26.07	34.76	43.46		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	N/A	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	N/A

Notes: PROD = Free Phase Petroleum Product Detected; Not Sampled

4 Inch Well

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	RW-2	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.652	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	6.07	*Depth to Groundwater (DGW) (ft.):*	6.49	*Free Product Thickness (ft.):*	0.32
Length of water column (LWC = TWD – DGW) (ft.):	13.51	*1 casing volume (CV = LWC x C) (gals.):*	8.81	*5 casing volumes (5 x CV) (gals.):*	44.04

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	8.81	17.62	26.43	35.23	44.04		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*	N/A	*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	N/A

Notes: PROD = Free Phase Petroleum Product Detected; Not Sampled

4 Inch Well

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Helrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	RW-3	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.652	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	3.19	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.81	*1 casing volume (CV = LWC x C) (gals.):*	10.96	*5 casing volumes (5 x CV) (gals.):*	54.80

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	10.96	21.92	32.88	43.84	54.80		40.00
Time (military)	10:00	10:11	10:22	10:33				10:44
PH (s.u.)	6.17	6.27	6.24	6.29				6.31
Specific Conductivity (µS/cm)	212.6	237.1	206.4	210.8				219.5
Water Temperature (°C)	22.1	20.6	20.5	20.4				20.5
Dissolved Oxygen (mg/L)	0.79	0.86	0.94	1.02				1.01
Turbidity (NTU)	16.21	58.96	72.15	104.2				87.16

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*		*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	40.00

Notes: Dry @ 40 Gallons; Strong Odor

4 Inch Well

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	*Site ID #:*	04877	*Site Name:*	Nickelpumper 235	*Field Personnel:*	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	*Project Manager:*	M. Hetrick	*General Weather Conditions:*	Rain	*Ambient Air Temp (°F):*	60

Quality Assurance

Meter Name	*Serial #:*	*Calibration:*							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	*pH 4.0: Y or N*	Y	*pH 7.0: Y or N*	Y	*pH 10.0: Y or N*	Y	*S.C.: Y or N*	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	*Y or N*	Y						
MicroTPI/TPW (Turbidity)	201301174	*0.0 NTU: Y or N*	Y	*1.0 NTU: Y or N*	Y	*10.0 NTU: Y or N*	Y		

Well Information

Well ID:	RW-4	*Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652*	0.652	*Method of Purging/Sample Collection*	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	*Screened Interval (ft.):*	5-20	*Total Well Depth (TWD) (ft.):*	20
Depth to Free Product (DFP) (ft.):	ND	*Depth to Groundwater (DGW) (ft.):*	4.44	*Free Product Thickness (ft.):*	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.56	*1 casing volume (CV = LWC x C) (gals.):*	10.15	*5 casing volumes (5 x CV) (gals.):*	50.73

Purging Data

	Initial	*1st Vol.*	*2nd Vol.*	*3rd Vol.*	*4th Vol.*	*5th Vol.*	*Post*	*Sampling*
Volume Purged (gallons)	0.00	10.15	20.29	30.44	40.58	50.73		45.00
Time (military)	10:05	10:15	10:25	10:35	10:45			10:50
PH (s.u.)	Sheen	Sheen	Sheen	Sheen	Sheen			Sheen
Specific Conductivity (µS/cm)	Sheen	Sheen	Sheen	Sheen	Sheen			Sheen
Water Temperature (°C)	Sheen	Sheen	Sheen	Sheen	Sheen			Sheen
Dissolved Oxygen (mg/L)	Sheen	Sheen	Sheen	Sheen	Sheen			Sheen
Turbidity (NTU)	Sheen	Sheen	Sheen	Sheen	Sheen			Sheen

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	*Sampling Time:*		*Duplicate: Y or N*	N	*If yes, Duplicate Time:*	N/A	*Total Gallons Purged:*	45.00

Notes: Dry @ 45 Gallons; Strong Odor; Sheen

Sheen = Noticeable Petroleum Sheen Observed; 4 Inch Well

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.
County:	Hampton	**Project Manager:**	M. Helrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	RW-5	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.10	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.90	**1 casing volume (CV = LWC x C) (gals.):**	9.71	**5 casing volumes (5 x CV) (gals.):**	48.57

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	9.71	19.43	29.14	38.86	48.57		
Time (military)	12:30	12:39	12:48	12:57	13:06	13:24		
PH (s.u.)	6.01	6.21	6.02	6.21	6.05	5.95		
Specific Conductivity (µS/cm)	153.7	160.2	150.7	152.1	156.8	158.2		
Water Temperature (°C)	23.8	23.8	23.9	24.0	24.2	24.1		
Dissolved Oxygen (mg/L)	0.66	0.72	0.77	0.69	0.68	0.71		
Turbidity (NTU)	22.71	25.81	30.92	45.9	60.21	85.82		

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	13:24	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	49.00

Notes: Odor

4 Inch Well

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	11/9/2015	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	F.M., P.W., J.P., B.G., C.H., C.P.		
County:	Hampton	**Project Manager:**	M. Hetrick	**General Weather Conditions:**	Rain	**Ambient Air Temp (°F):**	60		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	RW-6	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.12	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.88	**1 casing volume (CV = LWC x C) (gals.):**	10.35	**5 casing volumes (5 x CV) (gals.):**	51.77

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	10.35	20.71	31.06	41.42	51.77		
Time (military)	14:15	14:24	14:33	14:42	14:51	15:09		
PH (s.u.)	6.34	6.15	6.07	5.93	5.92	5.90		
Specific Conductivity (µS/cm)	267.8	269.2	270.7	282.5	281.2	285.7		
Water Temperature (°C)	23.8	23.7	23.9	24.0	24.1	24.2		
Dissolved Oxygen (mg/L)	0.91	0.88	0.93	0.95	0.98	0.95		
Turbidity (NTU)								

Sampling Data

Sampled By:	F.M., P.W., J.P., B.G., C.H., C.P.	**Sampling Time:**	15:09	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	52.00

Notes: Odor

4 Inch Well

Midlands
Environmental
Consultants, Inc.

November 11, 2015

Re: Treatment of Purge Water
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 15-5311

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 624.5 gallons were treated on November 9, 2015, at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Frank M. Mitlin
Staff Hydrogeologist

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www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 6

1902509

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull St Columbia, SC 29201
Email To: BryantJC@dhec.sc.gov
Phone: 803-898-0678 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant - UST
Copy To:
Purchase Order No.: 4600472513
Project Name: Nickel Dumper 235
Project Number: UST#04877 / Pace CAHS972

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1	WT	G																	Not Sampled
2	MW-2R					11/9/15	12:30		6				6					X		No Odor
3	MW-3R						13:06		6				6					X		Strong Odor
4	MW-4D						12:54		6				6					X		No Odor
5	MW-5																			Not Located
6	MW-6																			Not Located
7	MW-7						11:54		6				6							No Odor
8	MW-8R						10:55		6				6							Odor
9	MW-9						11:07		6				6							Odor
10	MW-10						1:25		6				6							Slight Odor
11	MW-11					↓	11:43		6				6					X		No Odor
12	MW-12	WT	G																	Not Located

Analysis Test: Btex, MTBE, Naphthalene 1,2 DCA EDB

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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2003715

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull St
Columbia, SC, 29201
Email To: Bryce.Jeuchter.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryce.t - UST.
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST#04877/PACE CA#50970

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: BTEX, Naph, MTBE; 1,2-DCA; 8-OXY; EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW 14	WT	G			11/9/15	10:20		6				6						X X X X		No Odor
2	MW 15																				NI WS
3	MW 16						12:07		6				6								No Odor
4	MW 17						11:43		6				6								No Odor
5	MW 18						12:09		6				6								No Odor
6	MW 19						10:31		6				6								No Odor
7	MW 20						9:56		6				6								No Odor
8	MW 21						10:53		6				6								No Odor
9	MW 22																				Not Sampled
10	MW 23																				Not Sampled
11	MW 24						12:34		6				6								No Odor
12	MW 25	WT	G			11/9/15	12:58		6				6						X X X X		No Odor

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 3 of 6

2003718

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull St
Columbia SC 29201
Email To: BryantJC@dhec.sc.gov
Phone: 803-898-0600 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: T. Bryant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Wickelpumper 235
Project Number: UST # 04877 / PACE CA# SC770

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	VOC-K Meth, MTBE, 1,2 DCA, 1,8 DXY, EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW 26	WT	G			11/9/15	12:20		6				6						X X X X		No Odor
2	MW 27						10:11		6				6								No Odor
3	MW 28						10:32		6				6								No Odor
4	MW 29																				Not Located
5	MW 30						11:40		6				6								No Odor
6	MW 31						11:17		6				6								No Odor
7	MW 32						12:2[illegible]		6				6								Odor
8	MW 33						3:45		6				6								Odor
9	MW 34						3:2[illegible]		6				6								No Odor
10	MW 35						3:48		6				6								No Odor
11	MW 36						9:55		6				6								No Odor
12	MW 37						9:54		6				6						X X X X		Strong Odor

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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2003719

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To: BYrantJc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803 898 0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J Byrant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST #04877 / PACE CA# 50ATX

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE; see valid codes to left): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, Naphth, MTBE	1,2 DCA	8 Oxy	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	~~MW~~ MW 38	WT	G			11/9/15	8:54		6				6						X	X	X	X		No Odor
2	MW 39						13:02		6				6											No Odor
3	MW 40						9:09		6				6											No Odor
4	MW 41						14:08		6				6											No Odor
5	MW 42						9:36		6				6											No Odor
6	DW 1						13:32		6				6											No Odor
7	DW 2						11:21		6				6											No Odor
8	RW 1																							No Sample
9	RW 2																							No Sample
10	RW 3						10:44		6				6											Along Odor
11	RW 4						10:50		6				6						↓	↓	↓	↓		Strong Odor
12	RW 5	WT	G			11/9/15	13:24		6				6						X	X	X	X		Odor

Requested Analysis Filtered (Y/N)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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2003716

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull St
Columbia, SC, 29201
Email To: BycentJc@dhec.sc.gov
Phone: 803-898-0666 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bycent - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST # 04877 / PHCE CH# 50976

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Cortese
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX, Naph, MTBE	1,2-DCA	8-OXY	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	RW 6	WT	G			11/9/15	15:09		6				6					X	X	X	X		No Odor
2	WSW 1	DW	G			11/9/15	13:45		6				6					X	X	X	X		LDL's
3	WSW 2						13:40		6				6					X	X	X	X		LDL's
4	WSW 3																						Not Sampled
5	WSW 4																						Not Sampled
6	WSW 5						13:15		6				6					X	X	X	X		LDL's
7	WSW 6						13:25		6				6										LDL's
8	WSW 7	DW	G				13:30		6				6										LDL's
9	MW-3R Duplicate	WT					13:06		6				6										
10	MW-9 Duplicate	WT					11:07																
11	MW-37 Duplicate	WT					9:54																
12	Field Blank	WT	G			11/9/15	13:10		6				6					X	X	X	X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 6 of 6

2003717

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To: BrantJC@dhec.sc.gov
Phone: 803-896-0606 Fax: 803 898 0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J Brant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST #04877 / PACE ca#50170

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, MTBE, 1,2 DCA, & EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Trip Blank	WT	G			11/9/15	13:11		2										X		
2	Trip Blank 2	WT	G			11/9/15	13:12		2										X		
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips	11/9/15					

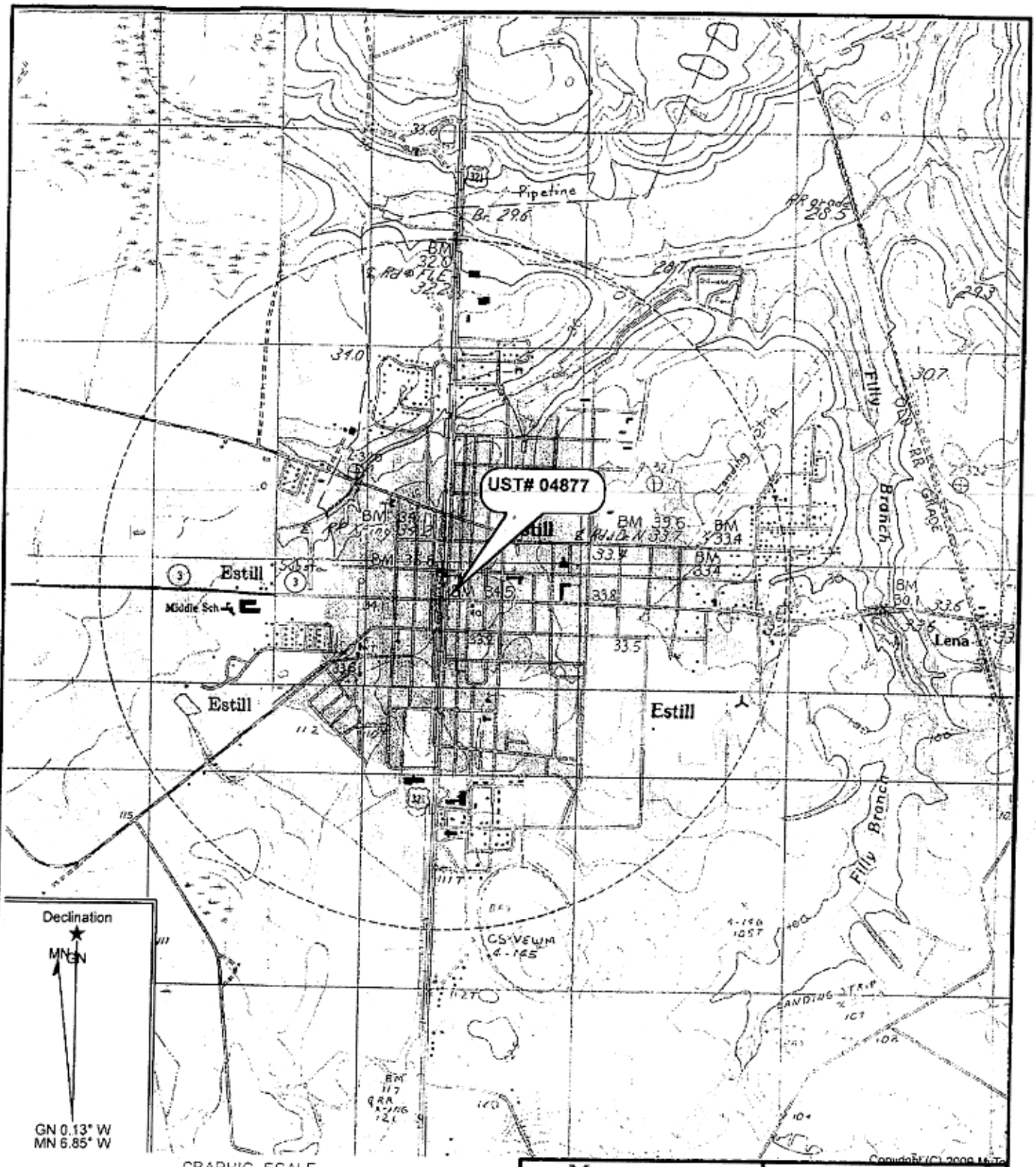
2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips
DATE Signed (MM/DD/YY): 11/9/15

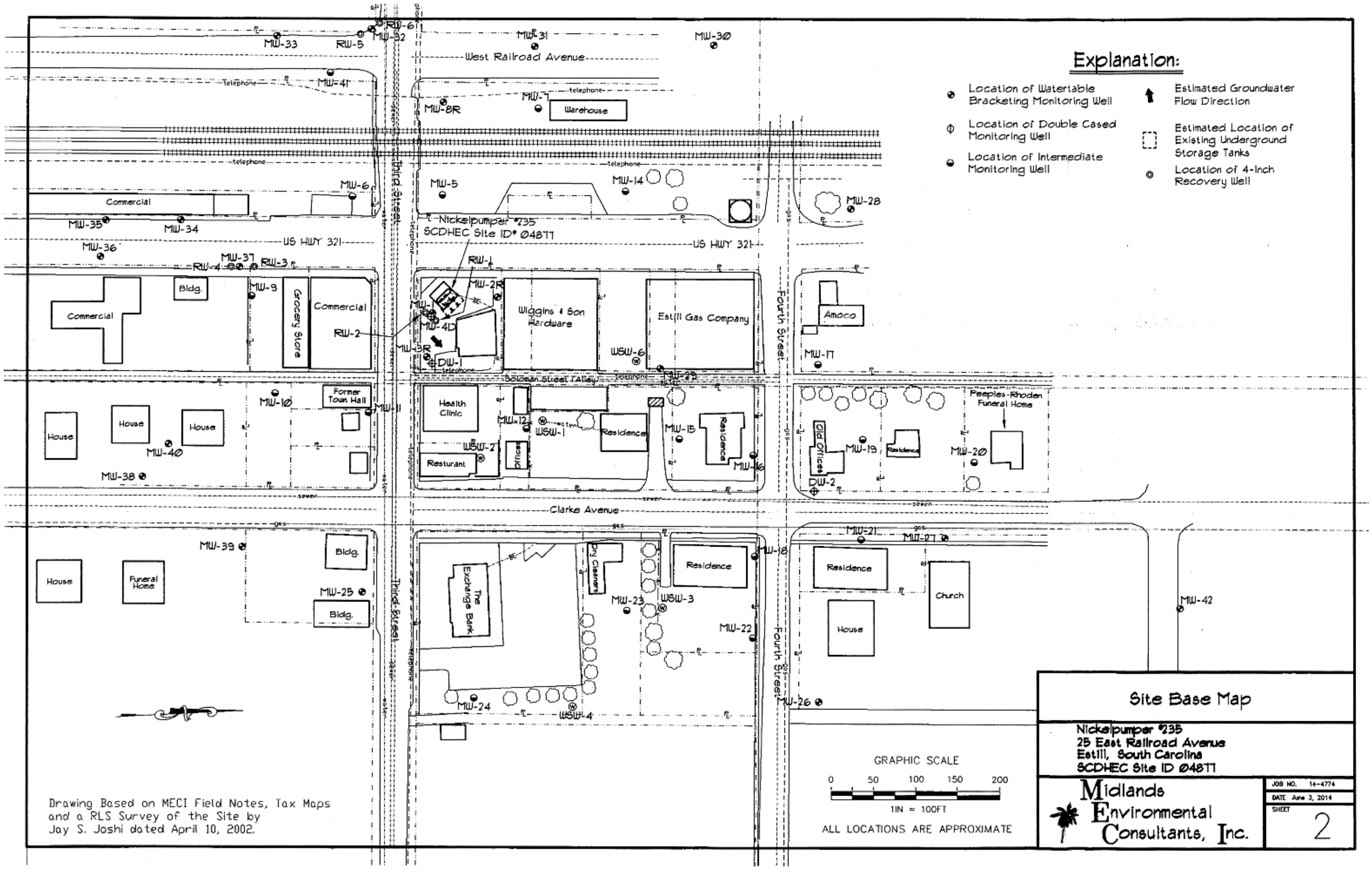
Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Reference: Gifford, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 1.5 Meters

Midlands Environmental Consultants, Inc.	Site Location
Nickelpumper 235 25 East Railroad Avenue, Estill, SC SCDHEC Site ID# 04877	
Figure 1	MECI 14-4774



Site Base Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID #04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 2

Pace Analytical Services, Inc.
9800 Kincey Ave Suite 100
Huntersville, NC 28078
(704)875-9092

UST
NOV 3 0 2015
PROGRAM

November 20, 2015

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Dear Mr. Bryant:
Enclosed are the analytical results for sample(s) received by the laboratory on November 10, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Trey Carter
trey.carter@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project	NICKEL PUMPER 235 USTA#04877
Pace Project No	92275423

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification # 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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9800 Kincey Ave Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92275423001	MW-2R	Water	11/09/15 12.30	11/10/15 11 42
92275423002	MW-3R	Water	11/09/15 13:06	11/10/15 11 42
92275423003	MW-4D	Water	11/09/15 12:54	11/10/15 11.42
92275423004	MW-7	Water	11/09/15 11:54	11/10/15 11:42
92275423005	MW-8R	Water	11/09/15 10 55	11/10/15 11:42
92275423006	MW-9	Water	11/09/15 11 07	11/10/15 11 42
92275423007	MW-10	Water	11/09/15 11 25	11/10/15 11.42
92275423008	MW-11	Water	11/09/15 11:43	11/10/15 11:42
92275423009	MW-14	Water	11/09/15 10 20	11/10/15 11 42
92275423010	MW-16	Water	11/09/15 12:07	11/10/15 11 42
92275423011	MW-17	Water	11/09/15 11 43	11/10/15 11 42
92275423012	MW-18	Water	11/09/15 12:04	11/10/15 11:42
92275423013	MW-19	Water	11/09/15 10 31	11/10/15 11:42
92275423014	MW-20	Water	11/09/15 09:56	11/10/15 11 42
92275423015	MW-21	Water	11/09/15 10:53	11/10/15 11 42
92275423016	MW-24	Water	11/09/15 12:39	11/10/15 11 42
92275423017	MW-25	Water	11/09/15 12 52	11/10/15 11:42
92275423018	MW-26	Water	11/09/15 12:20	11/10/15 11 42
92275423019	MW-27	Water	11/09/15 10:11	11/10/15 11 42
92275423020	MW-28	Water	11/09/15 10:32	11/10/15 11.42
92275423021	MW-30	Water	11/09/15 11:40	11/10/15 11:42
92275423022	MW-31	Water	11/09/15 11:17	11/10/15 11 42
92275423023	MW-32	Water	11/09/15 12:25	11/10/15 11 42
92275423024	MW-33	Water	11/09/15 13:45	11/10/15 11 42
92275423025	MW-34	Water	11/09/15 13:27	11/10/15 11:42
92275423026	MW-35	Water	11/09/15 13 42	11/10/15 11:42
92275423027	MW-36	Water	11/09/15 09:35	11/10/15 11:42
92275423028	MW-37	Water	11/09/15 09:54	11/10/15 11 42
92275423029	MW-38	Water	11/09/15 08:54	11/10/15 11:42
92275423030	MW-39	Water	11/09/15 15 08	11/10/15 11:42
92275423031	MW-40	Water	11/09/15 09 09	11/10/15 11 42
92275423032	MW-41	Water	11/09/15 14:08	11/10/15 11 42
92275423033	MW-42	Water	11/09/15 09:36	11/10/15 11 42
92275423034	DW 1	Water	11/09/15 13 32	11/10/15 11:42
92275423035	DW 2	Water	11/09/15 11:21	11/10/15 11:42
92275423036	RW 3	Water	11/09/15 10 44	11/10/15 11:42
92275423037	RW 4	Water	11/09/15 10:50	11/10/15 11.42

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92275423038	**RW 5**	Water	11/09/15 13.24	11/10/15 11:42
92275423039	**RW 6**	Water	11/09/15 15 09	11/10/15 11 42
92275423040	**WSW 1**	Water	11/09/15 13:45	11/10/15 11:42
92275423041	**WSW 2**	Water	11/09/15 13:40	11/10/15 11:42
92275423042	**WSW 5**	Water	11/09/15 13:15	11/10/15 11:42
92275423043	**WSW 6**	Water	11/09/15 13:25	11/10/15 11:42
92275423044	**WSW 7**	Water	11/09/15 13:30	11/10/15 11 42
92275423045	**MW-3R DUPLICATE**	Water	11/09/15 13 06	11/10/15 11 42
92275423046	**MW-9 DUPLICATE**	Water	11/09/15 11:07	11/10/15 11.42
92275423047	**MW-37 DUPLICATE**	Water	11/09/15 09:54	11/10/15 11:42
92275423048	**FIELD BLANK**	Water	11/09/15 13:10	11/10/15 11:42
92275423049	**TRIP BLANK**	Water	11/09/15 13:11	11/10/15 11:42
92275423050	**TRIP BLANK 2**	Water	11/09/15 13 12	11/10/15 11.42

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SAMPLE ANALYTE COUNT

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92275423001	**MW-2R**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423002	**MW-3R**	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423003	**MW-4D**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423004	**MW-7**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423005	**MW-8R**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423006	**MW-9**	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL, NB	20	PASI-C
92275423007	**MW-10**	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423008	**MW-11**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423009	**MW-14**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423010	**MW-16**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423011	**MW-17**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423012	**MW-18**	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423013	**MW-19**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423014	**MW-20**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423015	**MW-21**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423016	**MW-24**	EPA 8011	RES	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423017	**MW-25**	EPA 8011	RES	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423018	**MW-26**	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423019	**MW-27**	EPA 8011	RES	2	PASI-C

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SAMPLE ANALYTE COUNT

Project NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	NB	20	PASI-C
92275423020	MW-28	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423021	MW-30	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423022	MW-31	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423023	MW-32	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423024	MW-33	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423025	MW-34	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423026	MW-35	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423027	MW-36	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423028	MW-37	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL, NB	20	PASI-C
92275423029	MW-38	EPA 8011	HSK	2	PASI-C
		EPA 8260	NB	20	PASI-C
92275423030	MW-39	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423031	MW-40	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423032	MW-41	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423033	MW-42	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423034	DW 1	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423035	DW 2	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423036	RW 3	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL, NB	20	PASI-C
92275423037	RW 4	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL, NB	20	PASI-C

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SAMPLE ANALYTE COUNT

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92275423038	**RW 5**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423039	**RW 6**	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL, NB	20	PASI-C
92275423040	**WSW 1**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423041	**WSW 2**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423042	**WSW 5**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423043	**WSW 6**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423044	**WSW 7**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423045	**MW-3R DUPLICATE**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423046	**MW-9 DUPLICATE**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423047	**MW-37 DUPLICATE**	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92275423048	**FIELD BLANK**	EPA 8011	HSK	2	PASI-C
		EPA 8260	CCL	20	PASI-C
92275423049	**TRIP BLANK**	EPA 8260	CCL	20	PASI-C
92275423050	**TRIP BLANK 2**	EPA 8260	CCL	20	PASI-C

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(704)875-9092

SUMMARY OF DETECTION

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92275423002	**MW-3R**					
EPA 8011	1,2-Dibromoethane (EDB)	0 028	ug/L	0.019	11/13/15 00:23	
EPA 8260	tert-Amyl Alcohol	1970	ug/L	100	11/12/15 05:12	
EPA 8260	Benzene	1710	ug/L	100	11/12/15 16:14	
EPA 8260	tert-Butyl Alcohol	85 0J	ug/L	100	11/12/15 05 12	
EPA 8260	1,2-Dichloroethane	6 5	ug/L	5 0	11/12/15 05:12	
EPA 8260	Ethylbenzene	168	ug/L	100	11/12/15 16.14	
EPA 8260	Methyl-tert-butyl ether	38.8	ug/L	5.0	11/12/15 05 12	
EPA 8260	Naphthalene	157	ug/L	100	11/12/15 16:14	
EPA 8260	Toluene	81.6	ug/L	5 0	11/12/15 05:12	
EPA 8260	Xylene (Total)	326	ug/L	10.0	11/12/15 05:12	
EPA 8260	m&p-Xylene	278	ug/L	10.0	11/12/15 05.12	
EPA 8260	o-Xylene	49 0	ug/L	5.0	11/12/15 05 12	
92275423004	**MW-7**					
EPA 8260	Naphthalene	2.2J	ug/L	5 0	11/12/15 05:30	
92275423005	**MW-8R**					
EPA 8260	Ethylbenzene	3.2J	ug/L	5.0	11/12/15 05 47	
EPA 8260	Naphthalene	15.6	ug/L	5.0	11/12/15 05:47	
92275423006	**MW-9**					
EPA 8011	1,2-Dibromoethane (EDB)	2 6	ug/L	0.079	11/14/15 03:12	
EPA 8260	Benzene	1360	ug/L	125	11/12/15 01 02	
EPA 8260	Ethylbenzene	782	ug/L	125	11/12/15 01 02	
EPA 8260	Naphthalene	257	ug/L	125	11/12/15 01.02	
EPA 8260	Toluene	5360	ug/L	250	11/12/15 20:50	
EPA 8260	Xylene (Total)	3490	ug/L	250	11/12/15 01:02	
EPA 8260	m&p-Xylene	2010	ug/L	250	11/12/15 01 02	
EPA 8260	o-Xylene	1480	ug/L	125	11/12/15 01 02	
92275423007	**MW-10**					
EPA 8011	1,2-Dibromoethane (EDB)	1 4	ug/L	0 040	11/13/15 01:04	
EPA 8260	Benzene	826	ug/L	250	11/12/15 01 19	
EPA 8260	Ethylbenzene	472	ug/L	250	11/12/15 01 19	
EPA 8260	Naphthalene	152J	ug/L	250	11/12/15 01.19	
EPA 8260	Toluene	3900	ug/L	250	11/12/15 01:19	
EPA 8260	Xylene (Total)	2200	ug/L	500	11/12/15 01 19	
EPA 8260	m&p-Xylene	1280	ug/L	500	11/12/15 01 19	
EPA 8260	o-Xylene	918	ug/L	250	11/12/15 01 19	
92275423012	**MW-18**					
EPA 8011	1,2-Dibromoethane (EDB)	0 056	ug/L	0.019	11/13/15 01:25	
EPA 8260	Toluene	201	ug/L	12.5	11/12/15 02.10	
92275423015	**MW-21**					
EPA 8260	Methyl-tert-butyl ether	3.3J	ug/L	5 0	11/17/15 14:10	
92275423023	**MW-32**					
EPA 8011	1,2-Dibromoethane (EDB)	0 91	ug/L	0 020	11/13/15 05 32	
EPA 8260	Ethylbenzene	2220J	ug/L	5000	11/12/15 03 01	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92275423023	**MW-32**					
EPA 8260	Toluene	117000	ug/L	5000	11/12/15 03 01	
EPA 8260	m&p-Xylene	8890J	ug/L	10000	11/12/15 03.01	
EPA 8260	o-Xylene	4020J	ug/L	5000	11/12/15 03:01	
92275423025	**MW-34**					
EPA 8260	Benzene	71 5J	ug/L	125	11/12/15 03:18	
EPA 8260	Ethylbenzene	1840	ug/L	125	11/12/15 03:18	
EPA 8260	Naphthalene	568	ug/L	125	11/12/15 03 18	
EPA 8260	Toluene	467	ug/L	125	11/12/15 03 18	
EPA 8260	Xylene (Total)	1700	ug/L	250	11/12/15 03 18	
EPA 8260	m&p-Xylene	1540	ug/L	250	11/12/15 03 18	
EPA 8260	o-Xylene	160	ug/L	125	11/12/15 03.18	
92275423028	**MW-37**					
EPA 8011	1,2-Dibromoethane (EDB)	1.7	ug/L	0.042	11/13/15 21:49	
EPA 8260	Benzene	4440	ug/L	125	11/12/15 03:35	
EPA 8260	Ethylbenzene	2130	ug/L	125	11/12/15 03:35	
EPA 8260	Naphthalene	1000	ug/L	125	11/12/15 03 35	
EPA 8260	Toluene	15800	ug/L	500	11/12/15 21:07	
EPA 8260	Xylene (Total)	9750	ug/L	250	11/12/15 03:35	
EPA 8260	m&p-Xylene	6520	ug/L	250	11/12/15 03.35	
EPA 8260	o-Xylene	3230	ug/L	125	11/12/15 03:35	
92275423032	**MW-41**					
EPA 8260	Ethylbenzene	2 9J	ug/L	5.0	11/11/15 23 20	
92275423036	**RW 3**					
EPA 8260	Benzene	705	ug/L	50.0	11/12/15 03.52	
EPA 8260	Ethylbenzene	2560	ug/L	125	11/12/15 21 24	
EPA 8260	Naphthalene	941	ug/L	50.0	11/12/15 03 52	
EPA 8260	Toluene	428	ug/L	50.0	11/12/15 03 52	
EPA 8260	Xylene (Total)	2030	ug/L	100	11/12/15 03:52	
EPA 8260	m&p-Xylene	1780	ug/L	100	11/12/15 03:52	
EPA 8260	o-Xylene	247	ug/L	50 0	11/12/15 03:52	
92275423037	**RW 4**					
EPA 8011	1,2-Dibromoethane (EDB)	5 1	ug/L	0.20	11/16/15 19:34	
EPA 8260	tert-Amyl Alcohol	2010	ug/L	1000	11/12/15 04 09	
EPA 8260	Benzene	4530	ug/L	500	11/13/15 12 35	
EPA 8260	Ethylbenzene	3580	ug/L	500	11/13/15 12:35	
EPA 8260	Naphthalene	619	ug/L	50.0	11/12/15 04.09	
EPA 8260	Toluene	12900	ug/L	500	11/13/15 12:35	
EPA 8260	Xylene (Total)	13800	ug/L	1000	11/13/15 12:35	
EPA 8260	m&p-Xylene	9330	ug/L	1000	11/13/15 12:35	
EPA 8260	o-Xylene	4510	ug/L	500	11/13/15 12:35	
92275423038	**RW 5**					
EPA 8260	Ethylbenzene	236	ug/L	20 0	11/13/15 18 13	
EPA 8260	Naphthalene	371	ug/L	20 0	11/13/15 18:13	
EPA 8260	Toluene	20 7	ug/L	20.0	11/13/15 18 13	

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SUMMARY OF DETECTION

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92275423038	**RW 5**					
EPA 8260	Xylene (Total)	47 3	ug/L	40.0	11/13/15 18:13	
EPA 8260	m&p-Xylene	47 3	ug/L	40 0	11/13/15 18 13	
92275423039	**RW 6**					
EPA 8260	Benzene	82.9	ug/L	50 0	11/12/15 04:43	
EPA 8260	Ethylbenzene	2530	ug/L	250	11/12/15 21:59	
EPA 8260	Naphthalene	1100	ug/L	50.0	11/12/15 04:43	
EPA 8260	Toluene	5470	ug/L	250	11/12/15 21:59	
EPA 8260	Xylene (Total)	7290	ug/L	500	11/12/15 21:59	
EPA 8260	m&p-Xylene	5570	ug/L	500	11/12/15 21.59	
EPA 8260	o-Xylene	1730	ug/L	50.0	11/12/15 04:43	
92275423044	**WSW 7**					
EPA 8260	Ethyl-tert-butyl ether	0.16J	ug/L	10 0	11/11/15 20:12	
92275423045	**MW-3R DUPLICATE**					
EPA 8011	1,2-Dibromoethane (EDB)	0 040	ug/L	0 020	11/13/15 16:24	
EPA 8260	tert-Amyl Alcohol	4480	ug/L	2000	11/13/15 17:55	
EPA 8260	Benzene	1720	ug/L	100	11/13/15 17:55	
EPA 8260	Ethylbenzene	148	ug/L	100	11/13/15 17 55	
EPA 8260	Naphthalene	176	ug/L	100	11/13/15 17 55	
EPA 8260	Toluene	82.2J	ug/L	100	11/13/15 17 55	
EPA 8260	m&p-Xylene	191J	ug/L	200	11/13/15 17:55	
EPA 8260	o-Xylene	35 1J	ug/L	100	11/13/15 17:55	
92275423046	**MW-9 DUPLICATE**					
EPA 8011	1,2-Dibromoethane (EDB)	3.1	ug/L	0.10	11/16/15 19.54	
EPA 8260	tert-Amyl Alcohol	8220	ug/L	5000	11/13/15 20:46	
EPA 8260	Benzene	1450	ug/L	250	11/13/15 20:46	
EPA 8260	Ethylbenzene	869	ug/L	250	11/13/15 20:46	
EPA 8260	Naphthalene	308	ug/L	250	11/13/15 20 46	
EPA 8260	Toluene	5140	ug/L	250	11/13/15 20.46	
EPA 8260	Xylene (Total)	4010	ug/L	500	11/13/15 20:46	
EPA 8260	m&p-Xylene	2330	ug/L	500	11/13/15 20:46	
EPA 8260	o-Xylene	1680	ug/L	250	11/13/15 20 46	
92275423047	**MW-37 DUPLICATE**					
EPA 8011	1,2-Dibromoethane (EDB)	1.7	ug/L	0.080	11/16/15 20:14	
EPA 8260	Benzene	4620	ug/L	500	11/13/15 21:03	
EPA 8260	Ethylbenzene	2540	ug/L	500	11/13/15 21 03	
EPA 8260	Naphthalene	1060	ug/L	500	11/13/15 21 03	
EPA 8260	Toluene	16400	ug/L	500	11/13/15 21 03	
EPA 8260	Xylene (Total)	11900	ug/L	1000	11/13/15 21:03	
EPA 8260	m&p-Xylene	8220	ug/L	1000	11/13/15 21:03	
EPA 8260	o-Xylene	3660	ug/L	500	11/13/15 21 03	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-2R **Lab ID: 92275423001** Collected 11/09/15 12:30 Received: 11/10/15 11:42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method. EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/11/15 00:12	11/11/15 11:05	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	91	%	60-140		1	11/11/15 00:12	11/11/15 11:05	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/16/15 18 36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/16/15 18 36	994-05-8	
Benzene	ND	ug/L	5 0	1.7	1		11/16/15 18:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/16/15 18:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/16/15 18:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/16/15 18:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1 8	1		11/16/15 18 36	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/16/15 18 36	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/16/15 18:36	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1 6	1		11/16/15 18 36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/16/15 18.36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/16/15 18:36	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/16/15 18:36	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/16/15 18:36	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/16/15 18:36	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/16/15 18 36	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/16/15 18 36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		11/16/15 18 36	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		11/16/15 18.36	17060-07-0	
Toluene-d8 (S)	115	%	70-130		1		11/16/15 18:36	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-3R **Lab ID: 92275423002** Collected: 11/09/15 13:06 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.028**	ug/L	0.019	0.019	1	11/12/15 18:13	11/13/15 00:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	99	%	60-140		1	11/12/15 18:13	11/13/15 00:23	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**1970**	ug/L	100	76.8	1		11/12/15 05:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 05:12	994-05-8	
Benzene	**1710**	ug/L	100	34.0	20		11/12/15 16:14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 05:12	624-95-3	
tert-Butyl Alcohol	**85.0J**	ug/L	100	57.7	1		11/12/15 05:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 05:12	762-75-4	
1,2-Dichloroethane	**6.5**	ug/L	5.0	1.8	1		11/12/15 05:12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 05:12	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 05:12	64-17-5	
Ethylbenzene	**168**	ug/L	100	32.0	20		11/12/15 16:14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 05:12	637-92-3	
Methyl-tert-butyl ether	**38.8**	ug/L	5.0	1.7	1		11/12/15 05:12	1634-04-4	
Naphthalene	**157**	ug/L	100	40.0	20		11/12/15 16:14	91-20-3	
Toluene	**81.6**	ug/L	5.0	1.6	1		11/12/15 05:12	108-88-3	
Xylene (Total)	**326**	ug/L	10.0	2.7	1		11/12/15 05:12	1330-20-7	
m&p-Xylene	**278**	ug/L	10.0	3.1	1		11/12/15 05:12	179601-23-1	
o-Xylene	**49.0**	ug/L	5.0	1.6	1		11/12/15 05:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 05:12	460-00-4	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		11/12/15 05:12	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/12/15 05:12	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-4D **Lab ID: 92275423003** Collected 11/09/15 12.54 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/11/15 00:12	11/11/15 11:44	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	90	%	60-140		1	11/11/15 00 12	11/11/15 11.44	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/16/15 18 53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/16/15 18:53	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/16/15 18:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/16/15 18:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/16/15 18 53	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/16/15 18 53	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/16/15 18.53	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/16/15 18:53	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/16/15 18 53	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1 6	1		11/16/15 18:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3 6	1		11/16/15 18:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/16/15 18:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/16/15 18:53	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/16/15 18:53	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/16/15 18.53	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/16/15 18:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/16/15 18.53	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		11/16/15 18:53	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		1		11/16/15 18:53	17060-07-0	
Toluene-d8 (S)	117	%	70-130		1		11/16/15 18:53	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No . 92275423

Sample: MW-7 **Lab ID: 92275423004** Collected: 11/09/15 11:54 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/11/15 00:12	11/11/15 12:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	91	%	60-140		1	11/11/15 00:12	11/11/15 12:42	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/12/15 05:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/12/15 05:30	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/12/15 05 30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 05 30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 05:30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 05:30	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1.8	1		11/12/15 05:30	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/12/15 05:30	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 05:30	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1 6	1		11/12/15 05:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 05 30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 05.30	1634-04-4	
Naphthalene	**2.2J**	ug/L	5.0	2.0	1		11/12/15 05 30	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 05:30	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 05.30	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3 1	1		11/12/15 05:30	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/12/15 05:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/12/15 05:30	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		11/12/15 05.30	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/12/15 05 30	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-8R **Lab ID: 92275423005** Collected: 11/09/15 10:55 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/11/15 00:13	11/11/15 13:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	77	%	60-140		1	11/11/15 00:13	11/11/15 13:01	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 05:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 05:47	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 05:47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 05:47	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 05:47	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 05:47	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 05:47	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 05:47	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 05:47	64-17-5	
Ethylbenzene	**3.2J**	ug/L	5.0	1.6	1		11/12/15 05:47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 05:47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 05:47	1634-04-4	
Naphthalene	**15.6**	ug/L	5.0	2.0	1		11/12/15 05:47	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 05:47	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 05:47	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 05:47	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 05:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 05:47	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		11/12/15 05:47	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/12/15 05:47	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Sample: MW-9 **Lab ID: 92275423006** Collected: 11/09/15 11:07 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	**2.6**	ug/L	0 079	0.079	4	11/13/15 14:24	11/14/15 03.12	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	138	%	60-140		4	11/13/15 14 24	11/14/15 03.12	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2500	1920	25		11/12/15 01 02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	250	85.0	25		11/12/15 01 02	994-05-8	
Benzene	**1360**	ug/L	125	42.5	25		11/12/15 01:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2500	802	25		11/12/15 01:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2500	1440	25		11/12/15 01 02	75-65-0	
tert-Butyl Formate	ND	ug/L	1250	182	25		11/12/15 01 02	762-75-4	
1,2-Dichloroethane	ND	ug/L	125	45.0	25		11/12/15 01 02	107-06-2	
Diisopropyl ether	ND	ug/L	125	42 5	25		11/12/15 01:02	108-20-3	
Ethanol	ND	ug/L	5000	3440	25		11/12/15 01:02	64-17-5	
Ethylbenzene	**782**	ug/L	125	40.0	25		11/12/15 01:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	250	90.0	25		11/12/15 01 02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	125	42.5	25		11/12/15 01 02	1634-04-4	
Naphthalene	**257**	ug/L	125	50 0	25		11/12/15 01 02	91-20-3	
Toluene	**5360**	ug/L	250	80.0	50		11/12/15 20:50	108-88-3	
Xylene (Total)	**3490**	ug/L	250	67.5	25		11/12/15 01 02	1330-20-7	
m&p-Xylene	**2010**	ug/L	250	77.5	25		11/12/15 01 02	179601-23-1	
o-Xylene	**1480**	ug/L	125	40.0	25		11/12/15 01 02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		25		11/12/15 01 02	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		25		11/12/15 01 02	17060-07-0	
Toluene-d8 (S)	104	%	70-130		25		11/12/15 01:02	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-10 **Lab ID: 92275423007** Collected 11/09/15 11:25 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**1.4**	ug/L	0.040	0.040	2	11/12/15 18:13	11/13/15 01:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	86	%	60-140		2	11/12/15 18:13	11/13/15 01 04	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	5000	3840	50		11/12/15 01.19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		11/12/15 01:19	994-05-8	
Benzene	**826**	ug/L	250	85 0	50		11/12/15 01:19	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		11/12/15 01:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		11/12/15 01 19	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		11/12/15 01 19	762-75-4	
1,2-Dichloroethane	ND	ug/L	250	90.0	50		11/12/15 01 19	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		11/12/15 01:19	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		11/12/15 01 19	64-17-5	
Ethylbenzene	**472**	ug/L	250	80.0	50		11/12/15 01:19	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		11/12/15 01:19	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		11/12/15 01:19	1634-04-4	
Naphthalene	**152J**	ug/L	250	100	50		11/12/15 01:19	91-20-3	
Toluene	**3900**	ug/L	250	80 0	50		11/12/15 01 19	108-88-3	
Xylene (Total)	**2200**	ug/L	500	135	50		11/12/15 01 19	1330-20-7	
m&p-Xylene	**1280**	ug/L	500	155	50		11/12/15 01 19	179601-23-1	
o-Xylene	**918**	ug/L	250	80 0	50		11/12/15 01 19	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		50		11/12/15 01:19	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		50		11/12/15 01:19	17060-07-0	
Toluene-d8 (S)	109	%	70-130		50		11/12/15 01:19	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-11 **Lab ID: 92275423008** Collected: 11/09/15 11 43 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/11/15 00 13	11/11/15 14:18	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	97	%	60-140		1	11/11/15 00 13	11/11/15 14:18	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/17/15 13:36	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/17/15 13 36	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/17/15 13 36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/17/15 13:36	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/17/15 13:36	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7 3	1		11/17/15 13:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/17/15 13:36	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/17/15 13 36	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/17/15 13 36	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/17/15 13:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/17/15 13:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/17/15 13:36	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/17/15 13 36	91-20-3	
Toluene	ND	ug/L	5 0	1.6	1		11/17/15 13:36	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/17/15 13:36	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3 1	1		11/17/15 13:36	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/17/15 13:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/17/15 13:36	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		11/17/15 13:36	17060-07-0	
Toluene-d8 (S)	123	%	70-130		1		11/17/15 13 36	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-14 **Lab ID: 92275423009** Collected 11/09/15 10:20 Received 11/10/15 11:42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/11/15 00 13	11/11/15 14:37	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	88	%	60-140		1	11/11/15 00.13	11/11/15 14:37	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 06:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/12/15 06:04	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/12/15 06.04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 06 04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 06.04	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/12/15 06 04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 06 04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06 04	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 06 04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 06:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 06:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/12/15 06:04	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/12/15 06:04	91-20-3	
Toluene	ND	ug/L	5.0	1 6	1		11/12/15 06.04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 06 04	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3 1	1		11/12/15 06 04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/12/15 06 04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/12/15 06 04	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		11/12/15 06.04	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/12/15 06:04	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-16 **Lab ID: 92275423010** Collected: 11/09/15 12:07 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/11/15 00:13	11/11/15 14:56	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	93	%	60-140		1	11/11/15 00:13	11/11/15 14:56	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/17/15 13:53	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/17/15 13:53	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/17/15 13:53	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/17/15 13:53	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/17/15 13:53	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/17/15 13:53	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/17/15 13:53	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/17/15 13:53	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/17/15 13:53	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/17/15 13:53	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/17/15 13:53	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/17/15 13:53	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/17/15 13:53	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/17/15 13:53	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/17/15 13:53	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/17/15 13:53	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/17/15 13:53	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/17/15 13:53	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/17/15 13:53	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		11/17/15 13:53	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: MW-17 **Lab ID: 92275423011** Collected 11/09/15 11:43 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method. EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/11/15 00:13	11/11/15 15:16	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	80	%	60-140		1	11/11/15 00:13	11/11/15 15:16	301-79-56	
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/12/15 06:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/12/15 06:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 06:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 06:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 06 22	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7 3	1		11/12/15 06 22	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1 8	1		11/12/15 06:22	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/12/15 06:22	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 06:22	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 06:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 06 22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 06 22	91-20-3	
Toluene	ND	ug/L	5.0	1 6	1		11/12/15 06.22	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2 7	1		11/12/15 06 22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 06:22	179601-23-1	
o-Xylene	ND	ug/L	5 0	1.6	1		11/12/15 06:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 06:22	460-00-4	
1,2-Dichloroethane-d4 (S)	117	%	70-130		1		11/12/15 06:22	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/12/15 06:22	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: MW-18 **Lab ID: 92275423012** Collected: 11/09/15 12:04 Received: 11/10/15 11.42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.056**	ug/L	0.019	0.019	1	11/12/15 18:13	11/13/15 01.25	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	100	%	60-140		1	11/12/15 18:13	11/13/15 01:25	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	250	192	2.5		11/12/15 02 10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	25.0	8.5	2 5		11/12/15 02 10	994-05-8	
Benzene	ND	ug/L	12.5	4.2	2 5		11/12/15 02.10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	250	80 2	2.5		11/12/15 02:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	250	144	2.5		11/12/15 02:10	75-65-0	
tert-Butyl Formate	ND	ug/L	125	18.2	2.5		11/12/15 02 10	762-75-4	
1,2-Dichloroethane	ND	ug/L	12.5	4 5	2 5		11/12/15 02:10	107-06-2	
Diisopropyl ether	ND	ug/L	12 5	4.2	2.5		11/12/15 02.10	108-20-3	
Ethanol	ND	ug/L	500	344	2 5		11/12/15 02 10	64-17-5	
Ethylbenzene	ND	ug/L	12.5	4 0	2.5		11/12/15 02 10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	25.0	9 0	2.5		11/12/15 02:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	12.5	4 2	2.5		11/12/15 02.10	1634-04-4	
Naphthalene	ND	ug/L	12.5	5.0	2 5		11/12/15 02 10	91-20-3	
Toluene	**201**	ug/L	12 5	4.0	2 5		11/12/15 02 10	108-88-3	
Xylene (Total)	ND	ug/L	25 0	6.8	2.5		11/12/15 02 10	1330-20-7	
m&p-Xylene	ND	ug/L	25.0	7 8	2.5		11/12/15 02 10	179601-23-1	
o-Xylene	ND	ug/L	12.5	4 0	2.5		11/12/15 02.10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		2.5		11/12/15 02:10	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		2 5		11/12/15 02:10	17060-07-0	
Toluene-d8 (S)	107	%	70-130		2.5		11/12/15 02 10	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-19 **Lab ID: 92275423013** Collected: 11/09/15 10:31 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	11/11/15 00:14	11/11/15 15:54	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	11/11/15 00:14	11/11/15 15:54	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 06:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 06:39	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 06:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 06:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 06:39	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 06:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 06:39	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06:39	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 06:39	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 06:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 06:39	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 06:39	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 06:39	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 06:39	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 06:39	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 06:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 06:39	460-00-4	
1,2-Dichloroethane-d4 (S)	119	%	70-130		1		11/12/15 06:39	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 06:39	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-20 **Lab ID: 92275423014** Collected 11/09/15 09:56 Received 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method. EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/11/15 00:14	11/11/15 16:13	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	11/11/15 00:14	11/11/15 16:13	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 06:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 06:56	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 06:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 06:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 06:56	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 06:56	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 06:56	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06:56	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 06:56	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 06:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 06:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 06:56	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 06:56	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 06:56	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 06:56	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 06:56	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 06:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/12/15 06:56	460-00-4	
1,2-Dichloroethane-d4 (S)	119	%	70-130		1		11/12/15 06:56	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 06:56	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No : 92275423

Sample: MW-21 **Lab ID: 92275423015** Collected 11/09/15 10:53 Received: 11/10/15 11 42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/11/15 00:14	11/11/15 16 32	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	84	%	60-140		1	11/11/15 00:14	11/11/15 16:32	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/17/15 14 10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/17/15 14:10	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/17/15 14:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/17/15 14:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/17/15 14:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/17/15 14 10	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/17/15 14.10	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/17/15 14 10	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/17/15 14 10	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/17/15 14.10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/17/15 14:10	637-92-3	
Methyl-tert-butyl ether	**3.3J**	ug/L	5.0	1 7	1		11/17/15 14:10	1634-04-4	
Naphthalene	ND	ug/L	5.0	2 0	1		11/17/15 14:10	91-20-3	
Toluene	ND	ug/L	5 0	1 6	1		11/17/15 14 10	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/17/15 14 10	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/17/15 14 10	179601-23-1	
o-Xylene	ND	ug/L	5 0	1.6	1		11/17/15 14 10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/17/15 14:10	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/17/15 14:10	17060-07-0	
Toluene-d8 (S)	118	%	70-130		1		11/17/15 14:10	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Sample: MW-24 **Lab ID: 92275423016** Collected: 11/09/15 12.39 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 019	0.019	1	11/11/15 00:14	11/11/15 16:52	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	86	%	60-140		1	11/11/15 00:14	11/11/15 16 52	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/16/15 19:10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/16/15 19 10	994-05-8	
Benzene	ND	ug/L	5 0	1.7	1		11/16/15 19:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/16/15 19:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/16/15 19:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/16/15 19:10	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/16/15 19:10	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/16/15 19:10	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/16/15 19:10	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/16/15 19:10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/16/15 19:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/16/15 19 10	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/16/15 19.10	91-20-3	
Toluene	ND	ug/L	5.0	1 6	1		11/16/15 19 10	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2 7	1		11/16/15 19:10	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/16/15 19:10	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/16/15 19 10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		11/16/15 19 10	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		11/16/15 19:10	17060-07-0	
Toluene-d8 (S)	116	%	70-130		1		11/16/15 19 10	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-25 **Lab ID: 92275423017** Collected 11/09/15 12:52 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/11/15 00:14	11/11/15 17:11	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	96	%	60-140		1	11/11/15 00:14	11/11/15 17:11	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 07:14	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/12/15 07:14	994-05-8	
Benzene	ND	ug/L	5 0	1.7	1		11/12/15 07 14	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/12/15 07 14	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 07 14	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7 3	1		11/12/15 07.14	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/12/15 07:14	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/12/15 07:14	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 07 14	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 07 14	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/12/15 07:14	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/12/15 07:14	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/12/15 07:14	91-20-3	
Toluene	ND	ug/L	5 0	1 6	1		11/12/15 07 14	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 07 14	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 07 14	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 07 14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/12/15 07:14	460-00-4	
1,2-Dichloroethane-d4 (S)	119	%	70-130		1		11/12/15 07:14	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/12/15 07:14	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-26 **Lab ID: 92275423018** Collected: 11/09/15 12:20 Received 11/10/15 11.42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/12/15 18 13	11/13/15 01 45	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	11/12/15 18:13	11/13/15 01:45	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 07:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/12/15 07.48	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/12/15 07 48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/12/15 07:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/12/15 07:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 07:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/12/15 07:48	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1.7	1		11/12/15 07 48	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 07.48	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 07.48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/12/15 07.48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 07:48	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/12/15 07:48	91-20-3	
Toluene	ND	ug/L	5 0	1 6	1		11/12/15 07:48	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 07:48	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3 1	1		11/12/15 07.48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 07 48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 07:48	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 07:48	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/12/15 07 48	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Sample: MW-27 **Lab ID: 92275423019** Collected: 11/09/15 10 11 Received: 11/10/15 11 42 Matrix. Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/11/15 00:14	11/11/15 17 50	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	89	%	60-140		1	11/11/15 00:14	11/11/15 17 50	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 08 06	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3 4	1		11/12/15 08 06	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/12/15 08:06	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 08:06	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 08:06	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/12/15 08 06	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 08.06	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/12/15 08 06	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 08.06	64-17-5	L3
Ethylbenzene	ND	ug/L	5 0	1.6	1		11/12/15 08:06	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3 6	1		11/12/15 08:06	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1.7	1		11/12/15 08 06	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 08 06	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 08:06	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 08:06	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3 1	1		11/12/15 08:06	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/12/15 08:06	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/12/15 08 06	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 08 06	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 08 06	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-28 **Lab ID: 92275423020** Collected: 11/09/15 10 32 Received: 11/10/15 11 42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method. EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:35	11/13/15 04:30	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	98	%	60-140		1	11/12/15 19:35	11/13/15 04 30	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 08.23	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/12/15 08:23	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 08:23	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/12/15 08:23	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 08:23	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7 3	1		11/12/15 08 23	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/12/15 08:23	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/12/15 08:23	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 08:23	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 08:23	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/12/15 08:23	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/12/15 08:23	1634-04-4	
Naphthalene	ND	ug/L	5 0	2.0	1		11/12/15 08:23	91-20-3	
Toluene	ND	ug/L	5 0	1 6	1		11/12/15 08.23	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 08 23	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/12/15 08:23	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 08:23	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 08 23	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 08 23	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/12/15 08 23	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-30 **Lab ID: 92275423021** Collected: 11/09/15 11:40 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19 35	11/13/15 04:51	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	11/12/15 19 35	11/13/15 04.51	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 08:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/12/15 08.40	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/12/15 08:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/12/15 08:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/12/15 08:40	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 08:40	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/12/15 08 40	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1 7	1		11/12/15 08 40	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 08.40	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/12/15 08:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/12/15 08:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 08:40	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 08:40	91-20-3	
Toluene	ND	ug/L	5 0	1.6	1		11/12/15 08.40	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 08 40	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 08 40	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/12/15 08:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 08:40	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 08:40	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 08.40	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

Sample: MW-31 **Lab ID: 92275423022** Collected: 11/09/15 11:17 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:36	11/13/15 05:12	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	97	%	60-140		1	11/12/15 19:36	11/13/15 05:12	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 08:58	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 08:58	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 08:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 08:58	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 08:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 08:58	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 08:58	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 08:58	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 08:58	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 08:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 08:58	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 08:58	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 08:58	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 08:58	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 08:58	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 08:58	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 08:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		11/12/15 08:58	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 08:58	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 08:58	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-32 **Lab ID: 92275423023** Collected 11/09/15 12:25 Received: 11/10/15 11 42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.91**	ug/L	0.020	0.020	1	11/12/15 19:36	11/13/15 05:32	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	105	%	60-140		1	11/12/15 19:36	11/13/15 05 32	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100000	76800	1000		11/12/15 03:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10000	3400	1000		11/12/15 03:01	994-05-8	
Benzene	ND	ug/L	5000	1700	1000		11/12/15 03:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100000	32100	1000		11/12/15 03:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100000	57700	1000		11/12/15 03:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50000	7300	1000		11/12/15 03:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	5000	1800	1000		11/12/15 03:01	107-06-2	
Diisopropyl ether	ND	ug/L	5000	1700	1000		11/12/15 03:01	108-20-3	
Ethanol	ND	ug/L	200000	138000	1000		11/12/15 03 01	64-17-5	
Ethylbenzene	**2220J**	ug/L	5000	1600	1000		11/12/15 03 01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10000	3600	1000		11/12/15 03:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5000	1700	1000		11/12/15 03:01	1634-04-4	
Naphthalene	ND	ug/L	5000	2000	1000		11/12/15 03:01	91-20-3	
Toluene	**117000**	ug/L	5000	1600	1000		11/12/15 03:01	108-88-3	
Xylene (Total)	ND	ug/L	10000	2700	1000		11/12/15 03:01	1330-20-7	
m&p-Xylene	**8890J**	ug/L	10000	3100	1000		11/12/15 03:01	179601-23-1	
o-Xylene	**4020J**	ug/L	5000	1600	1000		11/12/15 03 01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1000		11/12/15 03.01	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		1000		11/12/15 03 01	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1000		11/12/15 03.01	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: MW-33 **Lab ID: 92275423024** Collected: 11/09/15 13:45 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19:36	11/13/15 06:34	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	11/12/15 19:36	11/13/15 06 34	301-79-56	
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/11/15 22 12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/11/15 22 12	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/11/15 22 12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 22:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/11/15 22:12	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/11/15 22:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/11/15 22.12	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/11/15 22.12	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 22 12	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/11/15 22.12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/11/15 22:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1.7	1		11/11/15 22:12	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/11/15 22:12	91-20-3	
Toluene	ND	ug/L	5 0	1.6	1		11/11/15 22:12	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2 7	1		11/11/15 22:12	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/11/15 22:12	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/11/15 22:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	111	%	70-130		1		11/11/15 22 12	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 22 12	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		11/11/15 22:12	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-34 **Lab ID: 92275423025** Collected: 11/09/15 13:27 Received 11/10/15 11.42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method. EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19:36	11/13/15 06:55	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	98	%	60-140		1	11/12/15 19.36	11/13/15 06 55	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2500	1920	25		11/12/15 03 18	75-85-4	
tert-Amylmethyl ether	ND	ug/L	250	85 0	25		11/12/15 03.18	994-05-8	
Benzene	**71.5J**	ug/L	125	42.5	25		11/12/15 03 18	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2500	802	25		11/12/15 03:18	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2500	1440	25		11/12/15 03:18	75-65-0	
tert-Butyl Formate	ND	ug/L	1250	182	25		11/12/15 03:18	762-75-4	
1,2-Dichloroethane	ND	ug/L	125	45.0	25		11/12/15 03:18	107-06-2	
Diisopropyl ether	ND	ug/L	125	42.5	25		11/12/15 03:18	108-20-3	
Ethanol	ND	ug/L	5000	3440	25		11/12/15 03:18	64-17-5	
Ethylbenzene	**1840**	ug/L	125	40 0	25		11/12/15 03:18	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	250	90 0	25		11/12/15 03:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	125	42 5	25		11/12/15 03 18	1634-04-4	
Naphthalene	**568**	ug/L	125	50 0	25		11/12/15 03 18	91-20-3	
Toluene	**467**	ug/L	125	40 0	25		11/12/15 03:18	108-88-3	
Xylene (Total)	**1700**	ug/L	250	67.5	25		11/12/15 03:18	1330-20-7	
m&p-Xylene	**1540**	ug/L	250	77 5	25		11/12/15 03:18	179601-23-1	
o-Xylene	**160**	ug/L	125	40 0	25		11/12/15 03:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		25		11/12/15 03:18	460-00-4	
1,2-Dichloroethane-d4 (S)	105	%	70-130		25		11/12/15 03:18	17060-07-0	
Toluene-d8 (S)	108	%	70-130		25		11/12/15 03:18	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No : 92275423

Sample: MW-35 **Lab ID: 92275423026** Collected: 11/09/15 13:42 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method. EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:36	11/13/15 07:36	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	94	%	60-140		1	11/12/15 19 36	11/13/15 07:36	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/12/15 09:15	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/12/15 09:15	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/12/15 09:15	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/12/15 09:15	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/12/15 09 15	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 09 15	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/12/15 09:15	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/12/15 09:15	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 09:15	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 09:15	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 09:15	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/12/15 09.15	1634-04-4	
Naphthalene	ND	ug/L	5.0	2 0	1		11/12/15 09:15	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 09:15	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/12/15 09:15	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 09 15	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/12/15 09 15	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/12/15 09 15	460-00-4	
1,2-Dichloroethane-d4 (S)	121	%	70-130		1		11/12/15 09 15	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		11/12/15 09 15	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: MW-36 **Lab ID: 92275423027** Collected: 11/09/15 09:35 Received 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19 36	11/13/15 07:56	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	98	%	60-140		1	11/12/15 19 36	11/13/15 07.56	301-79-56	
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/12/15 09:33	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 09:33	994-05-8	
Benzene	ND	ug/L	5 0	1.7	1		11/12/15 09:33	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 09:33	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 09:33	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7 3	1		11/12/15 09.33	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1.8	1		11/12/15 09 33	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1.7	1		11/12/15 09 33	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 09:33	64-17-5	L3
Ethylbenzene	ND	ug/L	5 0	1.6	1		11/12/15 09:33	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/12/15 09:33	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/12/15 09:33	1634-04-4	
Naphthalene	ND	ug/L	5.0	2 0	1		11/12/15 09 33	91-20-3	
Toluene	ND	ug/L	5.0	1 6	1		11/12/15 09:33	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2 7	1		11/12/15 09.33	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/12/15 09 33	179601-23-1	
o-Xylene	ND	ug/L	5 0	1.6	1		11/12/15 09.33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/12/15 09:33	460-00-4	
1,2-Dichloroethane-d4 (S)	120	%	70-130		1		11/12/15 09:33	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		11/12/15 09:33	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-37 **Lab ID: 92275423028** Collected: 11/09/15 09.54 Received: 11/10/15 11:42 Matrix. Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**1.7**	ug/L	0 042	0 042	2	11/12/15 19:37	11/13/15 21 49	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	105	%	60-140		2	11/12/15 19:37	11/13/15 21 49	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2500	1920	25		11/12/15 03:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	250	85.0	25		11/12/15 03:35	994-05-8	
Benzene	**4440**	ug/L	125	42.5	25		11/12/15 03 35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2500	802	25		11/12/15 03 35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2500	1440	25		11/12/15 03.35	75-65-0	
tert-Butyl Formate	ND	ug/L	1250	182	25		11/12/15 03:35	762-75-4	
1,2-Dichloroethane	ND	ug/L	125	45 0	25		11/12/15 03:35	107-06-2	
Diisopropyl ether	ND	ug/L	125	42.5	25		11/12/15 03.35	108-20-3	
Ethanol	ND	ug/L	5000	3440	25		11/12/15 03:35	64-17-5	
Ethylbenzene	**2130**	ug/L	125	40.0	25		11/12/15 03 35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	250	90 0	25		11/12/15 03 35	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	125	42.5	25		11/12/15 03:35	1634-04-4	
Naphthalene	**1000**	ug/L	125	50 0	25		11/12/15 03:35	91-20-3	
Toluene	**15800**	ug/L	500	160	100		11/12/15 21:07	108-88-3	
Xylene (Total)	**9750**	ug/L	250	67.5	25		11/12/15 03 35	1330-20-7	
m&p-Xylene	**6520**	ug/L	250	77.5	25		11/12/15 03 35	179601-23-1	
o-Xylene	**3230**	ug/L	125	40 0	25		11/12/15 03.35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		25		11/12/15 03:35	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		25		11/12/15 03 35	17060-07-0	
Toluene-d8 (S)	102	%	70-130		25		11/12/15 03 35	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-38 **Lab ID: 92275423029** Collected: 11/09/15 08:54 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/12/15 19:37	11/13/15 08.38	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	112	%	60-140		1	11/12/15 19 37	11/13/15 08:38	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/12/15 09 50	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 09:50	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 09:50	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 09:50	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 09:50	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7 3	1		11/12/15 09 50	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 09.50	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1.7	1		11/12/15 09:50	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 09:50	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/12/15 09:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3 6	1		11/12/15 09:50	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1.7	1		11/12/15 09 50	1634-04-4	
Naphthalene	ND	ug/L	5 0	2.0	1		11/12/15 09 50	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 09 50	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/12/15 09:50	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3 1	1		11/12/15 09:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/12/15 09:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		11/12/15 09 50	460-00-4	
1,2-Dichloroethane-d4 (S)	122	%	70-130		1		11/12/15 09:50	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		11/12/15 09:50	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-39 **Lab ID: 92275423030** Collected 11/09/15 15:08 Received 11/10/15 11 42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:37	11/13/15 08 58	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	11/12/15 19 37	11/13/15 08:58	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/11/15 22 29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3 4	1		11/11/15 22 29	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/11/15 22:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 22:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 22:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/11/15 22:29	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/11/15 22:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/11/15 22:29	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 22 29	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1 6	1		11/11/15 22 29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3 6	1		11/11/15 22:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/11/15 22:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2 0	1		11/11/15 22:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 22:29	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/11/15 22 29	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/11/15 22 29	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/11/15 22 29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	108	%	70-130		1		11/11/15 22:29	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		1		11/11/15 22:29	17060-07-0	
Toluene-d8 (S)	111	%	70-130		1		11/11/15 22 29	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-40 **Lab ID: 92275423031** Collected: 11/09/15 09:09 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/12/15 19:37	11/13/15 09:19	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	128	%	60-140		1	11/12/15 19:37	11/13/15 09 19	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/11/15 22 46	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/11/15 22 46	994-05-8	
Benzene	ND	ug/L	5 0	1.7	1		11/11/15 22:46	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/11/15 22.46	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 22:46	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7 3	1		11/11/15 22:46	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1 8	1		11/11/15 22:46	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/11/15 22:46	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 22:46	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1.6	1		11/11/15 22:46	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/11/15 22 46	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1.7	1		11/11/15 22.46	1634-04-4	
Naphthalene	ND	ug/L	5 0	2.0	1		11/11/15 22:46	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 22:46	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2 7	1		11/11/15 22:46	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/11/15 22:46	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/11/15 22:46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	111	%	70-130		1		11/11/15 22 46	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/11/15 22 46	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		11/11/15 22 46	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-41 **Lab ID: 92275423032** Collected: 11/09/15 14 08 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19:37	11/13/15 09.39	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	11/12/15 19.37	11/13/15 09:39	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/11/15 23:20	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3 4	1		11/11/15 23:20	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/11/15 23 20	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 23 20	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 23:20	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/11/15 23:20	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1 8	1		11/11/15 23:20	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/11/15 23:20	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 23:20	64-17-5	
Ethylbenzene	**2.9J**	ug/L	5 0	1.6	1		11/11/15 23 20	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/11/15 23.20	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/11/15 23:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	2 0	1		11/11/15 23:20	91-20-3	
Toluene	ND	ug/L	5 0	1 6	1		11/11/15 23:20	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/11/15 23 20	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/11/15 23.20	179601-23-1	
o-Xylene	ND	ug/L	5 0	1.6	1		11/11/15 23:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	106	%	70-130		1		11/11/15 23:20	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		11/11/15 23 20	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		11/11/15 23:20	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-42 **Lab ID: 92275423033** Collected: 11/09/15 09 36 Received: 11/10/15 11.42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 019	0.019	1	11/12/15 19:37	11/13/15 09:59	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	11/12/15 19.37	11/13/15 09 59	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/11/15 23:37	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3 4	1		11/11/15 23 37	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/11/15 23.37	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32 1	1		11/11/15 23.37	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/11/15 23 37	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/11/15 23:37	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/11/15 23:37	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1 7	1		11/11/15 23:37	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 23:37	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1 6	1		11/11/15 23:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/11/15 23 37	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1 7	1		11/11/15 23:37	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/11/15 23:37	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 23:37	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/11/15 23:37	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/11/15 23:37	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/11/15 23:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	111	%	70-130		1		11/11/15 23 37	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/11/15 23.37	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		11/11/15 23 37	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: DW 1 **Lab ID: 92275423034** Collected 11/09/15 13:32 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:37	11/13/15 10:19	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	11/12/15 19:37	11/13/15 10:19	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/12/15 00:11	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/12/15 00:11	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/12/15 00:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/12/15 00:11	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/12/15 00:11	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/12/15 00:11	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/12/15 00:11	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/12/15 00:11	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/12/15 00:11	64-17-5	M1
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/12/15 00:11	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/12/15 00:11	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/12/15 00:11	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/12/15 00:11	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/12/15 00:11	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/12/15 00:11	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/12/15 00:11	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/12/15 00:11	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		11/12/15 00:11	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		11/12/15 00:11	17060-07-0	
Toluene-d8 (S)	110	%	70-130		1		11/12/15 00:11	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No: 92275423

Sample: DW 2 **Lab ID: 92275423035** Collected: 11/09/15 11:21 Received 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/12/15 19 37	11/13/15 10:40	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	107	%	60-140		1	11/12/15 19.37	11/13/15 10:40	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/11/15 21:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/11/15 21:04	994-05-8	
Benzene	ND	ug/L	5 0	1 7	1		11/11/15 21 04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 21:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 21.04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7 3	1		11/11/15 21.04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/11/15 21:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/11/15 21:04	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 21:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/11/15 21:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3 6	1		11/11/15 21 04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/11/15 21.04	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/11/15 21:04	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 21:04	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/11/15 21 04	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/11/15 21:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/11/15 21:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		11/11/15 21:04	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 21:04	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		11/11/15 21.04	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No: 92275423

Sample: RW 3 **Lab ID: 92275423036** Collected: 11/09/15 10:44 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19.37	11/13/15 11:00	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	11/12/15 19:37	11/13/15 11:00	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	1000	768	10		11/12/15 03:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34 0	10		11/12/15 03:52	994-05-8	
Benzene	**705**	ug/L	50.0	17 0	10		11/12/15 03 52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		11/12/15 03 52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		11/12/15 03:52	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		11/12/15 03:52	762-75-4	
1,2-Dichloroethane	ND	ug/L	50 0	18.0	10		11/12/15 03:52	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		11/12/15 03:52	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		11/12/15 03 52	64-17-5	
Ethylbenzene	**2560**	ug/L	125	40 0	25		11/12/15 21:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36 0	10		11/12/15 03 52	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50.0	17 0	10		11/12/15 03:52	1634-04-4	
Naphthalene	**941**	ug/L	50 0	20.0	10		11/12/15 03:52	91-20-3	
Toluene	**428**	ug/L	50 0	16.0	10		11/12/15 03:52	108-88-3	
Xylene (Total)	**2030**	ug/L	100	27 0	10		11/12/15 03:52	1330-20-7	
m&p-Xylene	**1780**	ug/L	100	31 0	10		11/12/15 03 52	179601-23-1	
o-Xylene	**247**	ug/L	50.0	16 0	10		11/12/15 03.52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		10		11/12/15 03:52	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	70-130		10		11/12/15 03:52	17060-07-0	
Toluene-d8 (S)	110	%	70-130		10		11/12/15 03 52	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: RW 4 **Lab ID: 92275423037** Collected 11/09/15 10 50 Received: 11/10/15 11.42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method. EPA 8011								
1,2-Dibromoethane (EDB)	**5.1**	ug/L	0.20	0.20	10	11/16/15 17:34	11/16/15 19:34	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		10	11/16/15 17:34	11/16/15 19 34	301-79-56	S4
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**2010**	ug/L	1000	768	10		11/12/15 04:09	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		11/12/15 04.09	994-05-8	
Benzene	**4530**	ug/L	500	170	100		11/13/15 12 35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		11/12/15 04 09	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		11/12/15 04:09	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73 0	10		11/12/15 04:09	762-75-4	
1,2-Dichloroethane	ND	ug/L	50 0	18.0	10		11/12/15 04:09	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		11/12/15 04 09	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		11/12/15 04:09	64-17-5	
Ethylbenzene	**3580**	ug/L	500	160	100		11/13/15 12:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		11/12/15 04:09	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50 0	17.0	10		11/12/15 04:09	1634-04-4	
Naphthalene	**619**	ug/L	50 0	20.0	10		11/12/15 04:09	91-20-3	
Toluene	**12900**	ug/L	500	160	100		11/13/15 12 35	108-88-3	
Xylene (Total)	**13800**	ug/L	1000	270	100		11/13/15 12 35	1330-20-7	
m&p-Xylene	**9330**	ug/L	1000	310	100		11/13/15 12:35	179601-23-1	
o-Xylene	**4510**	ug/L	500	160	100		11/13/15 12:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		10		11/12/15 04:09	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		10		11/12/15 04 09	17060-07-0	
Toluene-d8 (S)	100	%	70-130		10		11/12/15 04:09	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: RW 5 **Lab ID: 92275423038** Collected: 11/09/15 13:24 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19:37	11/13/15 11.40	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	98	%	60-140		1	11/12/15 19:37	11/13/15 11:40	301-79-56	
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	400	307	4		11/13/15 18 13	75-85-4	
tert-Amylmethyl ether	ND	ug/L	40.0	13 6	4		11/13/15 18 13	994-05-8	
Benzene	ND	ug/L	20 0	6 8	4		11/13/15 18:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	400	128	4		11/13/15 18:13	624-95-3	
tert-Butyl Alcohol	ND	ug/L	400	231	4		11/13/15 18:13	75-65-0	
tert-Butyl Formate	ND	ug/L	200	29.2	4		11/13/15 18:13	762-75-4	
1,2-Dichloroethane	ND	ug/L	20.0	7.2	4		11/13/15 18 13	107-06-2	
Diisopropyl ether	ND	ug/L	20.0	6.8	4		11/13/15 18 13	108-20-3	
Ethanol	ND	ug/L	800	551	4		11/13/15 18 13	64-17-5	L3
Ethylbenzene	**236**	ug/L	20.0	6.4	4		11/13/15 18:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	40 0	14 4	4		11/13/15 18:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	20 0	6 8	4		11/13/15 18:13	1634-04-4	
Naphthalene	**371**	ug/L	20 0	8 0	4		11/13/15 18:13	91-20-3	
Toluene	**20.7**	ug/L	20 0	6 4	4		11/13/15 18:13	108-88-3	
Xylene (Total)	**47.3**	ug/L	40.0	10 8	4		11/13/15 18 13	1330-20-7	
m&p-Xylene	**47.3**	ug/L	40.0	12 4	4		11/13/15 18 13	179601-23-1	
o-Xylene	ND	ug/L	20.0	6.4	4		11/13/15 18 13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		4		11/13/15 18:13	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		4		11/13/15 18:13	17060-07-0	
Toluene-d8 (S)	106	%	70-130		4		11/13/15 18 13	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: RW 6 **Lab ID: 92275423039** Collected: 11/09/15 15 09 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/12/15 19.38	11/13/15 12:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	11/12/15 19:38	11/13/15 12 01	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	1000	768	10		11/12/15 04:43	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		11/12/15 04:43	994-05-8	
Benzene	**82.9**	ug/L	50.0	17.0	10		11/12/15 04:43	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		11/12/15 04 43	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		11/12/15 04.43	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73 0	10		11/12/15 04:43	762-75-4	
1,2-Dichloroethane	ND	ug/L	50 0	18.0	10		11/12/15 04:43	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		11/12/15 04:43	108-20-3	
Ethanol	ND	ug/L	2000	1380	10		11/12/15 04 43	64-17-5	
Ethylbenzene	**2530**	ug/L	250	80 0	50		11/12/15 21:59	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36 0	10		11/12/15 04.43	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	50 0	17 0	10		11/12/15 04:43	1634-04-4	
Naphthalene	**1100**	ug/L	50 0	20.0	10		11/12/15 04:43	91-20-3	
Toluene	**5470**	ug/L	250	80.0	50		11/12/15 21 59	108-88-3	
Xylene (Total)	**7290**	ug/L	500	135	50		11/12/15 21:59	1330-20-7	
m&p-Xylene	**5570**	ug/L	500	155	50		11/12/15 21 59	179601-23-1	
o-Xylene	**1730**	ug/L	50.0	16 0	10		11/12/15 04:43	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		10		11/12/15 04:43	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		10		11/12/15 04:43	17060-07-0	
Toluene-d8 (S)	105	%	70-130		10		11/12/15 04 43	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: WSW 1 **Lab ID: 92275423040** Collected: 11/09/15 13:45 Received: 11/10/15 11.42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0 020	1	11/12/15 19:41	11/13/15 13.42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	11/12/15 19:41	11/13/15 13 42	301-79-56	
8260 MSV Low Level SC	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/11/15 18:30	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0 10	1		11/11/15 18:30	994-05-8	
Benzene	ND	ug/L	1 0	0.25	1		11/11/15 18 30	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50 0	1		11/11/15 18 30	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/11/15 18.30	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/11/15 18:30	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/11/15 18 30	107-06-2	
Diisopropyl ether	ND	ug/L	1 0	0.12	1		11/11/15 18 30	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/11/15 18:30	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/11/15 18:30	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0 070	1		11/11/15 18:30	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0 21	1		11/11/15 18:30	1634-04-4	
Naphthalene	ND	ug/L	1 0	0 24	1		11/11/15 18 30	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/11/15 18.30	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/11/15 18 30	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/11/15 18 30	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/11/15 18:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/11/15 18:30	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		11/11/15 18:30	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/11/15 18:30	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: WSW 2 **Lab ID: 92275423041** Collected: 11/09/15 13:40 Received: 11/10/15 11.42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/12/15 19:41	11/13/15 14:43	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	11/12/15 19:41	11/13/15 14:43	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/11/15 18:47	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/11/15 18:47	994-05-8	
Benzene	ND	ug/L	1 0	0 25	1		11/11/15 18 47	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50 0	1		11/11/15 18 47	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/11/15 18:47	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	1.9	1		11/11/15 18 47	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/11/15 18.47	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0 12	1		11/11/15 18:47	108-20-3	
Ethanol	ND	ug/L	200	33 0	1		11/11/15 18:47	64-17-5	
Ethylbenzene	ND	ug/L	1.0	0 30	1		11/11/15 18.47	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/11/15 18 47	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1 0	0.21	1		11/11/15 18:47	1634-04-4	
Naphthalene	ND	ug/L	1 0	0.24	1		11/11/15 18 47	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/11/15 18 47	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/11/15 18 47	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0 66	1		11/11/15 18.47	179601-23-1	
o-Xylene	ND	ug/L	1.0	0 23	1		11/11/15 18:47	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		11/11/15 18:47	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		11/11/15 18 47	17060-07-0	
Toluene-d8 (S)	110	%	70-130		1		11/11/15 18 47	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No: 92275423

Sample: WSW 5 **Lab ID: 92275423042** Collected: 11/09/15 13:15 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19:42	11/13/15 15:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	11/12/15 19:42	11/13/15 15 23	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50 0	1		11/11/15 19:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	0 10	1		11/11/15 19.21	994-05-8	
Benzene	ND	ug/L	1.0	0 25	1		11/11/15 19:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/11/15 19:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/11/15 19:21	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	1.9	1		11/11/15 19:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/11/15 19:21	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0 12	1		11/11/15 19:21	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/11/15 19:21	64-17-5	
Ethylbenzene	ND	ug/L	1 0	0 30	1		11/11/15 19:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		11/11/15 19:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/11/15 19 21	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/11/15 19 21	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/11/15 19:21	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0 66	1		11/11/15 19:21	1330-20-7	
m&p-Xylene	ND	ug/L	2 0	0 66	1		11/11/15 19:21	179601-23-1	
o-Xylene	ND	ug/L	1 0	0.23	1		11/11/15 19 21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		11/11/15 19 21	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		11/11/15 19:21	17060-07-0	
Toluene-d8 (S)	109	%	70-130		1		11/11/15 19:21	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: WSW 6 **Lab ID: 92275423043** Collected: 11/09/15 13 25 Received 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0 020	1	11/12/15 19 42	11/13/15 15 43	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	11/12/15 19:42	11/13/15 15:43	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50 0	1		11/11/15 19.55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/11/15 19:55	994-05-8	
Benzene	ND	ug/L	1.0	0 25	1		11/11/15 19:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/11/15 19:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/11/15 19:55	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50 0	1.9	1		11/11/15 19:55	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	1 0	0.24	1		11/11/15 19 55	107-06-2	
Diisopropyl ether	ND	ug/L	1 0	0.12	1		11/11/15 19.55	108-20-3	
Ethanol	ND	ug/L	200	33 0	1		11/11/15 19:55	64-17-5	M1
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/11/15 19 55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	0.070	1		11/11/15 19:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/11/15 19:55	1634-04-4	
Naphthalene	ND	ug/L	1.0	0 24	1		11/11/15 19:55	91-20-3	
Toluene	ND	ug/L	1.0	0 26	1		11/11/15 19:55	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0 66	1		11/11/15 19:55	1330-20-7	
m&p-Xylene	ND	ug/L	2 0	0.66	1		11/11/15 19 55	179601-23-1	
o-Xylene	ND	ug/L	1 0	0 23	1		11/11/15 19 55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/11/15 19:55	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 19:55	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		11/11/15 19:55	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: WSW 7 **Lab ID: 92275423044** Collected: 11/09/15 13:30 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	11/12/15 19:42	11/13/15 16:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	11/12/15 19:42	11/13/15 16:04	301-79-56	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		11/11/15 20:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		11/11/15 20:12	994-05-8	
Benzene	ND	ug/L	1.0	0.25	1		11/11/15 20:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		11/11/15 20:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		11/11/15 20:12	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		11/11/15 20:12	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	1.0	0.24	1		11/11/15 20:12	107-06-2	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		11/11/15 20:12	108-20-3	
Ethanol	ND	ug/L	200	33.0	1		11/11/15 20:12	64-17-5	M1
Ethylbenzene	ND	ug/L	1.0	0.30	1		11/11/15 20:12	100-41-4	
Ethyl-tert-butyl ether	**0.16J**	ug/L	10.0	0.070	1		11/11/15 20:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.21	1		11/11/15 20:12	1634-04-4	
Naphthalene	ND	ug/L	1.0	0.24	1		11/11/15 20:12	91-20-3	
Toluene	ND	ug/L	1.0	0.26	1		11/11/15 20:12	108-88-3	
Xylene (Total)	ND	ug/L	2.0	0.66	1		11/11/15 20:12	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	0.66	1		11/11/15 20:12	179601-23-1	
o-Xylene	ND	ug/L	1.0	0.23	1		11/11/15 20:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		1		11/11/15 20:12	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		11/11/15 20:12	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		11/11/15 20:12	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-3R DUPLICATE **Lab ID: 92275423045** Collected: 11/09/15 13:06 Received: 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method. EPA 8011								
1,2-Dibromoethane (EDB)	**0.040**	ug/L	0.020	0.020	1	11/12/15 19:42	11/13/15 16:24	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	111	%	60-140		1	11/12/15 19:42	11/13/15 16:24	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**4480**	ug/L	2000	1540	20		11/13/15 17.55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68 0	20		11/13/15 17:55	994-05-8	
Benzene	**1720**	ug/L	100	34 0	20		11/13/15 17.55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		11/13/15 17.55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		11/13/15 17:55	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		11/13/15 17:55	762-75-4	
1,2-Dichloroethane	ND	ug/L	100	36.0	20		11/13/15 17:55	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		11/13/15 17.55	108-20-3	
Ethanol	ND	ug/L	4000	2760	20		11/13/15 17 55	64-17-5	L3
Ethylbenzene	**148**	ug/L	100	32.0	20		11/13/15 17 55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72 0	20		11/13/15 17:55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34 0	20		11/13/15 17 55	1634-04-4	
Naphthalene	**176**	ug/L	100	40.0	20		11/13/15 17:55	91-20-3	
Toluene	**82.2J**	ug/L	100	32.0	20		11/13/15 17:55	108-88-3	
Xylene (Total)	ND	ug/L	200	54 0	20		11/13/15 17:55	1330-20-7	
m&p-Xylene	**191J**	ug/L	200	62 0	20		11/13/15 17:55	179601-23-1	
o-Xylene	**35.1J**	ug/L	100	32.0	20		11/13/15 17:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	104	%	70-130		20		11/13/15 17 55	460-00-4	
1,2-Dichloroethane-d4 (S)	101	%	70-130		20		11/13/15 17 55	17060-07-0	
Toluene-d8 (S)	104	%	70-130		20		11/13/15 17 55	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: MW-9 DUPLICATE **Lab ID: 92275423046** Collected: 11/09/15 11 07 Received: 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**3.1**	ug/L	0.10	0.10	5	11/16/15 17:34	11/16/15 19:54	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	0	%	60-140		5	11/16/15 17:34	11/16/15 19.54	301-79-56	S4
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	**8220**	ug/L	5000	3840	50		11/13/15 20:46	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		11/13/15 20:46	994-05-8	
Benzene	**1450**	ug/L	250	85.0	50		11/13/15 20:46	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		11/13/15 20 46	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		11/13/15 20 46	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		11/13/15 20.46	762-75-4	
1,2-Dichloroethane	ND	ug/L	250	90.0	50		11/13/15 20.46	107-06-2	
Diisopropyl ether	ND	ug/L	250	85 0	50		11/13/15 20:46	108-20-3	
Ethanol	ND	ug/L	10000	6890	50		11/13/15 20:46	64-17-5	L3
Ethylbenzene	**869**	ug/L	250	80.0	50		11/13/15 20:46	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		11/13/15 20 46	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85 0	50		11/13/15 20 46	1634-04-4	
Naphthalene	**308**	ug/L	250	100	50		11/13/15 20 46	91-20-3	
Toluene	**5140**	ug/L	250	80 0	50		11/13/15 20.46	108-88-3	
Xylene (Total)	**4010**	ug/L	500	135	50		11/13/15 20 46	1330-20-7	
m&p-Xylene	**2330**	ug/L	500	155	50		11/13/15 20 46	179601-23-1	
o-Xylene	**1680**	ug/L	250	80.0	50		11/13/15 20 46	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		50		11/13/15 20 46	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		50		11/13/15 20 46	17060-07-0	
Toluene-d8 (S)	104	%	70-130		50		11/13/15 20.46	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: MW-37 DUPLICATE **Lab ID: 92275423047** Collected: 11/09/15 09:54 Received 11/10/15 11:42 Matrix Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**1.7**	ug/L	0.080	0.080	4	11/16/15 17:35	11/16/15 20:14	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	109	%	60-140		4	11/16/15 17:35	11/16/15 20:14	301-79-56	
8260 MSV	Analytical Method EPA 8260								
tert-Amyl Alcohol	ND	ug/L	10000	7680	100		11/13/15 21:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	340	100		11/13/15 21:03	994-05-8	
Benzene	**4620**	ug/L	500	170	100		11/13/15 21:03	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	3210	100		11/13/15 21:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	5770	100		11/13/15 21:03	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	730	100		11/13/15 21:03	762-75-4	
1,2-Dichloroethane	ND	ug/L	500	180	100		11/13/15 21:03	107-06-2	
Diisopropyl ether	ND	ug/L	500	170	100		11/13/15 21:03	108-20-3	
Ethanol	ND	ug/L	20000	13800	100		11/13/15 21:03	64-17-5	L3
Ethylbenzene	**2540**	ug/L	500	160	100		11/13/15 21:03	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	360	100		11/13/15 21:03	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	170	100		11/13/15 21:03	1634-04-4	
Naphthalene	**1060**	ug/L	500	200	100		11/13/15 21:03	91-20-3	
Toluene	**16400**	ug/L	500	160	100		11/13/15 21:03	108-88-3	
Xylene (Total)	**11900**	ug/L	1000	270	100		11/13/15 21:03	1330-20-7	
m&p-Xylene	**8220**	ug/L	1000	310	100		11/13/15 21:03	179601-23-1	
o-Xylene	**3660**	ug/L	500	160	100		11/13/15 21:03	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		100		11/13/15 21:03	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		100		11/13/15 21:03	17060-07-0	
Toluene-d8 (S)	106	%	70-130		100		11/13/15 21:03	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Sample: FIELD BLANK **Lab ID: 92275423048** Collected: 11/09/15 13:10 Received: 11/10/15 11.42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0 020	0.020	1	11/12/15 19 42	11/13/15 17:24	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	110	%	60-140		1	11/12/15 19:42	11/13/15 17:24	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76 8	1		11/11/15 21:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/11/15 21:21	994-05-8	
Benzene	ND	ug/L	5.0	1 7	1		11/11/15 21.21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 21:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57 7	1		11/11/15 21 21	75-65-0	
tert-Butyl Formate	ND	ug/L	50 0	7.3	1		11/11/15 21 21	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/11/15 21:21	107-06-2	
Diisopropyl ether	ND	ug/L	5 0	1.7	1		11/11/15 21:21	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 21 21	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1 6	1		11/11/15 21.21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10 0	3.6	1		11/11/15 21:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/11/15 21:21	1634-04-4	
Naphthalene	ND	ug/L	5 0	2 0	1		11/11/15 21 21	91-20-3	
Toluene	ND	ug/L	5 0	1.6	1		11/11/15 21:21	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/11/15 21 21	1330-20-7	
m&p-Xylene	ND	ug/L	10 0	3.1	1		11/11/15 21:21	179601-23-1	
o-Xylene	ND	ug/L	5.0	1 6	1		11/11/15 21:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	110	%	70-130		1		11/11/15 21 21	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 21:21	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		11/11/15 21:21	2037-26-5	

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ANALYTICAL RESULTS

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

Sample: TRIP BLANK **Lab ID: 92275423049** Collected 11/09/15 13:11 Received 11/10/15 11:42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/11/15 21:38	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		11/11/15 21:38	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/11/15 21:38	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 21:38	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 21:38	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/11/15 21:38	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		11/11/15 21:38	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/11/15 21:38	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 21:38	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		11/11/15 21:38	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		11/11/15 21:38	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		11/11/15 21:38	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/11/15 21:38	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 21:38	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		11/11/15 21:38	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		11/11/15 21:38	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		11/11/15 21:38	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	109	%	70-130		1		11/11/15 21:38	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 21:38	17060-07-0	
Toluene-d8 (S)	110	%	70-130		1		11/11/15 21:38	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Sample: TRIP BLANK 2 **Lab ID: 92275423050** Collected 11/09/15 13:12 Received 11/10/15 11 42 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method. EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		11/11/15 21 55	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10 0	3.4	1		11/11/15 21:55	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		11/11/15 21:55	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		11/11/15 21:55	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		11/11/15 21 55	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		11/11/15 21 55	762-75-4	
1,2-Dichloroethane	ND	ug/L	5 0	1 8	1		11/11/15 21:55	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		11/11/15 21:55	108-20-3	
Ethanol	ND	ug/L	200	138	1		11/11/15 21:55	64-17-5	
Ethylbenzene	ND	ug/L	5 0	1.6	1		11/11/15 21:55	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3 6	1		11/11/15 21 55	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5 0	1 7	1		11/11/15 21:55	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		11/11/15 21 55	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		11/11/15 21:55	108-88-3	
Xylene (Total)	ND	ug/L	10 0	2.7	1		11/11/15 21:55	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3 1	1		11/11/15 21:55	179601-23-1	
o-Xylene	ND	ug/L	5 0	1 6	1		11/11/15 21:55	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	111	%	70-130		1		11/11/15 21 55	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	70-130		1		11/11/15 21:55	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		11/11/15 21:55	2037-26-5	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34244 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92275423040, 92275423041, 92275423042, 92275423043, 92275423044

METHOD BLANK: 1604219 Matrix: Water
Associated Lab Samples: 92275423040, 92275423041, 92275423042, 92275423043, 92275423044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	0.24	11/11/15 17:56	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	50.0	11/11/15 17:56	
Benzene	ug/L	ND	1.0	0.25	11/11/15 17:56	
Diisopropyl ether	ug/L	ND	1.0	0.12	11/11/15 17:56	
Ethanol	ug/L	ND	200	33.0	11/11/15 17:56	
Ethyl-tert-butyl ether	ug/L	ND	10.0	0.070	11/11/15 17:56	
Ethylbenzene	ug/L	ND	1.0	0.30	11/11/15 17:56	
m&p-Xylene	ug/L	ND	2.0	0.66	11/11/15 17:56	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.21	11/11/15 17:56	
Naphthalene	ug/L	ND	1.0	0.24	11/11/15 17:56	
o-Xylene	ug/L	ND	1.0	0.23	11/11/15 17:56	
tert-Amyl Alcohol	ug/L	ND	100	50.0	11/11/15 17:56	
tert-Amylmethyl ether	ug/L	ND	10.0	0.10	11/11/15 17:56	
tert-Butyl Alcohol	ug/L	ND	100	3.6	11/11/15 17:56	
tert-Butyl Formate	ug/L	ND	50.0	1.9	11/11/15 17:56	
Toluene	ug/L	ND	1.0	0.26	11/11/15 17:56	
Xylene (Total)	ug/L	ND	2.0	0.66	11/11/15 17:56	
1,2-Dichloroethane-d4 (S)	%	95	70-130		11/11/15 17:56	
4-Bromofluorobenzene (S)	%	101	70-130		11/11/15 17:56	
Toluene-d8 (S)	%	106	70-130		11/11/15 17:56	

LABORATORY CONTROL SAMPLE 1604220

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.7	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	946	95	70-130	
Benzene	ug/L	50	51.2	102	70-130	
Diisopropyl ether	ug/L	50	55.9	112	70-130	
Ethanol	ug/L	2000	2580	129	70-130	
Ethyl-tert-butyl ether	ug/L	100	110	110	70-130	
Ethylbenzene	ug/L	50	49.7	99	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	58.6	117	70-130	
Naphthalene	ug/L	50	51.5	103	70-130	
o-Xylene	ug/L	50	52.8	106	70-130	
tert-Amyl Alcohol	ug/L	1000	865	87	70-130	
tert-Amylmethyl ether	ug/L	100	106	106	70-130	
tert-Butyl Alcohol	ug/L	500	563	113	70-130	
tert-Butyl Formate	ug/L	400	406	101	70-130	
Toluene	ug/L	50	44.7	89	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No: 92275423

LABORATORY CONTROL SAMPLE: 1604220

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	160	107	70-130	
1,2-Dichloroethane-d4 (S)	%			105	70-130	
4-Bromofluorobenzene (S)	%			112	70-130	
Toluene-d8 (S)	%			95	70-130	

MATRIX SPIKE SAMPLE 1604223

Parameter	Units	92275423043 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	20.6	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	483	121	70-130	
Benzene	ug/L	ND	20	21 7	109	70-130	
Diisopropyl ether	ug/L	ND	20	23.1	115	70-130	
Ethanol	ug/L	ND	800	1560	194	70-130	M1
Ethyl-tert-butyl ether	ug/L	ND	40	43.2	108	70-130	
Ethylbenzene	ug/L	ND	20	20.8	104	70-130	
m&p-Xylene	ug/L	ND	40	42.7	107	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22 6	113	70-130	
Naphthalene	ug/L	ND	20	21 3	106	70-130	
o-Xylene	ug/L	ND	20	21 4	107	70-130	
tert-Amyl Alcohol	ug/L	ND	400	483	121	70-130	
tert-Amylmethyl ether	ug/L	ND	40	39.7	99	70-130	
tert-Butyl Alcohol	ug/L	ND	200	434	217	70-130	M1
tert-Butyl Formate	ug/L	ND	160	36.7J	23	70-130	M1
Toluene	ug/L	ND	20	19 6	98	70-130	
1,2-Dichloroethane-d4 (S)	%				107	70-130	
4-Bromofluorobenzene (S)	%				110	70-130	
Toluene-d8 (S)	%				96	70-130	

MATRIX SPIKE SAMPLE: 1604224

Parameter	Units	92275423044 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	17.1	86	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	438	109	70-130	
Benzene	ug/L	ND	20	19 2	96	70-130	
Diisopropyl ether	ug/L	ND	20	18 8	94	70-130	
Ethanol	ug/L	ND	800	1290	161	70-130	M1
Ethyl-tert-butyl ether	ug/L	0.16J	40	42.9	107	70-130	
Ethylbenzene	ug/L	ND	20	18 5	92	70-130	
m&p-Xylene	ug/L	ND	40	37 4	94	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	19 6	98	70-130	
Naphthalene	ug/L	ND	20	18 3	91	70-130	
o-Xylene	ug/L	ND	20	18.7	94	70-130	
tert-Amyl Alcohol	ug/L	ND	400	433	108	70-130	
tert-Amylmethyl ether	ug/L	ND	40	32 4	81	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

MATRIX SPIKE SAMPLE: 1604224

Parameter	Units	92275423044 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
tert-Butyl Alcohol	ug/L	ND	200	360	179	70-130	M1
tert-Butyl Formate	ug/L	ND	160	36.7J	23	70-130	M1
Toluene	ug/L	ND	20	17.6	88	70-130	
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				109	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1604221

Parameter	Units	92275423041 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	94	100	7		
4-Bromofluorobenzene (S)	%	103	105	1		
Toluene-d8 (S)	%	110	106	3		

SAMPLE DUPLICATE: 1604222

Parameter	Units	92275423042 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No · 92275423

SAMPLE DUPLICATE· 1604222

Parameter	Units	92275423042 Result	Dup Result	RPD	Max RPD	Qualifiers
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	100	2		
4-Bromofluorobenzene (S)	%	105	107	2		
Toluene-d8 (S)	%	109	108	1		

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

QC Batch. MSV/34240 Analysis Method: EPA 8260
QC Batch Method EPA 8260 Analysis Description 8260 MSV SC
Associated Lab Samples 92275423002, 92275423004, 92275423005, 92275423009, 92275423011, 92275423013

METHOD BLANK: 1604019 Matrix Water
Associated Lab Samples: 92275423002, 92275423004, 92275423005, 92275423009, 92275423011, 92275423013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1 8	11/12/15 00:18	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32 1	11/12/15 00.18	
Benzene	ug/L	ND	5 0	1 7	11/12/15 00:18	
Diisopropyl ether	ug/L	ND	5.0	1.7	11/12/15 00:18	
Ethanol	ug/L	ND	200	138	11/12/15 00:18	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3 6	11/12/15 00 18	
Ethylbenzene	ug/L	ND	5.0	1 6	11/12/15 00 18	
m&p-Xylene	ug/L	ND	10 0	3 1	11/12/15 00 18	
Methyl-tert-butyl ether	ug/L	ND	5 0	1.7	11/12/15 00:18	
Naphthalene	ug/L	ND	5.0	2.0	11/12/15 00:18	
o-Xylene	ug/L	ND	5.0	1 6	11/12/15 00.18	
tert-Amyl Alcohol	ug/L	ND	100	76 8	11/12/15 00 18	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	11/12/15 00 18	
tert-Butyl Alcohol	ug/L	ND	100	57 7	11/12/15 00:18	
tert-Butyl Formate	ug/L	ND	50 0	7.3	11/12/15 00:18	
Toluene	ug/L	ND	5.0	1.6	11/12/15 00:18	
Xylene (Total)	ug/L	ND	10.0	2 7	11/12/15 00 18	
1,2-Dichloroethane-d4 (S)	%	114	70-130		11/12/15 00 18	
4-Bromofluorobenzene (S)	%	104	70-130		11/12/15 00.18	
Toluene-d8 (S)	%	103	70-130		11/12/15 00:18	

LABORATORY CONTROL SAMPLE 1604020

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50 5	101	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	973	97	70-130	
Benzene	ug/L	50	52.5	105	70-130	
Diisopropyl ether	ug/L	50	60.5	121	70-130	
Ethanol	ug/L	2000	2380	119	70-130	
Ethyl-tert-butyl ether	ug/L	100	112	112	70-130	
Ethylbenzene	ug/L	50	50 4	101	70-130	
m&p-Xylene	ug/L	100	101	101	70-130	
Methyl-tert-butyl ether	ug/L	50	58.2	116	70-130	
Naphthalene	ug/L	50	56.9	114	70-130	
o-Xylene	ug/L	50	52.1	104	70-130	
tert-Amyl Alcohol	ug/L	1000	1100	110	70-130	
tert-Amylmethyl ether	ug/L	100	105	105	70-130	
tert-Butyl Alcohol	ug/L	500	559	112	70-130	
tert-Butyl Formate	ug/L	400	422	106	70-130	
Toluene	ug/L	50	51 4	103	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

LABORATORY CONTROL SAMPLE: 1604020

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	153	102	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE 1604021

Parameter	Units	92274863004 Result	Spike Conc	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.7	108	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	354	89	70-130	
Benzene	ug/L	ND	20	22 3	111	70-130	
Diisopropyl ether	ug/L	ND	20	24 4	122	70-130	
Ethanol	ug/L	ND	800	611	76	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	45.8	114	70-130	
Ethylbenzene	ug/L	ND	20	20.7	103	70-130	
m&p-Xylene	ug/L	ND	40	41.1	103	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	23 4	117	70-130	
Naphthalene	ug/L	ND	20	19 7	98	70-130	
o-Xylene	ug/L	ND	20	20 4	102	70-130	
tert-Amyl Alcohol	ug/L	ND	400	378	94	70-130	
tert-Amylmethyl ether	ug/L	ND	40	42 4	106	70-130	
tert-Butyl Alcohol	ug/L	ND	200	305	152	70-130	M1
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	M1
Toluene	ug/L	ND	20	22.1	110	70-130	
1,2-Dichloroethane-d4 (S)	%				109	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				101	70-130	

SAMPLE DUPLICATE: 1604022

Parameter	Units	92274863014 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	15.2	15.4	1	30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	76.5	77.8	2	30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	587	606	3	30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

SAMPLE DUPLICATE: 1604022

Parameter	Units	92274863014 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	518	558	7	30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	116	116	1		
4-Bromofluorobenzene (S)	%	103	103	0		
Toluene-d8 (S)	%	103	104	1		

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34241 Analysis Method: EPA 8260
QC Batch Method EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples 92275423014, 92275423017, 92275423018, 92275423019, 92275423020, 92275423021, 92275423022, 92275423026, 92275423027, 92275423029

METHOD BLANK 1604027 Matrix: Water
Associated Lab Samples: 92275423014, 92275423017, 92275423018, 92275423019, 92275423020, 92275423021, 92275423022, 92275423026, 92275423027, 92275423029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5 0	1 8	11/12/15 00:36	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32 1	11/12/15 00 36	
Benzene	ug/L	ND	5.0	1.7	11/12/15 00 36	
Diisopropyl ether	ug/L	ND	5.0	1.7	11/12/15 00 36	
Ethanol	ug/L	ND	200	138	11/12/15 00 36	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3 6	11/12/15 00.36	
Ethylbenzene	ug/L	ND	5 0	1.6	11/12/15 00:36	
m&p-Xylene	ug/L	ND	10 0	3 1	11/12/15 00:36	
Methyl-tert-butyl ether	ug/L	ND	5.0	1 7	11/12/15 00:36	
Naphthalene	ug/L	ND	5.0	2.0	11/12/15 00 36	
o-Xylene	ug/L	ND	5.0	1.6	11/12/15 00:36	
tert-Amyl Alcohol	ug/L	ND	100	76.8	11/12/15 00:36	
tert-Amylmethyl ether	ug/L	ND	10.0	3 4	11/12/15 00:36	
tert-Butyl Alcohol	ug/L	ND	100	57 7	11/12/15 00:36	
tert-Butyl Formate	ug/L	ND	50 0	7 3	11/12/15 00.36	
Toluene	ug/L	ND	5 0	1.6	11/12/15 00 36	
Xylene (Total)	ug/L	ND	10 0	2.7	11/12/15 00.36	
1,2-Dichloroethane-d4 (S)	%	114	70-130		11/12/15 00.36	
4-Bromofluorobenzene (S)	%	101	70-130		11/12/15 00:36	
Toluene-d8 (S)	%	104	70-130		11/12/15 00:36	

LABORATORY CONTROL SAMPLE 1604028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.3	99	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1070	107	70-130	
Benzene	ug/L	50	50 6	101	70-130	
Diisopropyl ether	ug/L	50	59 7	119	70-130	
Ethanol	ug/L	2000	2740	137	70-130	L0
Ethyl-tert-butyl ether	ug/L	100	112	112	70-130	
Ethylbenzene	ug/L	50	48.1	96	70-130	
m&p-Xylene	ug/L	100	97.2	97	70-130	
Methyl-tert-butyl ether	ug/L	50	57.9	116	70-130	
Naphthalene	ug/L	50	58 0	116	70-130	
o-Xylene	ug/L	50	50 8	102	70-130	
tert-Amyl Alcohol	ug/L	1000	1200	120	70-130	
tert-Amylmethyl ether	ug/L	100	106	106	70-130	
tert-Butyl Alcohol	ug/L	500	614	123	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

LABORATORY CONTROL SAMPLE: 1604028

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	425	106	70-130	
Toluene	ug/L	50	49.6	99	70-130	
Xylene (Total)	ug/L	150	148	99	70-130	
1,2-Dichloroethane-d4 (S)	%			108	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			101	70-130	

MATRIX SPIKE SAMPLE: 1604029

Parameter	Units	92275423014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	22 5	112	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	370	93	70-130	
Benzene	ug/L	ND	20	22.7	113	70-130	
Diisopropyl ether	ug/L	ND	20	25.2	126	70-130	
Ethanol	ug/L	ND	800	802	100	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	47 1	118	70-130	
Ethylbenzene	ug/L	ND	20	21.4	107	70-130	
m&p-Xylene	ug/L	ND	40	43.1	108	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	24.3	121	70-130	
Naphthalene	ug/L	ND	20	20 9	105	70-130	
o-Xylene	ug/L	ND	20	21 2	106	70-130	
tert-Amyl Alcohol	ug/L	ND	400	399	100	70-130	
tert-Amylmethyl ether	ug/L	ND	40	43.8	109	70-130	
tert-Butyl Alcohol	ug/L	ND	200	314	157	70-130	M1
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	M1
Toluene	ug/L	ND	20	22 2	111	70-130	
1,2-Dichloroethane-d4 (S)	%				111	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1604030

Parameter	Units	92275423017 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

SAMPLE DUPLICATE: 1604030

Parameter	Units	92275423017 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	119	118	1		
4-Bromofluorobenzene (S)	%	101	102	2		
Toluene-d8 (S)	%	103	103	0		

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34242 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV SC
Associated Lab Samples: 92275423024, 92275423030, 92275423031, 92275423032, 92275423033, 92275423034, 92275423035, 92275423048, 92275423049, 92275423050

METHOD BLANK: 1604086 | Matrix: Water
Associated Lab Samples: 92275423024, 92275423030, 92275423031, 92275423032, 92275423033, 92275423034, 92275423035, 92275423048, 92275423049, 92275423050

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	11/11/15 19:22	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	11/11/15 19.22	
Benzene	ug/L	ND	5 0	1.7	11/11/15 19 22	
Diisopropyl ether	ug/L	ND	5 0	1.7	11/11/15 19 22	
Ethanol	ug/L	ND	200	138	11/11/15 19 22	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3 6	11/11/15 19:22	
Ethylbenzene	ug/L	ND	5.0	1 6	11/11/15 19:22	
m&p-Xylene	ug/L	ND	10.0	3.1	11/11/15 19:22	
Methyl-tert-butyl ether	ug/L	ND	5.0	1 7	11/11/15 19:22	
Naphthalene	ug/L	ND	5.0	2.0	11/11/15 19 22	
o-Xylene	ug/L	ND	5 0	1.6	11/11/15 19.22	
tert-Amyl Alcohol	ug/L	ND	100	76.8	11/11/15 19:22	
tert-Amylmethyl ether	ug/L	ND	10 0	3.4	11/11/15 19 22	
tert-Butyl Alcohol	ug/L	ND	100	57.7	11/11/15 19 22	
tert-Butyl Formate	ug/L	ND	50 0	7 3	11/11/15 19:22	
Toluene	ug/L	ND	5 0	1 6	11/11/15 19:22	
Xylene (Total)	ug/L	ND	10.0	2 7	11/11/15 19:22	
1,2-Dichloroethane-d4 (S)	%	99	70-130		11/11/15 19:22	
4-Bromofluorobenzene (S)	%	108	70-130		11/11/15 19:22	
Toluene-d8 (S)	%	106	70-130		11/11/15 19.22	

LABORATORY CONTROL SAMPLE 1604087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.7	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	929	93	70-130	
Benzene	ug/L	50	50.8	102	70-130	
Diisopropyl ether	ug/L	50	57 6	115	70-130	
Ethanol	ug/L	2000	2530	126	70-130	
Ethyl-tert-butyl ether	ug/L	100	107	107	70-130	
Ethylbenzene	ug/L	50	43 4	87	70-130	
m&p-Xylene	ug/L	100	85 4	85	70-130	
Methyl-tert-butyl ether	ug/L	50	49 7	99	70-130	
Naphthalene	ug/L	50	39.5	79	70-130	
o-Xylene	ug/L	50	43.1	86	70-130	
tert-Amyl Alcohol	ug/L	1000	948	95	70-130	
tert-Amylmethyl ether	ug/L	100	95.2	95	70-130	
tert-Butyl Alcohol	ug/L	500	569	114	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

LABORATORY CONTROL SAMPLE: 1604087

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	408	102	70-130	
Toluene	ug/L	50	46.7	93	70-130	
Xylene (Total)	ug/L	150	129	86	70-130	
1,2-Dichloroethane-d4 (S)	%			99	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE 1604089

Parameter	Units	92275423032 Result	Spike Conc	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	20 4	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	414	103	70-130	
Benzene	ug/L	ND	20	23.4	116	70-130	
Diisopropyl ether	ug/L	ND	20	23 1	115	70-130	
Ethanol	ug/L	ND	800	1190	149	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	43.5	109	70-130	
Ethylbenzene	ug/L	2 9J	20	22.5	98	70-130	
m&p-Xylene	ug/L	ND	40	39 9	99	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	20 6	103	70-130	
Naphthalene	ug/L	ND	20	19 2	87	70-130	
o-Xylene	ug/L	ND	20	20 2	100	70-130	
tert-Amyl Alcohol	ug/L	ND	400	442	110	70-130	
tert-Amylmethyl ether	ug/L	ND	40	40.3	101	70-130	
tert-Butyl Alcohol	ug/L	ND	200	265	131	70-130	
tert-Butyl Formate	ug/L	ND	160	85 2	53	70-130	
Toluene	ug/L	ND	20	21 3	106	70-130	
1,2-Dichloroethane-d4 (S)	%				102	70-130	
4-Bromofluorobenzene (S)	%				103	70-130	
Toluene-d8 (S)	%				99	70-130	

MATRIX SPIKE SAMPLE: 1604091

Parameter	Units	92275423034 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21 3	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	420	105	70-130	
Benzene	ug/L	ND	20	24.0	118	70-130	
Diisopropyl ether	ug/L	ND	20	22.7	114	70-130	
Ethanol	ug/L	ND	800	1190	148	70-130	M1
Ethyl-tert-butyl ether	ug/L	ND	40	43 0	108	70-130	
Ethylbenzene	ug/L	ND	20	20 9	102	70-130	
m&p-Xylene	ug/L	ND	40	41.7	104	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.8	114	70-130	
Naphthalene	ug/L	ND	20	17 6	87	70-130	
o-Xylene	ug/L	ND	20	20 9	101	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

MATRIX SPIKE SAMPLE: 1604091

Parameter	Units	92275423034 Result	Spike Conc	MS Result	MS % Rec	% Rec Limits	Qualifiers
tert-Amyl Alcohol	ug/L	ND	400	427	107	70-130	
tert-Amylmethyl ether	ug/L	ND	40	39.5	99	70-130	
tert-Butyl Alcohol	ug/L	ND	200	295	148	70-130	M1
tert-Butyl Formate	ug/L	ND	160	53 3	33	70-130	M1
Toluene	ug/L	ND	20	22 9	110	70-130	
1,2-Dichloroethane-d4 (S)	%				104	70-130	
4-Bromofluorobenzene (S)	%				106	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1604088

Parameter	Units	92275423031 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	100	2		
4-Bromofluorobenzene (S)	%	111	108	3		
Toluene-d8 (S)	%	112	110	2		

SAMPLE DUPLICATE 1604090

Parameter	Units	92275423033 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

SAMPLE DUPLICATE 1604090

Parameter	Units	92275423033 Result	Dup Result	RPD	Max RPD	Qualifiers
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	103	1		
4-Bromofluorobenzene (S)	%	111	109	2		
Toluene-d8 (S)	%	109	107	2		

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34243 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92275423006, 92275423007, 92275423012, 92275423023, 92275423025, 92275423028, 92275423036, 92275423037, 92275423039

METHOD BLANK: 1604186 Matrix: Water
Associated Lab Samples: 92275423006, 92275423007, 92275423012, 92275423023, 92275423025, 92275423028, 92275423036, 92275423037, 92275423039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	11/11/15 19:39	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	11/11/15 19:39	
Benzene	ug/L	ND	5.0	1.7	11/11/15 19:39	
Diisopropyl ether	ug/L	ND	5.0	1.7	11/11/15 19:39	
Ethanol	ug/L	ND	200	138	11/11/15 19:39	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	11/11/15 19:39	
Ethylbenzene	ug/L	ND	5.0	1.6	11/11/15 19:39	
m&p-Xylene	ug/L	ND	10.0	3.1	11/11/15 19:39	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	11/11/15 19:39	
Naphthalene	ug/L	ND	5.0	2.0	11/11/15 19:39	
o-Xylene	ug/L	ND	5.0	1.6	11/11/15 19:39	
tert-Amyl Alcohol	ug/L	ND	100	76.8	11/11/15 19:39	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	11/11/15 19:39	
tert-Butyl Alcohol	ug/L	ND	100	57.7	11/11/15 19:39	
tert-Butyl Formate	ug/L	ND	50.0	7.3	11/11/15 19:39	
Toluene	ug/L	ND	5.0	1.6	11/11/15 19:39	
Xylene (Total)	ug/L	ND	10.0	2.7	11/11/15 19:39	
1,2-Dichloroethane-d4 (S)	%	98	70-130		11/11/15 19:39	
4-Bromofluorobenzene (S)	%	107	70-130		11/11/15 19:39	
Toluene-d8 (S)	%	107	70-130		11/11/15 19:39	

LABORATORY CONTROL SAMPLE 1604187

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.6	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	988	99	70-130	
Benzene	ug/L	50	51.4	103	70-130	
Diisopropyl ether	ug/L	50	57.6	115	70-130	
Ethanol	ug/L	2000	2360	118	70-130	
Ethyl-tert-butyl ether	ug/L	100	108	108	70-130	
Ethylbenzene	ug/L	50	45.9	92	70-130	
m&p-Xylene	ug/L	100	89.5	90	70-130	
Methyl-tert-butyl ether	ug/L	50	49.8	100	70-130	
Naphthalene	ug/L	50	42.2	84	70-130	
o-Xylene	ug/L	50	45.2	90	70-130	
tert-Amyl Alcohol	ug/L	1000	975	97	70-130	
tert-Amylmethyl ether	ug/L	100	98.2	98	70-130	
tert-Butyl Alcohol	ug/L	500	573	115	70-130	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

LABORATORY CONTROL SAMPLE: 1604187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	416	104	70-130	
Toluene	ug/L	50	46 8	94	70-130	
Xylene (Total)	ug/L	150	135	90	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			104	70-130	
Toluene-d8 (S)	%			97	70-130	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34259 Analysis Method EPA 8260
QC Batch Method EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples 92275423038, 92275423045

METHOD BLANK: 1605331 Matrix: Water
Associated Lab Samples: 92275423038, 92275423045

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1 8	11/13/15 14:48	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32 1	11/13/15 14:48	
Benzene	ug/L	ND	5.0	1 7	11/13/15 14 48	
Diisopropyl ether	ug/L	ND	5 0	1 7	11/13/15 14:48	
Ethanol	ug/L	ND	200	138	11/13/15 14:48	
Ethyl-tert-butyl ether	ug/L	ND	10 0	3.6	11/13/15 14 48	
Ethylbenzene	ug/L	ND	5 0	1.6	11/13/15 14 48	
m&p-Xylene	ug/L	ND	10 0	3.1	11/13/15 14 48	
Methyl-tert-butyl ether	ug/L	ND	5 0	1.7	11/13/15 14 48	
Naphthalene	ug/L	ND	5.0	2.0	11/13/15 14:48	
o-Xylene	ug/L	ND	5.0	1 6	11/13/15 14:48	
tert-Amyl Alcohol	ug/L	ND	100	76 8	11/13/15 14:48	
tert-Amylmethyl ether	ug/L	ND	10.0	3 4	11/13/15 14:48	
tert-Butyl Alcohol	ug/L	ND	100	57 7	11/13/15 14:48	
tert-Butyl Formate	ug/L	ND	50.0	7 3	11/13/15 14.48	
Toluene	ug/L	ND	5 0	1 6	11/13/15 14 48	
Xylene (Total)	ug/L	ND	10 0	2.7	11/13/15 14.48	
1,2-Dichloroethane-d4 (S)	%	96	70-130		11/13/15 14 48	
4-Bromofluorobenzene (S)	%	98	70-130		11/13/15 14 48	
Toluene-d8 (S)	%	103	70-130		11/13/15 14.48	

LABORATORY CONTROL SAMPLE: 1605332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49 9	100	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	952	95	70-130	
Benzene	ug/L	50	52 4	105	70-130	
Diisopropyl ether	ug/L	50	59.3	119	70-130	
Ethanol	ug/L	2000	3640	182	70-130	L0
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	50.1	100	70-130	
m&p-Xylene	ug/L	100	104	104	70-130	
Methyl-tert-butyl ether	ug/L	50	53.1	106	70-130	
Naphthalene	ug/L	50	48.1	96	70-130	
o-Xylene	ug/L	50	52.0	104	70-130	
tert-Amyl Alcohol	ug/L	1000	959	96	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	617	123	70-130	
tert-Butyl Formate	ug/L	400	376	94	70-130	
Toluene	ug/L	50	45 6	91	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

LABORATORY CONTROL SAMPLE: 1605332

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	156	104	70-130	
1,2-Dichloroethane-d4 (S)	%			103	70-130	
4-Bromofluorobenzene (S)	%			113	70-130	
Toluene-d8 (S)	%			95	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No . 92275423

QC Batch: MSV/34260 Analysis Method: EPA 8260
QC Batch Method EPA 8260 Analysis Description 8260 MSV SC
Associated Lab Samples 92275423046, 92275423047

METHOD BLANK. 1605348 Matrix Water
Associated Lab Samples: 92275423046, 92275423047

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	11/13/15 15.05	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	11/13/15 15 05	
Benzene	ug/L	ND	5.0	1.7	11/13/15 15 05	
Diisopropyl ether	ug/L	ND	5.0	1 7	11/13/15 15:05	
Ethanol	ug/L	ND	200	138	11/13/15 15:05	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3 6	11/13/15 15.05	
Ethylbenzene	ug/L	ND	5 0	1 6	11/13/15 15:05	
m&p-Xylene	ug/L	ND	10 0	3.1	11/13/15 15 05	
Methyl-tert-butyl ether	ug/L	ND	5 0	1.7	11/13/15 15.05	
Naphthalene	ug/L	ND	5.0	2.0	11/13/15 15:05	
o-Xylene	ug/L	ND	5.0	1 6	11/13/15 15:05	
tert-Amyl Alcohol	ug/L	ND	100	76 8	11/13/15 15:05	
tert-Amylmethyl ether	ug/L	ND	10 0	3 4	11/13/15 15:05	
tert-Butyl Alcohol	ug/L	ND	100	57.7	11/13/15 15 05	
tert-Butyl Formate	ug/L	ND	50 0	7 3	11/13/15 15 05	
Toluene	ug/L	ND	5.0	1.6	11/13/15 15.05	
Xylene (Total)	ug/L	ND	10.0	2.7	11/13/15 15 05	
1,2-Dichloroethane-d4 (S)	%	97	70-130		11/13/15 15.05	
4-Bromofluorobenzene (S)	%	103	70-130		11/13/15 15:05	
Toluene-d8 (S)	%	103	70-130		11/13/15 15:05	

LABORATORY CONTROL SAMPLE: 1605349

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48 8	98	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	988	99	70-130	
Benzene	ug/L	50	48 2	96	70-130	
Diisopropyl ether	ug/L	50	57.9	116	70-130	
Ethanol	ug/L	2000	3450	172	70-130	L0
Ethyl-tert-butyl ether	ug/L	100	108	108	70-130	
Ethylbenzene	ug/L	50	48.0	96	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	54 9	110	70-130	
Naphthalene	ug/L	50	46 6	93	70-130	
o-Xylene	ug/L	50	51 3	103	70-130	
tert-Amyl Alcohol	ug/L	1000	967	97	70-130	
tert-Amylmethyl ether	ug/L	100	102	102	70-130	
tert-Butyl Alcohol	ug/L	500	630	126	70-130	
tert-Butyl Formate	ug/L	400	373	93	70-130	
Toluene	ug/L	50	43 6	87	70-130	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

LABORATORY CONTROL SAMPLE: 1605349

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	153	102	70-130	
1,2-Dichloroethane-d4 (S)	%			113	70-130	
4-Bromofluorobenzene (S)	%			115	70-130	
Toluene-d8 (S)	%			92	70-130	

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34314 Analysis Method EPA 8260
QC Batch Method: EPA 8260 Analysis Description 8260 MSV SC
Associated Lab Samples: 92275423001, 92275423003, 92275423016

METHOD BLANK: 1607744 Matrix: Water
Associated Lab Samples: 92275423001, 92275423003, 92275423016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1 8	11/16/15 17 45	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32 1	11/16/15 17.45	
Benzene	ug/L	ND	5.0	1 7	11/16/15 17:45	
Diisopropyl ether	ug/L	ND	5.0	1 7	11/16/15 17:45	
Ethanol	ug/L	ND	200	138	11/16/15 17:45	
Ethyl-tert-butyl ether	ug/L	ND	10 0	3.6	11/16/15 17 45	
Ethylbenzene	ug/L	ND	5 0	1.6	11/16/15 17.45	
m&p-Xylene	ug/L	ND	10 0	3 1	11/16/15 17 45	
Methyl-tert-butyl ether	ug/L	ND	5 0	1.7	11/16/15 17 45	
Naphthalene	ug/L	ND	5.0	2 0	11/16/15 17:45	
o-Xylene	ug/L	ND	5.0	1 6	11/16/15 17:45	
tert-Amyl Alcohol	ug/L	ND	100	76 8	11/16/15 17:45	
tert-Amylmethyl ether	ug/L	ND	10 0	3.4	11/16/15 17:45	
tert-Butyl Alcohol	ug/L	ND	100	57.7	11/16/15 17:45	
tert-Butyl Formate	ug/L	ND	50 0	7.3	11/16/15 17 45	
Toluene	ug/L	ND	5 0	1.6	11/16/15 17:45	
Xylene (Total)	ug/L	ND	10 0	2.7	11/16/15 17 45	
1,2-Dichloroethane-d4 (S)	%	111	70-130		11/16/15 17:45	
4-Bromofluorobenzene (S)	%	107	70-130		11/16/15 17:45	
Toluene-d8 (S)	%	114	70-130		11/16/15 17:45	

LABORATORY CONTROL SAMPLE 1607745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	49.5	99	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	899	90	70-130	
Benzene	ug/L	50	49.8	100	70-130	
Diisopropyl ether	ug/L	50	58.7	117	70-130	
Ethanol	ug/L	2000	2030	102	70-130	
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	44.2	88	70-130	
m&p-Xylene	ug/L	100	87 5	87	70-130	
Methyl-tert-butyl ether	ug/L	50	55 7	111	70-130	
Naphthalene	ug/L	50	40.7	81	70-130	
o-Xylene	ug/L	50	42.8	86	70-130	
tert-Amyl Alcohol	ug/L	1000	1020	102	70-130	
tert-Amylmethyl ether	ug/L	100	98.3	98	70-130	
tert-Butyl Alcohol	ug/L	500	452	90	70-130	
tert-Butyl Formate	ug/L	400	458	115	70-130	
Toluene	ug/L	50	47 8	96	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

LABORATORY CONTROL SAMPLE: 1607745

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	130	87	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1607747

Parameter	Units	92275821002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	23.9	118	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	287	72	70-130	
Benzene	ug/L	3.0J	20	27.6	123	70-130	
Diisopropyl ether	ug/L	ND	20	23 9	119	70-130	
Ethanol	ug/L	ND	800	800	100	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	42.7	107	70-130	
Ethylbenzene	ug/L	ND	20	17.9	82	70-130	
m&p-Xylene	ug/L	ND	40	35.4	83	70-130	
Methyl-tert-butyl ether	ug/L	4.1J	20	32 8	143	70-130	M1
Naphthalene	ug/L	ND	20	13 5	67	70-130	M1
o-Xylene	ug/L	ND	20	16 0	78	70-130	
tert-Amyl Alcohol	ug/L	ND	400	380	92	70-130	
tert-Amylmethyl ether	ug/L	ND	40	36 3	91	70-130	
tert-Butyl Alcohol	ug/L	ND	200	341	171	70-130	M1
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	M1
Toluene	ug/L	ND	20	21 0	104	70-130	
1,2-Dichloroethane-d4 (S)	%				120	70-130	
4-Bromofluorobenzene (S)	%				106	70-130	
Toluene-d8 (S)	%				109	70-130	

SAMPLE DUPLICATE: 1607746

Parameter	Units	92275423016 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

SAMPLE DUPLICATE 1607746

Parameter	Units	92275423016 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	115	113	2		
4-Bromofluorobenzene (S)	%	109	108	1		
Toluene-d8 (S)	%	116	116	1		

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: MSV/34320 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV SC
Associated Lab Samples: 92275423008, 92275423010, 92275423015

METHOD BLANK 1608147 | Matrix Water
Associated Lab Samples 92275423008, 92275423010, 92275423015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	11/17/15 13:02	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	11/17/15 13:02	
Benzene	ug/L	ND	5.0	1.7	11/17/15 13:02	
Diisopropyl ether	ug/L	ND	5.0	1.7	11/17/15 13:02	
Ethanol	ug/L	ND	200	138	11/17/15 13:02	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	11/17/15 13:02	
Ethylbenzene	ug/L	ND	5.0	1.6	11/17/15 13:02	
m&p-Xylene	ug/L	ND	10.0	3.1	11/17/15 13:02	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	11/17/15 13:02	
Naphthalene	ug/L	ND	5.0	2.0	11/17/15 13:02	
o-Xylene	ug/L	ND	5.0	1.6	11/17/15 13:02	
tert-Amyl Alcohol	ug/L	ND	100	76.8	11/17/15 13:02	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	11/17/15 13:02	
tert-Butyl Alcohol	ug/L	ND	100	57.7	11/17/15 13:02	
tert-Butyl Formate	ug/L	ND	50.0	7.3	11/17/15 13:02	
Toluene	ug/L	ND	5.0	1.6	11/17/15 13:02	
Xylene (Total)	ug/L	ND	10.0	2.7	11/17/15 13:02	
1,2-Dichloroethane-d4 (S)	%	98	70-130		11/17/15 13:02	
4-Bromofluorobenzene (S)	%	97	70-130		11/17/15 13:02	
Toluene-d8 (S)	%	106	70-130		11/17/15 13:02	

LABORATORY CONTROL SAMPLE: 1608148

Parameter	Units	Spike Conc	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	44.5	89	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	873	87	70-130	
Benzene	ug/L	50	50.3	101	70-130	
Diisopropyl ether	ug/L	50	54.3	109	70-130	
Ethanol	ug/L	2000	1760	88	70-130	
Ethyl-tert-butyl ether	ug/L	100	105	105	70-130	
Ethylbenzene	ug/L	50	45.3	91	70-130	
m&p-Xylene	ug/L	100	93.8	94	70-130	
Methyl-tert-butyl ether	ug/L	50	53.6	107	70-130	
Naphthalene	ug/L	50	48.8	98	70-130	
o-Xylene	ug/L	50	47.4	95	70-130	
tert-Amyl Alcohol	ug/L	1000	895	90	70-130	
tert-Amylmethyl ether	ug/L	100	100	100	70-130	
tert-Butyl Alcohol	ug/L	500	475	95	70-130	
tert-Butyl Formate	ug/L	400	426	107	70-130	
Toluene	ug/L	50	45.6	91	70-130	

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(704)875-9092

QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

LABORATORY CONTROL SAMPLE 1608148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	141	94	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			97	70-130	
Toluene-d8 (S)	%			95	70-130	

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

QC Batch: OEXT/38979 Analysis Method EPA 8011
QC Batch Method EPA 8011 Analysis Description GCS 8011 EDB DBCP
Associated Lab Samples 92275423001, 92275423003, 92275423004, 92275423005, 92275423008, 92275423009, 92275423010, 92275423011, 92275423013, 92275423014, 92275423015, 92275423016, 92275423017, 92275423019

METHOD BLANK: 1603313 Matrix: Water
Associated Lab Samples 92275423001, 92275423003, 92275423004, 92275423005, 92275423008, 92275423009, 92275423010, 92275423011, 92275423013, 92275423014, 92275423015, 92275423016, 92275423017, 92275423019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	11/11/15 09:48	
1-Chloro-2-bromopropane (S)	%	97	60-140		11/11/15 09:48	

LABORATORY CONTROL SAMPLE & LCSD 1603314 1603315

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.31	0.34	106	118	60-140	10	20	
1-Chloro-2-bromopropane (S)	%				92	104	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1603316 1603317

Parameter	Units	92275423003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.29	.29	0 31	0 30	106	104	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						90	87	60-140			

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.. 92275423

QC Batch: OEXT/39025 Analysis Method EPA 8011
QC Batch Method EPA 8011 Analysis Description. GCS 8011 EDB DBCP
Associated Lab Samples. 92275423002, 92275423007, 92275423012, 92275423018

METHOD BLANK: 1604978 Matrix Water
Associated Lab Samples. 92275423002, 92275423007, 92275423012, 92275423018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0 020	0.020	11/12/15 18:34	
1-Chloro-2-bromopropane (S)	%	95	60-140		11/12/15 18:34	

LABORATORY CONTROL SAMPLE & LCSD 1604979 1604980

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.28	0 30	0.31	108	110	60-140	3	20	
1-Chloro-2-bromopropane (S)	%				97	101	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1604981 1604982

Parameter	Units	92275786006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	28	.28	0.31	0.32	112	114	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						98	99	60-140			

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: OEXT/39026 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92275423020, 92275423021, 92275423022, 92275423023, 92275423024, 92275423025, 92275423026, 92275423027, 92275423028, 92275423029, 92275423030, 92275423031, 92275423032, 92275423033, 92275423034, 92275423035, 92275423036, 92275423038, 92275423039

METHOD BLANK: 1604986 Matrix: Water
Associated Lab Samples: 92275423020, 92275423021, 92275423022, 92275423023, 92275423024, 92275423025, 92275423026, 92275423027, 92275423028, 92275423029, 92275423030, 92275423031, 92275423032, 92275423033, 92275423034, 92275423035, 92275423036, 92275423038, 92275423039

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	11/13/15 03:28	
1-Chloro-2-bromopropane (S)	%	99	60-140		11/13/15 03:28	

LABORATORY CONTROL SAMPLE & LCSD: 1604987 1604988

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.34	0.29	118	98	60-140	16	20	
1-Chloro-2-bromopropane (S)	%				102	79	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1604989 1604990

Parameter	Units	92275423023 Result	MS Spike Conc	MSD Spike Conc	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	0.91	.29	29	1.2	1.1	84	80	60-140	1	20	
1-Chloro-2-bromopropane (S)	%						105	97	60-140			

SAMPLE DUPLICATE: 1604991

Parameter	Units	92275423025 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	98	102	4		

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QUALITY CONTROL DATA

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No. 92275423

QC Batch: OEXT/39027 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92275423040, 92275423041, 92275423042, 92275423043, 92275423044, 92275423045, 92275423048

METHOD BLANK: 1605006 Matrix: Water
Associated Lab Samples: 92275423040, 92275423041, 92275423042, 92275423043, 92275423044, 92275423045, 92275423048

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0 020	0 020	11/13/15 12 41	
1-Chloro-2-bromopropane (S)	%	107	60-140		11/13/15 12:41	

LABORATORY CONTROL SAMPLE & LCSD: 1605007 1605008

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.29	0.35	0.35	122	122	60-140	0	20	
1-Chloro-2-bromopropane (S)	%				109	107	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1605009 1605010

Parameter	Units	92275423040 Result	MS Spike Conc	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	28	.28	0.32	0 32	112	112	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						90	90	60-140			

SAMPLE DUPLICATE: 1605011

Parameter	Units	92275423041 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	119	134	11		

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No : 92275423

QC Batch OEXT/39047 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92275423006

METHOD BLANK 1606162 Matrix: Water
Associated Lab Samples: 92275423006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0 020	0 020	11/13/15 19:10	
1-Chloro-2-bromopropane (S)	%	99	60-140		11/13/15 19:10	

LABORATORY CONTROL SAMPLE & LCSD: 1606163 1606164

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	29	0.26	0 26	90	94	60-140	2	20	
1-Chloro-2-bromopropane (S)	%				101	100	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE 1606165 1606166

Parameter	Units	92275786008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.28	.28	0 25	0 26	90	92	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						95	99	60-140			

SAMPLE DUPLICATE: 1606167

Parameter	Units	92275786010 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	100	117	14		

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QUALITY CONTROL DATA

Project NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

QC Batch: OEXT/39084 Analysis Method EPA 8011
QC Batch Method. EPA 8011 Analysis Description GCS 8011 EDB DBCP
Associated Lab Samples 92275423037, 92275423046, 92275423047

METHOD BLANK: 1607880 Matrix: Water
Associated Lab Samples. 92275423037, 92275423046, 92275423047

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0 020	11/16/15 18 34	
1-Chloro-2-bromopropane (S)	%	106	60-140		11/16/15 18:34	

LABORATORY CONTROL SAMPLE & LCSD: 1607881 1607882

Parameter	Units	Spike Conc	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	28	0.31	0 31	112	110	60-140	1	20	
1-Chloro-2-bromopropane (S)	%				104	103	60-140			

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QUALIFIERS

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270 The result for each analyte is a combined concentration

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270 The result reported for each analyte is a combined concentration

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples Results unaffected by high bias.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92275423001	MW-2R	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423002	MW-3R	EPA 8011	OEXT/39025	EPA 8011	GCSV/23197
92275423003	MW-4D	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423004	MW-7	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423005	MW-8R	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423006	MW-9	EPA 8011	OEXT/39047	EPA 8011	GCSV/23210
92275423007	MW-10	EPA 8011	OEXT/39025	EPA 8011	GCSV/23197
92275423008	MW-11	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423009	MW-14	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423010	MW-16	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423011	MW-17	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423012	MW-18	EPA 8011	OEXT/39025	EPA 8011	GCSV/23197
92275423013	MW-19	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423014	MW-20	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423015	MW-21	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423016	MW-24	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423017	MW-25	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423018	MW-26	EPA 8011	OEXT/39025	EPA 8011	GCSV/23197
92275423019	MW-27	EPA 8011	OEXT/38979	EPA 8011	GCSV/23180
92275423020	MW-28	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423021	MW-30	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423022	MW-31	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423023	MW-32	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423024	MW-33	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423025	MW-34	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423026	MW-35	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423027	MW-36	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423028	MW-37	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423029	MW-38	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423030	MW-39	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423031	MW-40	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423032	MW-41	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423033	MW-42	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423034	DW 1	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423035	DW 2	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423036	RW 3	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423037	RW 4	EPA 8011	OEXT/39084	EPA 8011	GCSV/23221
92275423038	RW 5	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423039	RW 6	EPA 8011	OEXT/39026	EPA 8011	GCSV/23198
92275423040	WSW 1	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423041	WSW 2	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423042	WSW 5	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No 92275423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92275423043	WSW 6	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423044	WSW 7	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423045	MW-3R DUPLICATE	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423046	MW-9 DUPLICATE	EPA 8011	OEXT/39084	EPA 8011	GCSV/23221
92275423047	MW-37 DUPLICATE	EPA 8011	OEXT/39084	EPA 8011	GCSV/23221
92275423048	FIELD BLANK	EPA 8011	OEXT/39027	EPA 8011	GCSV/23199
92275423040	WSW 1	EPA 8260	MSV/34244		
92275423041	WSW 2	EPA 8260	MSV/34244		
92275423042	WSW 5	EPA 8260	MSV/34244		
92275423043	WSW 6	EPA 8260	MSV/34244		
92275423044	WSW 7	EPA 8260	MSV/34244		
92275423001	MW-2R	EPA 8260	MSV/34314		
92275423002	MW-3R	EPA 8260	MSV/34240		
92275423003	MW-4D	EPA 8260	MSV/34314		
92275423004	MW-7	EPA 8260	MSV/34240		
92275423005	MW-8R	EPA 8260	MSV/34240		
92275423006	MW-9	EPA 8260	MSV/34243		
92275423007	MW-10	EPA 8260	MSV/34243		
92275423008	MW-11	EPA 8260	MSV/34320		
92275423009	MW-14	EPA 8260	MSV/34240		
92275423010	MW-16	EPA 8260	MSV/34320		
92275423011	MW-17	EPA 8260	MSV/34240		
92275423012	MW-18	EPA 8260	MSV/34243		
92275423013	MW-19	EPA 8260	MSV/34240		
92275423014	MW-20	EPA 8260	MSV/34241		
92275423015	MW-21	EPA 8260	MSV/34320		
92275423016	MW-24	EPA 8260	MSV/34314		
92275423017	MW-25	EPA 8260	MSV/34241		
92275423018	MW-26	EPA 8260	MSV/34241		
92275423019	MW-27	EPA 8260	MSV/34241		
92275423020	MW-28	EPA 8260	MSV/34241		
92275423021	MW-30	EPA 8260	MSV/34241		
92275423022	MW-31	EPA 8260	MSV/34241		
92275423023	MW-32	EPA 8260	MSV/34243		
92275423024	MW-33	EPA 8260	MSV/34242		
92275423025	MW-34	EPA 8260	MSV/34243		
92275423026	MW-35	EPA 8260	MSV/34241		
92275423027	MW-36	EPA 8260	MSV/34241		

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKEL PUMPER 235 USTA#04877
Pace Project No.: 92275423

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92275423028	MW-37	EPA 8260	MSV/34243		
92275423029	MW-38	EPA 8260	MSV/34241		
92275423030	MW-39	EPA 8260	MSV/34242		
92275423031	MW-40	EPA 8260	MSV/34242		
92275423032	MW-41	EPA 8260	MSV/34242		
92275423033	MW-42	EPA 8260	MSV/34242		
92275423034	DW 1	EPA 8260	MSV/34242		
92275423035	DW 2	EPA 8260	MSV/34242		
92275423036	RW 3	EPA 8260	MSV/34243		
92275423037	RW 4	EPA 8260	MSV/34243		
92275423038	RW 5	EPA 8260	MSV/34259		
92275423039	RW 6	EPA 8260	MSV/34243		
92275423045	MW-3R DUPLICATE	EPA 8260	MSV/34259		
92275423046	MW-9 DUPLICATE	EPA 8260	MSV/34260		
92275423047	MW-37 DUPLICATE	EPA 8260	MSV/34260		
92275423048	FIELD BLANK	EPA 8260	MSV/34242		
92275423049	TRIP BLANK	EPA 8260	MSV/34242		
92275423050	TRIP BLANK 2	EPA 8260	MSV/34242		

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Pace Analytical	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: May 10, 2010 Page 1 of 2*
	Document Number: F-CHR-CS-003-rev.16	Issuing Authority: Pace Huntersville Quality Office

Client Name: SCHEC

* Page 2 of 2 is for Internal Use Only

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used: IR Gun T1402 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1402 No Correction

Corrected Cooler Temp.: 1.8 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: 11.10

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☑Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☑No ☐N/A	15.
Trip Blank Present:	☑Yes ☐No ☐N/A	16.
Trip Blank Custody Seals Present	☐Yes ☑No ☐N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

SCURF Review:	TC	Date:	11/10/15
SRF Review:	TC	Date:	11/10/15

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92275423

92275423

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 6

1902509

Section A — Required Client Information:

Company:	SCDHEC - UST
Address:	2600 Bull St Columbia, SC 29201
Email To:	BryantJC@dhec.sc.gov
Phone: 803-898-0606	Fax: 803-898-0673
Requested Due Date/TAT:	

Section B — Required Project Information:

Report To:	J. Bryant - UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickel pumper 235
Project Number:	UST#04877 / Pace Q#9275

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	849-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D — Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, MTBE, 1,2-DCA, EDB, 624	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 9227543
1	MW-1	WT	G																		Not Sampled
2	MW-2R					11/9/15	12:30		6				6						X		No Odor 001
3	MW-3R						13:06		6				6						X		Strong Odor 002
4	MW-4D						12:54		6				6						X		No Odor 003
5	MW-5																				Not located
6	MW-6																				Not located
7	MW-7						11:54		6				6								No Odor 004
8	MW-8R						10:55		6				6								Odor 005
9	MW-9						11:07		6				6								Odor 006
10	MW-10						11:25		6				6								Slight Odor 007
11	MW-11						11:43		6				6						X		No Odor 008
12	MW-12	WT	G																		Not Located

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Colin Phillips	11/9/15			11.10.15	1142				
		11-10-15	1500	FYC	11/10/15	1501	FT	4	✓	4

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips

SIGNATURE of SAMPLER: Colin Phillips — DATE Signed (MM/DD/YY): 11/9/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 2 of 6

2003715

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC - UST	Report To: J. Bryant - UST	Attention:
Address: 2600 Bull St	Copy To:	Company Name:
Columbia, SC, 29201		Address:
Email To: BryantJ@scdhec.sc.gov	Purchase Order No.: 4600422513	Pace Quote Reference:
Phone: 803-898-0606 Fax: 803-898-0673	Project Name: Nickelpumper 235	Pace Project Manager: T. Carter
Requested Due Date/TAT:	Project Number: UST#04877/PACE QA#50970	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, Naphthalene 1,2-DCA EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92275473
1	MW 14	WT	G			11/9/15	10:20		6				6						X X X X		No Odor 009
2	MW 15																				N/WS
3	MW 16						12:07		6				6								No Odor 010
4	MW 17						15:43		6				6								No Odor 011
5	MW 18						17:04		6				6								No Odor 012
6	MW 19						10:31		6				6								No Odor 013
7	MW 20						9:56		6				6								No Odor 014
8	MW 21						10:53		6				6								No Odor 015
9	MW 22																				Not Sampled
10	MW 23																				Not Sampled
11	MW 24	WT	G			11/9/15	12:39		6				6						X X X X		No Odor 016
12	MW 25	WT	G			11/9/15	12:58		6				6						X X X X		No Odor 017

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Colin Phillips Pace	11/9/15			11/10/15	1142	
		11-10-15	1500		11-10-15	1500	Y Y N Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips

SIGNATURE of SAMPLER: Colin Phillips — DATE Signed (MM/DD/YY): 11/9/15

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 3 of 6

2003718

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull St
Columbia SC 29201
Email To: BryantJC@dhec.sc.gov
Phone: 803-898-0600 Fax: 803-898-0675
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST #04877 / PACE QA#5[illegible]

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, Meth, MTBE	1,2 DCA	8260 BXY	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92275423
1	MW 26	WT	G			11/9/15	12:20		6				6					Y	X	X	X	X		No Odor 018
2	MW 27						10:11		6				6											No Odor 019
3	MW 28						10:32		6				6											No Odor 020
4	MW 29																							Not Located
5	MW 30						11:40		6				6											No Odor 021
6	MW 31						11:17		6				6											No Odor 022
7	MW 32						12:[illegible]		6				6											Odor 023
8	MW 33						13:45		6				6											Odor 024
9	MW 34						13:27		6				6											No Odor 025
10	MW 35						13:42		6				6											No Odor 026
11	MW 36						9:35		6				6											No Odor 027
12	MW 37						9:54		6				6											Strong Odor 028

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Colin Phillips	11/9/15		[signature] pace	11/10/15	1142				
	[signature] pace	11/10/15	1500	[signature] HVL	11.10.15	1500	1.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 11/9/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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2003719

Section A Required Client Information:

Company:	SCDHEC - UST
Address:	2600 Bull Street
	Columbia, SC 29201
Email To:	BryrantJc@dhec.sc.gov
Phone:	803-898-0606
Fax:	803 898 0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J Byrant - UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST #04877 / PACE CA# 50970

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX Napth, MTBE	1,2 DCA	8 OXY	EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92775423
1	~~MW 38~~ MW 38	WT	G			11/9/15	8:38		6				6						X	X	X	X		No Odor 029
2	MW 39	"	"			"	13:08		6				6						"	"	"	"		No Odor 030
3	MW 40	"	"			"	9:09		6				6						"	"	"	"		No Odor 031
4	MW 41	"	"			"	14:08		6				6						"	"	"	"		No Odor 032
5	MW 42	"	"			"	9:36		6				6						"	"	"	"		No Odor 033
6	DW 1	"	"			"	13:32		6				6						"	"	"	"		No Odor 034
7	DW 2	"	"			"	11:21		6				6						"	"	"	"		No Odor 035
8	RW 1	"	"																					No Sample
9	RW 2	"	"																					No Sample
10	RW 3	"	"				10:44		6				6											Strong Odor 036
11	RW 4	"	"				10:50		6				6						"	"	"	"		Strong Odor 037
12	RW 5	"	"			11/9/15	13:24		6				6						X	X	X	X		Odor 038

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Colin Phillips	11/9/15			11/10/15	1142				
		11-10-15	1500		11-10-15	1500	1.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips

SIGNATURE of SAMPLER: Colin Phillips — DATE Signed (MM/DD/YY): 11/9/15

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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2003716

Section A — Required Client Information:

Company:	SCDHEC - UST
Address:	2600 Bull St
	Columbia, SC, 29201
Email To:	Byrant+JC@dhec.sc.gov
Phone: 803-898-0606	Fax: 803-898-0673
Requested Due Date/TAT:	

Section B — Required Project Information:

Report To:	J. Byrant - UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST# 04877 PACE CA# 50970

Section C — Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location — STATE: SC — Hampton

Section D — Required Client Information

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, Naphthalene	1,2-DCA	8-OXY EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	RW 6	WT	G			11/9/15	15:09		6				6						X	X	X		No Odor 039
2	WSW 1	DW	G			11/9/15	13:35		6				6						X	X	X		LDL's 040
3	WSW 2						13:40		6				6						X	X	X		LDL's 041
4	WSW 3																						Not Sampled
5	WSW 4																						Not Sampled
6	WSW 5						13:15		6				6						X	X	X		LDL's 042
7	WSW 6						13:25		6				6										LDL's 043
8	WSW 7	DW	G				13:30		6				6										LDL's 044
9	MW-3R Duplicate	WT					13:05		6				6										045
10	MW-9 Duplicate	WT					11:07		1				1										046
11	MW-37 Duplicate	WT					9:54																047
12	Field Blank	WT	G			11/9/15	13:10		6				6						X	X	X		048

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Colin Phillips	11/9/15			11-10-15	1142				
		11-10-15	1500	HLL	11.10.15	1500	1.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips

SIGNATURE of SAMPLER: Colin Phillips — DATE Signed (MM/DD/YY): 11/9/15

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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2003717

Section A Required Client Information:

Company: SCDHEC - UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To: BryantJC@dhec.sc.gov
Phone: 803-898-0606 Fax: 803 898 0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J Bryant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST #04877 / PACE ca#50970

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX, Naph, Intbe	1,2 DCA	8 OXY EDB	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Trip Blank	WT	G			11/9/15	13:11		2										X	X	X		049
2	Trip Blank 2	WT	G			11/9/15	13:12		2										X	X	X		050
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

Requested Analysis Filtered (Y/N)

9227 5473

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		11/9/15			11-10-15	1142				
		11-10-15	1500		11-10-15	1500	1.1	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Colin Phillips
SIGNATURE of SAMPLER: Colin Phillips DATE Signed (MM/DD/YY): 11/9/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

D H E C

PROMOTE PROTECT PROSPER

Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

04877

MR RONNY LOWDER
EMERALD INC
P O BOX 3050
SUMTER SC 29151-3050

APR 2 2 2016

UST DOC

Re: Aggressive fluid and vapor recovery (AFVR) directive
Contract #IFB-5400010441-11/24/15-EMW; PO #4600462870
Notice to proceed

Dear Mr. Lowder:

Under the terms and conditions of the referenced contract, and per the schedule submitted to the Underground Storage Tank (UST) Management Division on April 19, 2016, aggressive fluid and vapor recovery (AFVR) has been approved for the UST facilities listed below. Emerald, Inc. may proceed upon receipt of this letter. Enclosed are packets containing necessary information to perform AFVR at each facility. Each facility has been assigned an individual cost agreement (CA) number, work scope, work scope start date, and report due date. As specified in the contract, a report and invoice must be submitted on or before the due date. The appropriate CA number and Purchase Order (PO) #4600462870 should be referenced on each invoice submitted.

Permit	Facility	County	Work Scope	CA	Start Date	Report Date
15857	Grant's Grocery	Chester	1 96-hour event	51856	5/9/16	5/18/16
04733	Handy Pantry 89	Greenwood	1 96-hour event	51875	5/16/16	5/25/16
02698	Johnnie's Truck Stop	Darlington	1 96-hour event	51849/ 51850	5/16/16	5/25/16
03198	Summers Store	Fairfield	1 96-hour event	51753	5/23/16	6/1/16
16009	Mary Moorhead Property	Anderson	1 96-hour event	51741	5/23/16	6/1/16
02429	Sportsman Shop	Clarendon	1 96-hour event	51775	5/31/16	6/9/16
08911	Rembert Grocery	Sumter	2 96-hour events	51768	5/31/16	6/9/16
02728	Handee Shop	Darlington	1 96-hour event	51758	6/6/16	6/15/16
00479	Former Service Station	Anderson	1 96-hour event	51743	6/6/16	6/15/16
19535	Former Perry's	Calhoun	1 96-hour event	51877	6/6/16	6/15/16
08795	Blue Ridge Transfer	Sumter	1 96-hour event	51759	6/13/16	6/22/16
14262	Getsinger's Grocery	Anderson	1 96-hour event	51742	6/13/16	6/22/16

00046	Rocket Service Station	Abbeville	1 96-hour event	51761	6/13/16	6/22/16
05265	Okeetee Club	Jasper	1 96-hour event	51876	6/20/16	6/29/16
03439	Highway 11 Grocery	Oconee	4 96 hour events	52106	6/27/16	7/6/16
12151	Sportsman's Corner	Clarendon	1 96-hour event	51774	6/27/16	7/6/16
02802	Former Hess Station	Darlington	1 96-hour event	51802	6/27/16	7/6/16
12974	Pic & Pay	Hampton	1 96-hour event	51757	7/11/16	7/20/16
11776	Munn E Saver 105	Sumter	1 96-hour event	51781	7/11/16	7/20/16
17042	Mike's Jiffy Mart	Bamberg	1 96-hour event	51878	7/11/16	7/20/16
04877	Nicklepumper 235	Hampton	1 96-hour event	51756	7/18/16	7/27/16
14821	Kings Property	Horry	1 96-hour event	51916	7/18/16	7/27/16
05353	Red Hill Convenience	Lee	1 96-hour event	51881	7/18/16	7/27/16
09391	Bob's Superette	York	1 96-hour event	51661	7/23/16	8/1/16
08484	Tillman Johnson	Cherokee	1 96-hour event	51816	7/25/16	8/3/16

AFVR at each facility will be performed in accordance with the referenced contract on behalf of the UST Owner/Operator (O/O). Payment for approved costs will be made from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. The O/O has no obligation to pay for the specified work scope. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the South Carolina Department of Health and Environmental Control (Agency) is obtained.

Any changes to the work scope must be pre-approved by UST Management Division in order for Emerald to seek payment. Please contact the UST Project Manager for technical and/or financial approval. Any item that is not clearly or completely addressed in the report will not be compensated by SUPERB.

The Division grants pre-approval for transportation of free-phase product (FPP) and/or petroleum-contaminated groundwater from the referenced UST facility to a permitted treatment facility. The FPP and/or contaminated groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the report.

If you have any questions concerning this correspondence or need further assistance, please contact me by phone at (803) 898-0655, by fax at (803) 898-0673, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, Geologist/Hydrologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management

enc: Information packets
AFVR Schedule 20
cc:: Technical file (w/o enc)

Emerald, Inc.

CONSULTING AND ENGINEERING
SERVICES IN ENVIRONMENTAL AFFAIRS

2520 TAHOE DRIVE • POST OFFICE BOX 3050 • SUMTER, SOUTH CAROLINA 29151

WEBSITE:
www.emeraldinc-us.com

TELEPHONE (803) 469-5454
FAX (803) 469-5465

September 26, 2016



John Bryant, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Underground Storage Tank Management
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, SC 29201



Aggressive Fluid Vapor Recovery Report
Nickelpumper 235
Estill, South Carolina
Hampton County
UST Permit # 04877; CA # 51756
Emerald Job # 16-047

Mr. Bryant,

Please find the attached Aggressive Fluid Vapor Recovery (AFVR) Report for the Nickelpumper 235 site. A site reconnaissance was conducted to locate monitoring wells, gauge extraction wells, and assess site conditions. Prior to conducting this AFVR event information gathered during the site reconnaissance was presented to the SCDHEC project manager for review.

AGGRESSIVE FLUID VAPOR RECOVERY EVENT

On September 19, 2016 through 23, 2016, Emerald, Inc. personnel performed a 96-hour AFVR event utilizing RW-1 and RW-2 as extraction locations. This 96-hour AFVR event was conducted to remove free phase petroleum product previously detected at the subject site. Free phase petroleum product was detected in RW-1 at a thickness of 3.68 ft. and RW-2 at a thickness of 1.00 ft. prior to the event. At the conclusion of this event free phase petroleum was not

detected. Monitoring well locations are presented on the attached site map provided by SCDHEC.

Table 1 presents the off-gas concentrations (using a Photoionization Detector), post treatment off-gas concentrations, off-gas velocity, and knockout tank vacuum. Table 2 presents the stinger depths, wellhead vacuum measurements, water levels measurements and magnehelic readings obtained during the event. Emerald, Inc. field personnel normally record data at thirty minute intervals for the first eight hours of the event, then at one hour intervals from hours nine through twenty four and at two hour intervals from twenty four until the conclusion of the event. During the hours of midnight to 8 AM event monitoring was suspended. Off-gas treatment was utilized during business hours to limit exposure of the off-gas to the general public using a catalytic oxidizer.

According to the calculations as presented on Table 1, a total of 53.94 pounds of hydrocarbons (as vapor) and 8.63 equivalent gallons of hydrocarbons were removed during this event. Free phase product was not detected in the knockout tank. A total of 23,120 gallons of petroleum contaminated groundwater was transported to the City of Manning Wastewater Treatment Facility for proper disposal. One additional AFVR mobilization was added to the invoice due to the wastewater exceeding 20,000 gallons. Copies of the disposal manifests for this event are included as attachments.

If you have any questions or concerns please feel free to contact Emerald, Inc. at 803-469-5454.

Sincerely,
Emerald, Inc.

William C. McClary, P.G.
Project Manager

Ronny L. Lowder
President

Attachments

TABLE 1
AFVR MONITORING DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
SCDHEC SITE ID # 04877
EMERALD JOB # 16-047

Extraction Wells	Date	Time (hh:mm)	Differential Time (hr)	Knockout Tank Vacuum (in. Hg)	Off-Gas Concentration (PPM)	Post-Treatment Concentration (PPM)	Offgas Velocity (ft/min)	Flow Rate (SCFM)	CG:M ($mg/dsm^{3)}$	Cg (Lb/Dscf)	Removal Rate (Lbs/Hr)	Interval Removal (Lbs)
RW-1	9/19/16	10:00	Start	15	223	<0.1	N/A	140	1,186	7.40E-05	0.62	-
RW-2		10:30	0.5	16	204	<0.1	N/A	130	1,085	6.77E-05	0.53	0.29
		11:00	0.5	20	385	<0.1	N/A	90	2,047	1.28E-04	0.69	0.30
		11:30	0.5	20	366	<0.1	N/A	90	1,946	1.22E-04	0.66	0.34
		12:00 ↓	0.5	21	349	<0.1	N/A	90	1,856	1.16E-04	0.63	0.32
		12:30	0.5	21	377	<0.1	N/A	90	2,005	1.25E-04	0.68	0.33
		13:00	0.5	16	424	<0.1	N/A	140	2,255	1.41E-04	1.18	0.46
		13:30	0.5	16	386	<0.1	N/A	140	2,053	1.28E-04	1.08	0.56
		14:00	0.5	19	313	<0.1	N/A	100	1,664	1.04E-04	0.62	0.42
		14:30	0.5	19	331	<0.1	N/A	100	1,760	1.10E-04	0.66	0.32
		15:00	0.5	18	306	<0.1	N/A	110	1,627	1.02E-04	0.67	0.33
		15:30 ↓	0.5	18	375	<0.1	N/A	110	1,994	1.24E-04	0.82	0.37
		16:00	0.5	18	291	<0.1	N/A	110	1,547	9.66E-05	0.64	0.36
		16:30	0.5	19	344	<0.1	N/A	100	1,829	1.14E-04	0.69	0.33
		17:00	0.5	19	284	<0.1	N/A	100	1,510	9.43E-05	0.57	0.31
		17:30	0.5	19	263	<0.1	N/A	100	1,399	8.73E-05	0.52	0.27
		18:00	0.5	19	292	<0.1	N/A	100	1,553	9.69E-05	0.58	0.28
		19:00 ↓	1.0	19	263	<0.1	N/A	100	1,399	8.73E-05	0.52	0.55
		20:00	1.0	19	362	<0.1	N/A	100	1,925	1.20E-04	0.72	0.62
		21:00	1.0	19	382	<0.1	N/A	100	2,031	1.27E-04	0.76	0.74
		22:00	1.0	19	391	<0.1	N/A	100	2,079	1.30E-04	0.78	0.77
		23:00	1.0	19	363	<0.1	N/A	100	1,930	1.21E-04	0.72	0.75
		24:00	1.0	19	385	<0.1	N/A	100	2,047	1.28E-04	0.77	0.74
	9/20/16	8:00	8.0	19	304	<0.1	N/A	100	1,617	1.01E-04	0.61	5.49
		9:00 ↑	1.0	19	366	<0.1	N/A	100	1,946	1.22E-04	0.73	0.67
		10:00	1.0	21	387	<0.1	N/A	90	2,058	1.28E-04	0.69	0.71
		12:00 ↓	2.0	21	419	<0.1	N/A	90	2,228	1.39E-04	0.75	1.44
		14:00	2.0	19	350	<0.1	N/A	100	1,861	1.16E-04	0.70	1.45
		16:00 ↓	2.0	19	311	<0.1	N/A	100	1,654	1.03E-04	0.62	1.32
		18:00	2.0	20	334	<0.1	N/A	90	1,776	1.11E-04	0.60	1.22
		20:00	2.0	20	327	<0.1	N/A	80	1,739	1.09E-04	0.52	1.12
		22:00	2.0	20	344	<0.1	N/A	80	1,829	1.14E-04	0.55	1.07
		24:00	2.0	20	390	<0.1	N/A	80	2,074	1.29E-04	0.62	1.17

TABLE 1 Cont'd.
AFVR MONITORING DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
SCDHEC SITE ID # 04877
EMERALD JOB # 16-047

Extraction Wells	Date	Time (hh:mm)	Differential Time (hr)	Knockout Tank Vacuum (in. Hg)	Off-Gas Concentration (PPM)	Post-Treatment Concentration (PPM)	Offgas Velocity (ft/min)	Flow Rate (SCFM)	CG:M ($mg/dsm^{3)}$	Cg (Lb/Dscf)	Removal Rate (Lbs/Hr)	Interval Removal (Lbs)
RW-1	9/21/16	8:00 ↓	8.0	20	311	<0.1	N/A	90	1,654	1.03E-04	0.56	4.72
RW-2		10:00	2.0	19	284	<0.1	N/A	100	1,510	9.43E-05	0.57	1.12
		12:00	2.0	19	209	<0.1	N/A	100	1,111	6.94E-05	0.42	0.98
		14:00 ↓	2.0	19	270	<0.1	N/A	90	1,436	8.96E-05	0.48	0.90
		16:00	2.0	20	241	<0.1	N/A	90	1,282	8.00E-05	0.43	0.92
		18:00	2.0	20	263	<0.1	N/A	90	1,399	8.73E-05	0.47	0.90
		20:00	2.0	20	281	<0.1	N/A	90	1,494	9.33E-05	0.50	0.98
		22:00	2.0	20	276	<0.1	N/A	90	1,468	9.16E-05	0.49	1.00
		24:00	2.0	20	271	<0.1	N/A	90	1,441	9.00E-05	0.49	0.98
	9/22/16	8:00	8.0	20	234	<0.1	N/A	90	1,244	7.77E-05	0.42	3.62
		10:00 ↑	2.0	20	266	<0.1	N/A	100	1,415	8.83E-05	0.53	0.95
		12:00	2.0	20	229	<0.1	N/A	100	1,218	7.60E-05	0.46	0.99
		14:00 ↓	2.0	20	271	<0.1	N/A	100	1,441	9.00E-05	0.54	1.00
		16:00	2.0	20	218	<0.1	N/A	90	1,159	7.24E-05	0.39	0.93
		18:00	2.0	20	249	<0.1	N/A	90	1,324	8.27E-05	0.45	0.84
		20:00	2.0	20	273	<0.1	N/A	90	1,452	9.06E-05	0.49	0.94
		22:00	2.0	20	265	<0.1	N/A	90	1,409	8.80E-05	0.48	0.96
		24:00	2.0	20	271	<0.1	N/A	90	1,441	9.00E-05	0.49	0.96
	9/23/16	8:00	8.0	20	269	<0.1	N/A	90	1,430	8.93E-05	0.48	3.87
		10:00	2.0	20	258	<0.1	N/A	90	1,372	8.57E-05	0.46	0.94

Well Gauging Data			Before AFVR Event			After AFVR Event		
Well No.	Diameter (in)	Screened Interval (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)
RW-1	4	15-20	6.25	9.93	3.68	---	13.03	---
RW-2	4	15-20	6.86	7.86	1.00	---	12.24	---

Equations

Cg;m = PPMg*(Mg/K3)

Removal Rate = Cg * Flow Rate * 60Min/Hr

Interval Removal = $(T_1 + T_2)/2$

PPM = Part per Million (by PID)

Cg:m = mg/dsm3(mass concentration of gasoline emission)

Mg = 128 mg/mg-mole, molecular weight of gasoline

K3 = 24.07 dsm^3/1E6 mg-mole, mass to volume conversion

Cg = lb/dcsf, mass concentration of gasoline by emission

Removal Rate = lb/hr,pollutant mass removal rate of emission

Product Thickness

Product observed in Sight Tube? No

Product detected in Tanker? No

Weather Conditions		Emerald, Inc. Personnel
9/19/16	Cloudy, 67-85°F	D. Ridgeway
9/20/16	Cloudy, 67-85°F	C. Clark
9/21/16	Cloudy, 67-85°F	
9/22/16	Cloudy, 67-85°F	
9/23/16	Cloudy, 67-85°F	

Recovery / Disposal Information

Hydrocarbons Removed (vapor):	53.94	Pounds
Hydrocarbons Removed (liquid):	0.00	Gallons
Total Hydrocarbons Removed:	8.63	Equivalent Gallons
Molecular Weight Utilized:	128	mg/mg-mole
Disposal Facility:	City of Manning Wastewater Treatment Facility	
Total Liquids Removed:	23,120	

Notes

↑ = Stinger raised ↓ = Stinger lowered

TABLE 2
EVENT MONITORING DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
SCDHEC SITE ID # 04877
EMERALD JOB # 16-047

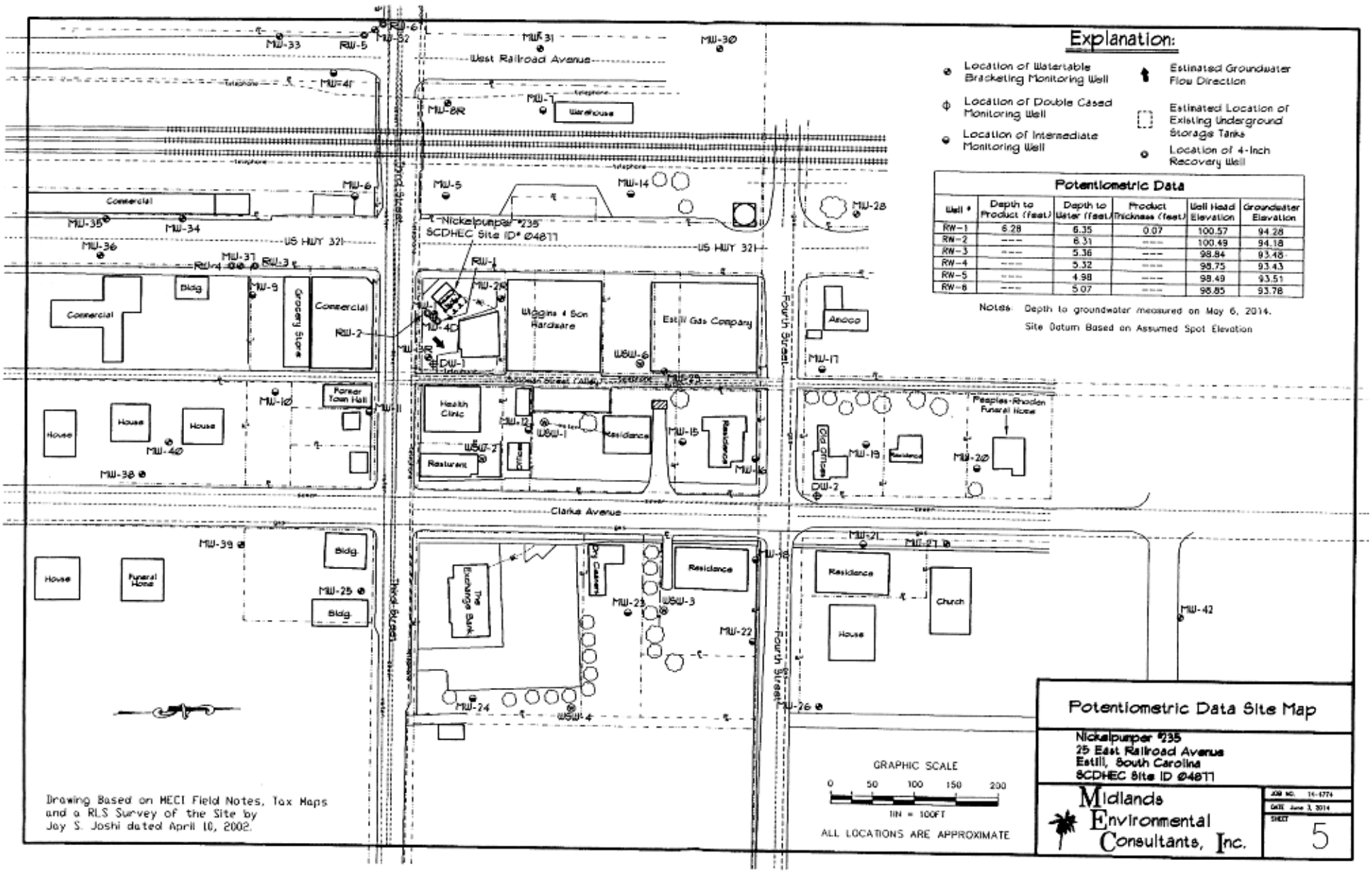
Date	Time (hh:mm)	Extraction Wells				Event Monitoring			
		RW-1		RW-2		MW-3R		MW-4D	
		Stinger Depth (ft.)	Wellhead Vacuum (in. Hg)	Stinger Depth (ft.)	Wellhead Vacuum (in. Hg)	Magnehelic Reading (inches of water)	Depth to Water (ft.)	Magnehelic Reading (inches of water)	Depth to Water (ft.)
9/19/16	10:00	15.0	15	15.0	15	Pre	6.79	Pre	22.16
	10:30	15.0	16	15.0	16	---	---	---	---
	11:00	15.0	20	15.0	20	---	---	---	---
	11:30	15.0.	20	15.0	20	---	---	---	---
	12:00	16.0	20	16.0	20	<0.10	7.64	<0.10	22.15
	12:30	16.0	15	16.0	20	---	---	---	---
	13:00	16.0	18	16.0	15	---	---	---	---
	13:30	16.0	18	16.0	15	---	---	---	---
	14:00	17.0	17	17.0	18	<0.10	8.03	<0.10	22.14
	14:30	17.0	17	17.0	18	---	---	---	---
	15:00	17.0	17	17.0	17	---	---	---	---
	15:30	18.0	18	18.0	17	---	---	---	---
	16:00	18.0	18	18.0	17	<0.10	8.06	<0.10	22.10
	16:30	18.0	18	18.0	18	---	---	---	---
	17:00	19.0	18	19.0	18	---	---	---	---
	17:30	19.0	18	19.0	18	---	---	---	---
	18:00	19.0	18	19.0	18	<0.10	8.10	<0.10	22.08
	19:00	19.0	18	19.0	18	---	---	---	---
	20:00	19.0	18	19.0	18	<0.10	7.15	<0.10	22.05
	21:00	19.0	18	19.0	18	---	---	---	---
	22:00	19.0	18	19.0	18	<0.10	7.20	<0.10	22.04
	23:00	19.0	18	19.0	18	---	---	---	---
	24:00	19.0	18	19.0	18	<0.10	7.23	<0.10	22.01
9/20/16	8:00	19.0	18	19.0	18	<0.10	7.44	<0.10	21.93
	9:00	15.0	18	15.0	18	---	---	---	---
	10:00	15.0	20	15.0	20	<0.10	7.42	<0.10	21.92
	12:00	16.0	20	16.0	20	<0.10	7.40	<0.10	21.91
	14:00	16.0	18	16.0	18	<0.10	7.40	<0.10	21.88
	16:00	17.0	18	17.0	18	<0.10	7.41	<0.10	21.89
	18:00	17.0	19	17.0	19	<0.10	7.41	<0.10	21.88
	20:00	17.0	19	17.0	19	<0.10	7.40	<0.10	21.87
	22:00	17.0	19	17.0	19	<0.10	7.42	<0.10	21.86
	24:00	17.0	19	17.0	19	<0.10	7.42	<0.10	21.85

Notes:

TABLE 2 Cont'd.
EVENT MONITORING DATA
NICKELPUMPER 235
ESTILL, SOUTH CAROLINA
SCDHEC SITE ID # 04877
EMERALD JOB # 16-047

Date	Time (hh:mm)	Extraction Wells				Event Monitoring			
		RW-1		RW-2		MW-3R		MW-4D	
		Stinger Depth (ft.)	Wellhead Vacuum (in. Hg)	Stinger Depth (ft.)	Wellhead Vacuum (in. Hg)	Magnehelic Reading (inches of water)	Depth to Water (ft.)	Magnehelic Reading (inches of water)	Depth to Water (ft.)
9/21/16	8:00	18.0	19	18.0	19	<0.10	7.38	<0.10	21.78
	10:00	18.0	18	18.0	19	<0.10	7.38	<0.10	21.76
	12:00	18.0	18	18.0	19	<0.10	7.39	<0.10	21.73
	14:00	19.0	19	19.0	19	<0.10	7.38	<0.10	21.72
	16:00	19.0	19	19.0	19	<0.10	7.37	<0.10	21.26
	18:00	19.0	19	19.0	19	<0.10	7.37	<0.10	21.68
	20:00	19.0	19	19.0	19	<0.10	7.37	<0.10	21.66
	22:00	19.0	19	19.0	19	<0.10	7.33	<0.10	21.64
	24:00	19.0	19	19.0	19	<0.10	7.35	<0.10	21.64
9/22/16	8:00	16.0	20	19.0	20	<0.10	7.38	<0.10	21.63
	10:00	16.0	18	16.0	18	<0.10	7.42	<0.10	21.61
	12:00	17.0	18	16.0	18	<0.10	7.44	<0.10	21.59
	14:00	17.0	18	17.0	18	<0.10	7.47	<0.10	21.57
	16:00	17.0	19	17.0	19	<0.10	7.51	<0.10	21.59
	18:00	17.0	19	17.0	19	<0.10	7.53	<0.10	21.53
	20:00	17.0	19	17.0	19	<0.10	7.56	<0.10	21.52
	22:00	17.0	19	17.0	19	<0.10	7.58	<0.10	21.50
	24:00	17.0	19	17.0	19	<0.10	7.53	<0.10	21.51
	8:00	17.0	19	17.0	19	<0.10	7.53	<0.10	21.52
9/23/16	10:00	17.0	19	17.0	19	<0.10	7.53	<0.10	21.53

Notes:



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Potentiometric Data

Well #	Depth to Product (Feet)	Depth to Water (Feet)	Product Thickness (Feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	----	6.31	----	100.49	94.18
RW-3	----	5.36	----	98.84	93.48
RW-4	----	5.32	----	98.75	93.43
RW-5	----	4.98	----	98.49	93.51
RW-6	----	5.07	----	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on HECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID #4877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 5

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 942 – 1

2. Page 1 of

3. Generator's Name and Mailing Address
Nickelpumper 235
25 East Railroad Avenue
Estill, S.C. UST# 04877

4. Generator's Phone ( )

5. Transporter 1 Company Name
EMERALD, INC.

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
City of Manning
Wastewater Treatment Facility
PO Box 546
Manning, SC 29102

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS PETROLEUM CONTAMINATED GROUNDWATER			6012	GAL
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: DANIEL F. RIDGEWAY
Signature:
Date: Month 9 Day 20

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Mike Rivers
Signature: Mike Rivers
Date: Month 9 Day 20

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name:
Signature:
Date: Month 9 Day 24

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 942 – 2

2. Page 1 of

3. Generator's Name and Mailing Address
Nickelpumper 235
25 East Railroad Avenue
Estill, S.C. UST# 04877

4. Generator's Phone ( )

5. Transporter 1 Company Name
EMERALD, INC.

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
City of Manning
Wastewater Treatment Facility
PO Box 546
Manning, SC 29102

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS PETROLEUM CONTAMINATED GROUNDWATER			6080	
b.				
c.				
d.				

GENERATOR

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: DANIEL F. RIDGEWAY
Signature: [signature]
Date: Month 9 Day 21

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Mike Rivers
Signature: [signature]
Date: Month 9 Day 21

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name:
Signature: [signature]
Date: Month 9 Day 29

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 942 -3

2. Page 1 of

3. Generator's Name and Mailing Address
Nickelpumper 235
25 East Railroad Avenue
Estill, S.C. UST# 04877

4. Generator's Phone ( )

5. Transporter 1 Company Name
EMERALD, INC.

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
City of Manning
Wastewater Treatment Facility
PO Box 546
Manning, SC 29102

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS PETROLEUM CONTAMINATED GROUNDWATER			5028	
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
DANIEL F. RIDGEWAY		9	22	

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
Mike Rivers	Mike Rivers	9	22	

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year
		9	29	

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 942 – 4

2. Page 1 of

3. Generator's Name and Mailing Address
Nickelpumper 235
25 East Railroad Avenue
Estill, S.C. UST# 04877

4. Generator's Phone ( )

5. Transporter 1 Company Name
EMERALD, INC.

6. US EPA ID Number

A. State Transporter's ID

B. Transporter 1 Phone

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
City of Manning
Wastewater Treatment Facility
PO Box 546
Manning, SC 29102

10. US EPA ID Number

E. State Facility's ID

F. Facility's Phone

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS PETROLEUM CONTAMINATED GROUNDWATER			6000	
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENERATOR

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: DANIEL F. RIDGEWAY
Signature: Daniel F. Ridgeway
Date: Month 9 Day 23

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Mike Rivers
Signature: Mike Rivers
Date: Month 9 Day 23

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name:
Signature: Willie Rucker
Date: Month 9 Day 29

S.C. Department of Health and Environmental Control

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT
2600 Bull Street, Columbia, South Carolina 29201
Telephone: 803-898-2544

UST 28 DOCKETING

MEMORANDUM

TO: Midlands Environmental Consultants, Inc

FROM: John Bryant

RE: **Site Specific Work Plan Request**

Facility Name: Nickelpumper 235

Permit Number: 04877

County: Hampton

Work To Be Completed: Purge and sample all monitoring wells. Sample all water supply wells associated with the site.

Total Number of Monitoring Well Samples: 50

Analysis Being Requested: BTEXNM, 1,2 DCA, 8-Oxys and EDB

Total Number of Water Supply Well Samples: 7

Analysis Being Requested: BTEXNM, 1,2 DCA, 8-Oxys and EDB

dhec
Healthy People. Healthy Communities

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

NOV 2 2 2016

Re: **Site Specific Work Plan Request**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600529921

Dear Mr. Shane:

In accordance with bid solicitation # IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), Revision 3.1 it is requested that you submit a Site Specific Work Plan for each site attached. The plans must be submitted **within 15 business days** to my attention. The project manager for each site will issue a notice to proceed once the plan has been reviewed and approved.

Please contact me with the sampling schedule before commencing work at these facilities. In addition, a weekly update for each site is required to be submitted via e-mail to the site's project manager and myself. If you have any questions or need further assistance, please contact me at (803) 898-0606 or bryantjc@dhec.sc.gov.

Sincerely,

John C. Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Site Information Packages

cc: Technical Files

Midlands
Environmental
Consultants, Inc.

November 28, 2016



Mr. John C. Bryant, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Site-Specific Work Plan
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 16-5774
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On November 22, 2016, MECI personnel performed a site visit to the subject sites to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Mr. John Bryant (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Nickelpumper 235 UST Permit #: 04877
Facility Address: 25 E Railroad Avenue, Estill, SC 29918
Responsible Party: Golden Isles Petroleum Inc. Phone: 912-692-0506
RP Address: PO Box 15448, Savannah, GA 31416
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Active Gas Station

Scope of Work (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☐ Other
- ☐ GAC

Analyses (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☐ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Drinking Water Supply Wells:

- ☑ BTEXNMDCA (524.2)
- ☑ Oxygenates & Ethanol (8260B)
- ☐ Mecury (200.8 245.1 or 245.2)
- ☐ RCRA Metals (200.8)
- ☑ EDB (504.1)

Soil:

- ☐ BTEXNM
- ☐ Lead
- ☐ RCRA Metals
- ☐ PAH
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil	7 Water Supply Wells	____ Air	2 Field Blank
49 Monitoring Wells	____ Surface Water	4 Duplicate	2 Trip Blank

Field Screening Methodology

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

of shallow points proposed: _____ Estimated Footage: _____ feet per point
of deep points proposed: _____ Estimated Footage: _____ feet per point
Field Screening Methodology: _____

Permanent Monitoring Wells

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

of shallow wells: _____ Estimated Footage: _____ feet per point
of deep wells: _____ Estimated Footage: _____ feet per point
of recovery wells: _____ Estimated Footage: _____ feet per point
Comments, if warranted:

_____

_____

UST Permit #: 04877 Facility Name: Nickelpumper 235

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 11/28/2016 Field Work Completion: 12/28/2016
Report Submittal: 1/28/2017 # of Copies Provided to Property Owners: _____

Aquifer Characterization
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

Investigation Derived Waste Disposal
Soil: _____ Tons Purge Water: 500.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

Additional Details For This Scope of Work
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.

-During the initial site visit, monitoring wells MW-5, MW-6, MW-12, MW-23, and MW-29 were not located. If Any of these wells are located during the sampling event, they will be sampled accordingly. Water supply well WSW-3 was found to be inactive during the initial site visit.
-MECI will attempt to sample all seven water supply wells during the sampling event.
-Monitoring wells will be purged prior to sample collection and samples will be analyzed for BTEXNM, 1,2-DCA, 8 Oxy's (8260B), and EDB (8011).
-Water supply well samples will be analyzed for BTEXNM, 1,2 DCA (524.2), 8 Oxy's (8260B), and EDB (504.1).

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)
____ Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

____ Well Driller as indicated in ACQAP? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

____ Other variations from ACQAP. Please describe below.

Attachments
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

dhec
S.C. Department of Health and Environmental Control

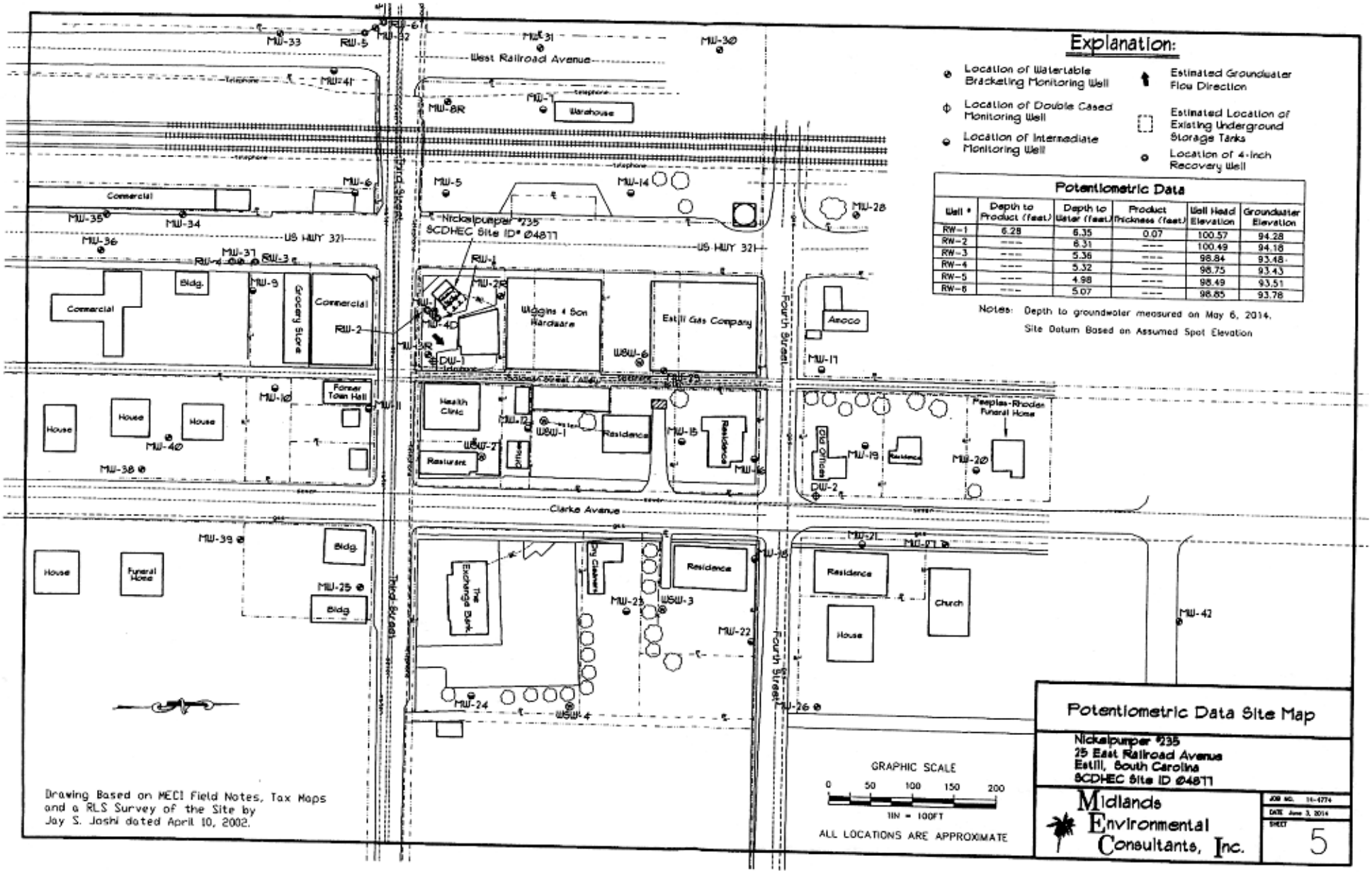
ASSESSMENT COMPONENT COST AGREEMENT
SOUTH CAROLINA

Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account
CONTRACT PO NUMBER 4600497949

Facility Name Nickelpumper 235

UST Permit #: 04877 **Cost Agreement #:** Proposal

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. **Plan***				
A1. Site Specific Work Plan	1	each	$0.00	$0.00
C1. QAPP Appendix B		each	$0.00	$0.00
2. A1. Receptor Survey		each	$0.00	$0.00
4. **Mob/Demob**				
B1. Personnel	3	each	$350.00	$1,050.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Product (Each)**				
A1. Groundwater Purge	49	per well	$16.00	$784.00
B1. Air or Vapors		samples	$0.00	$0.00
C1. Water Supply	7	samples	$10.00	$70.00
D1. Groundwater No Purge		per well	$8.00	$0.00
E1. Gauge Well only		per well	$0.00	$0.00
F1. Sample Below Product		per well	$0.00	$0.00
G1. Pasive Diffusion Bag		each	$20.00	$0.00
H1. Field Blank	2	each	$10.00	$20.00
17. **Disposal* (gallons or tons)**				
AA. Disposal/Water	500	gallons	$1.00	$500.00
BB. Free Product		gallons	$0.00	$0.00
Note: Rate includes costs or rental of suitable container(s)				
23. D. Site Reconnaissance		each	$0.00	$0.00
18. **Miscellaneous (attach receipts)**				
GW Contour Map		each	$25.00	$0.00
Isopleth Map		each	$25.00	$0.00
High-Strength Well Pad Replacement		each	$75.00	$0.00
Trip Blank	2	each	$10.00	$20.00
Low Flow Sampling		per well	$65.00	$0.00
Data Table		each	$25.00	$0.00
25. **Well Repair**				
B1. Repair 2x2 MW Pad		each	$75.00	$0.00
C1. Repair 4x4 MW Pad		each	$75.00	$0.00
D1. Replace Well Vault		each	$75.00	$0.00
E. Replace well cover		each	$25.00	$0.00
F1. Replace well cover bolts		each	$2.60	$0.00
G. Replace locking well cap & lock		each	$15.00	$0.00
K1. Replace Missing Well ID Plate		each	$10.00	$0.00
TOTAL				$2,444.00



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-inch Recovery Well

Potentiometric Data

Well #	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	---	6.31	---	100.49	94.18
RW-3	---	5.36	---	98.84	93.48
RW-4	---	5.32	---	98.75	93.43
RW-5	---	4.98	---	98.49	93.51
RW-6	---	5.07	---	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

Drawing Based on MEC! Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID #4877

Midlands Environmental Consultants, Inc.

JOB NO. 11-4774
DATE June 3, 2014
SHEET 5

dhec
Healthy People Healthy Communities

DEC 2 0 2016



BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071

Re: **Notice to Proceed-Site Specific Work Plan Approval**
Groundwater Sampling Contract
Solicitation # IFB-5400007403, PO#4600529921
Nickelpumper 235, 25 East Railroad Avenue, Estill, SC
UST Permit #04877; MECI CA #53609; Pace MW CA #53610; Pace WSW CA#53612
Hampton County

Dear Mr. Shane:

In accordance with bid solicitation #IFB-5400007403 and the UST Management Division Quality Assurance Program Plan (QAPP), the Site-Specific Work Plan has been reviewed and approved. In accordance with the approved ACQAP, a status report of the project should be provided on a weekly basis via e-mail. If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

MECI will perform services at the site on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. A copy of the disposal manifest and/or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the final report. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

Please note, sampling should be conducted within 15 calendar days from the date of this letter. The final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed. The final report should contain the requirements of Section III.2.15 of the bid solicitation. The final report should be submitted to John Bryant, the contract manager

If you have any site-specific questions or contract specific questions, please contact me at (803) 898-0606 or via e-mail at bryantjc@dhec.sc.gov.

Sincerely,

John Bryant, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Approved Cost Agreement (both CAs)

cc: John Bryant, Corrective Action Section, UST Management Division (w/o encs)
Trey Carter, Pace Analytical Services, 9800 Kincey Ave, Ste 100, Huntersville, NC, 28078 (w/app. CA)
Technical Files (w/encs)

Approved Cost Agreement 53610

Facility: 04877 NICKELPUMPER 235
BRYANTJC
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
11 ANALYSES						
	GW GROUNDWATER	A2	BTEXNM+OXYGS+1,2-DCA+ETH-8260B	54.0000	$19.000	1,026.00
		F1	EDB BY 8011	53.0000	$18.000	954.00
				Total Amount		1,980.00

Approved Cost Agreement 53612

Facility: 04877 NICKELPUMPER 235

BRYANTJC

PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
18 MISCELLANEOUS						
			BTEX+NAPTH+MTBE+1,2 DCA (524.2)	10.0000	$39.000	390.00
			EDB (504.1)	9.0000	$18.000	162.00
			OXYGENATES+ETHANOL (8260B)	10.0000	$13.000	130.00
				Total Amount		682.00

Approved Cost Agreement 53609

Facility: 04877 NICKELPUMPER 235
BRYANTJC
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
04 MOB/DEMOB						
		B1	PERSONNEL	3.0000	$350.000	1,050.00
10 SAMPLE COLLECTION						
		A1	GROUNDWATER (PURGE)	49.0000	$16.000	784.00
		C1	WATER SUPPLY	7.0000	$10.000	70.00
		H1	FIELD BLANK	2.0000	$10.000	20.00
17 DISPOSAL						
		AA	WASTEWATER	500.0000	$1.000	500.00
18 MISCELLANEOUS						
			SITE SPECIFIC WORK PLAN	1.0000	$0.000	0.00
			TRIP BLANK	2.0000	$10.000	20.00
				Total Amount		2,444.00

Midlands
Environmental
Consultants, Inc.

December 16, 2016



Mr. John C. Bryant, Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Report of Groundwater Sampling
Nicklepumper 235
25 East Railroad Ave
Estill, South Carolina
SCDHEC Site ID Number 04877; CA # 53609
MECI Project Number 16-5774
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Bryant,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling for the referenced site. This report describes site activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control's (SCDHEC) Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP).

PROJECT INFORMATION

The subject site (Nickelpumper 235) is located at 25 East Railroad Avenue, Estill, Hampton County, South Carolina. The subject site currently maintains one 5,000 gallon diesel underground storage tanks (UST), one 8,000 gallon regular unleaded gasoline UST, one 8,000 gallon plus gasoline UST, and one 8,000 gallon premium gasoline UST. The subject tanks are currently in compliance with an issued compliance date of April 18, 2013. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product from the subject tanks in January of 1993 and confirmed the release in July of 1994. The site is currently classified as Class 2BB.

The South Carolina Department of Health and Environmental Control (SCDHEC) reported a second release of petroleum product from the subject tanks on April 04, 2008 and confirmed the release on April 25, 2008. The release was issued a No Further Action on April 25, 2008.

The above information is based on reports and correspondence obtained from MECI field notes and SCDHEC files.

MONITORING WELL SAMPLING AND CHEMICAL ANALYSIS

On January 2, 2017, MECI personnel collected groundwater samples from forty-two (42) monitoring wells, and six (6) water supply wells at the subject site. Monitoring wells MW-5, MW-6, and MW-23 were not located during the initial site visit or during sampling activities. One (1) monitoring well, MW-1, was not able to be opened during the sampling event, due to the unique well vault. Three (3) monitoring wells, MW-37, RW-1, and RW-2, were gauged and found to contain measurable free phase petroleum product, and were not sampled. One (1) water supply well, WSW-6, was found to be inactive, and was not sampled. According to SCDHEC, all wells were to be purged prior to sample collection. Forty-two (42) monitoring wells were purged prior to sampling.

Prior to sampling, MECI personnel utilized an electronic water level indicator for water level measurements and an oil/water interface probe for free phase petroleum product level measurements. Purging was completed by bailing at least five well volumes of water from the well, until pH, conductivity, dissolved oxygen and turbidity stabilized, or all water was evacuated from the well, whichever occurred first. Sampling/purging was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. A new set of nitrile gloves were worn at each monitoring well, and at all time samples were handled. Field measurements of pH, conductivity, dissolved oxygen, water temperature, and turbidity were obtained before well sampling process. MECI utilized YSI Pro20 meter for DO (mg/L) and temperature readings (°C), YSI Pro1030 meter for pH and conductivity (uS) readings and a MicroTPI turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained. The wells were sampled in accordance with the most recent revision of SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division and MECI's most recent Standard Operating Procedures.

Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006001) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

Sample ID	Purge	No Purge	Gauge Only	Low-Flow	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	BTEX, Naphthalene, MTBE (EPA Method 524.2)	EDB (EPA Method 504.1)
							Analyte Sampled						
MW-1					X								
MW-2R	X						X	X	X	X			

Notes: BTEX = Benzene, Toluene, Ethylbenzene, & Total Xylenes
MTBE=Methyl tertiary butyl ether
1,2 DCA = 1,2 Dicloroethane
EDB = Ethylene Dibromide

Sample ID	Purge	No Purge	Gauge Only	Low-Flow	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	BTEX, Naphthalene, MTBE (EPA Method 524.2)	EDB (EPA Method 504.1)
							Analyte Sampled						
MW-3R	X						X	X	X	X			
MW-4D	X						X	X	X	X			
MW-5						X							
MW-6						X							
MW-7	X						X	X	X	X			
MW-8R	X						X	X	X	X			
MW-9	X						X	X	X	X			
MW-10	X						X	X	X	X			
MW-11	X						X	X	X	X			
MW-12	X						X	X	X	X			
MW-13	X						X	X	X	X			
MW-14	X						X	X	X	X			
MW-15	X						X	X	X	X			
MW-16	X						X	X	X	X			
MW-17	X						X	X	X	X			
MW-18	X						X	X	X	X			
MW-19	X						X	X	X	X			
MW-20	X						X	X	X	X			
MW-21	X						X	X	X	X			
MW-22	X						X	X	X	X			
MW-23						X							
MW-24	X						X	X	X	X			
MW-25	X						X	X	X	X			
MW-26	X						X	X	X	X			
MW-27	X						X	X	X	X			
MW-28	X						X	X	X	X			
MW-29	X						X	X	X	X			
MW-30	X						X	X	X	X			
MW-31	X						X	X	X	X			
MW-32	X						X	X	X	X			
MW-33	X						X	X	X	X			
MW-34	X						X	X	X	X			
MW-35	X						X	X	X	X			
MW-36	X						X	X	X	X			
MW-37			X										
MW-38	X						X	X	X	X			

Notes: **BTEX = Benzene, Toluene, Ethylbenzene, & Total Xylenes**
MTBE=Methyl tertiary butyl ether
1,2 DCA = 1,2 Dicloroethane
EDB = Ethylene Dibromide

Sample ID	Purge	No Purge	Gauge Only	Low-Flow Sampling	Not Sampled	Not Located	BTEX, Naphthalene, MTBE (EPA Method 8260-B)	EDB (EPA Method 8011)	1,2 DCA (EPA Method 8260-B)	8 Oxygenates (EPA Method 8260-B)	Total Lead (EPA Method 6010)	BTEX, Naphthalene, MTBE (EPA Method 524.2)	EDB (EPA Method 504.1)
							Analyte Sampled						
MW-39	X						X	X	X	X			
MW-40	X						X	X	X	X			
MW-41	X						X	X	X	X			
MW-42	X						X	X	X	X			
DW-1	X						X	X	X	X			
DW-2	X						X	X	X	X			
RW-1			X										
RW-2			X										
RW-3	X						X	X	X	X			
RW-4	X						X	X	X	X			
RW-5	X						X	X	X	X			
RW-6	X						X	X	X	X			
DUP-1							X	X	X	X			
DUP-2							X	X	X	X			
DUP-3							X	X	X	X			
Field Blank							X	X	X	X			
Trip Blank 1							X		X	X			
Trip Blank 2							X		X	X			
Trip Blank 3							X		X	X			
WSW-1										X		X	X
WSW-2										X		X	X
WSW-3										X		X	X
WSW-4										X		X	X
WSW-5										X		X	X
WSW-6					X								
WSW-7										X		X	X
WSW DUP-1										X		X	X
WSW Field Blank										X		X	X
WSW Trip Blank										X		X	

Notes: BTEX = Benzene, Toluene, Ethylbenzene, & Total Xylenes
MTBE=Methyl tertiary butyl ether
1,2 DCA = 1,2 Dicloroethane
EDB = Ethylene Dibromide

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 805.5 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is attached at the end of this report.

Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
Midlands Environmental Consultants, Inc.

Todd D. Elder
Staff Hydrogeologist

Jeff L. Coleman
Senior Scientist

Attachments:

Nicklepumper 235
Estill, South Carolina

January 3, 2017
MECI Job #: 16-5774

Contractor Checklist

Item#	Item	Yes	No	N/A
1	Is Facility Name, Permit #, and address provided?	X		
2	Is UST Owner/Operator name, address, & phone number provided?			X
3	Is name, address, & phone number of current property owner provided?			X
4	Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided?	X		
5	Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided?			X
6	Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided?	X		
7	Has the facility history been summarized?	X		
8	Has the regional geology and hydrogeology been described?			X
9	Are the receptor survey results provided as required?			X
10	Has current use of the site and adjacent land been described?			X
11	Has the site-specific geology and hydrogeology been described?			X
12	Has the primary soil type been described?			X
13	Have field screening results been described?			X
14	Has a description of the soil sample collection and preservation been detailed?			X
15	Has the field screening methodology and procedure been detailed?			X
16	Has the monitoring well installation and development dates been provided?			X
17	Has the method of well development been detailed?			X
18	Has justification been provided for the locations of the monitoring wells?			X
19	Have the monitoring wells been labeled in accordance with the UST QAPP guidelines?			X
20	Has the groundwater sampling methodology been detailed? See MECI SOP	X		
21	Have the groundwater sampling dates and groundwater measurements been provided? See attached Site Activity Summary Sheet	X		
22	Has the purging methodology been detailed? See MECI SOP	X		
23	Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? See attached Field Data Information Sheets	X		
24	If free-product is present, has the thickness been provided? See attached Site Activity Summary Sheets	X		
25	Does the report include a brief discussion of the assessment done and the results?			X
26	Does the report include a brief discussion of the aquifer evaluation and results?			X
27	Does the report include a brief discussion of the fate & transport models used?			X

Item#	Item	Yes	No	N/A
28	Are the site-conceptual model tables included? (Tier 1 Risk Evaluation)			X
29	Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation)			X
30	Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation)			X
31	Have recommendations for further action been provided and explained?			X
32	Has the soil analytical data for the site been provided in tabular format? (Table 1)			X
33	Has the potentiometric data for the site been provided in tabular format? (Table 2)			X
34	Has the current and historical laboratory data been provided in tabular format?			X
35	Have the aquifer characteristics been provided and summarized on the appropriate form?			X
36	Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation)			X
37	Has the topographic map been provided with all required elements? (Figure 1)	X		
38	Has the site base map been provided with all required elements? (Figure 2)	X		
39	Have the CoC site maps been provided? (Figure 3 & Figure 4)			X
40	Has the site potentiometric map been provided? (Figure 5)			X
41	Have the geologic cross-sections been provided? (Figure 6)			X
42	Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation)			X
43	Has the site survey been provided and include all necessary elements? (Appendix A)			X
44	Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B)	X		
45	Is the laboratory performing the analyses properly certified?	X		
46	Has the tax map been included with all necessary elements? (Appendix C)			X
47	Have the soil boring/field screening logs been provided? (Appendix D)			X
48	Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E)			X
49	Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F)			X
50	Have the disposal manifests been provided? See attached	X		
51	Has a copy of the local zoning regulations been provided? (Appendix H)			X
52	Has all fate and transport modeling been provided? (Appendix I)			X
53	Have copies of all access agreements obtained by the contractor been provided? (Appendix J)			X
54	Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided?	X		

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: T.E., P.W., J.P., J.F., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-1	N	1/2/17	***	UNK	***	***	***	***	***	Not Sampled; Could Not Open Well Lid
MW-2R	Y	1/2/17	13:40	10-25	***	7.37	***	1.78	14.50	No Odor
MW-3R	Y	1/2/17	17:00	10-25	***	6.68	***	1.44	15.00	Odor; Duplciated as DUP-3
MW-4D	Y	1/2/17	14:35	80-85	***	15.00	***	2.93	58.00	No Odor
MW-5	N	1/2/17	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-6	N	1/2/17	***	15-25	***	***	***	***	***	Not Located; Used Metal Detector
MW-7	Y	1/2/17	10:59	15-25	***	7.38	***	3.90	14.25	No Odor
MW-8R	Y	1/2/17	11:19	10-25	***	6.10	***	0.69	15.50	No Odor
MW-9	Y	1/2/17	12:38	15-25	***	6.19	***	1.37	15.50	Odor
MW-10	Y	1/2/17	15:57	15-25	***	4.52	***	0.90	17.00	Odor
MW-11	Y	1/2/17	16:30	15-25	***	6.33	***	2.04	15.50	No Odor
MW-12	Y	1/2/17	13:05	15-25	***	7.68	***	4.06	14.25	No Odor
MW-14	Y	1/2/17	11:42	15-25	***	7.25	***	4.25	14.50	No Odor
MW-15	Y	1/2/17	12:24	15-25	***	6.98	***	0.84	14.75	Slight Odor
MW-16	Y	1/2/17	12:05	15-25	***	7.12	***	1.69	14.75	No Odor
									223.5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: T.E., P.W., J.P., J.F., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-17	Y	1/2/17	16:05	15-25	***	7.80	***	4.07	14.00	No Odor
MW-18	Y	1/2/17	12:00	15-25	***	6.89	***	3.70	15.00	No Odor
MW-19	Y	1/2/17	15:05	15-25	***	7.32	***	4.14	14.50	No Odor
MW-20	Y	1/2/17	15:35	15-25	***	6.20	***	3.64	15.50	No Odor
MW-21	Y	1/2/17	12:55	15-25	***	7.10	***	4.29	15.00	No Odor; Duplicated as DUP-2
MW-22	Y	1/2/17	11:35	15-25	***	6.68	***	3.87	15.00	No Odor
MW-23	N	1/2/17	NL	15-25	***	NL	***	NL	NL	Not Located; Used Metal Detector
MW-24	Y	1/2/17	11:00	15-25	***	6.67	***	3.26	15.00	No Odor
MW-25	Y	1/2/17	16:00	5-20	***	5.65	***	3.62	12.00	No Odor
MW-26	Y	1/2/17	12:25	5-20	***	5.85	***	2.94	12.00	No Odor
MW-27	Y	1/2/17	13:20	5-20	***	6.92	***	3.14	11.00	No Odor
MW-28	Y	1/2/17	16:30	5-20	***	7.90	***	5.24	10.00	No Odor
MW-29	Y	1/2/17	12:40	5-20	***	7.74	***	4.23	10.00	No Odor
MW-30	Y	1/2/17	10:25	5-20	***	7.93	***	4.17	10.00	No Odor
MW-31	Y	1/2/17	10:40	5-20	***	7.13	***	4.30	10.50	No Odor
									179.50	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: T.E., P.W., J.P., J.F., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
MW-32	Y	1/2/17	11:00	5-20	***	5.13	***	SHEEN	12.50	Odor; Sheen
MW-33	Y	1/2/17	12:02	5-20	***	4.51	***	2.48	13.00	No Odor
MW-34	Y	1/2/17	14:15	5-20	***	5.06	***	1.15	12.50	Odor
MW-35	Y	1/2/17	14:30	5-20	***	4.29	***	1.16	13.00	No Odor
MW-36	Y	1/2/17	14:50	5-20	***	4.02	***	1.55	13.50	No Odor
MW-37	Y	1/2/17	PROD	5-20	5.08	5.10	***	PROD	PROD	PROD=Free phase petroleum product-0.02' thickness
MW-38	Y	1/2/17	15:06	5-20	***	3.84	***	1.62	13.50	No Odor
MW-39	Y	1/2/17	15:22	5-20	***	3.73	***	2.83	13.50	No Odor
MW-40	Y	1/2/17	15:37	5-20	***	4.16	***	0.76	13.00	No Odor
MW-41	Y	1/2/17	12:17	5-20	***	4.85	***	0.87	12.50	No Odor
MW-42	Y	1/2/17	10:30	5-20	***	7.35	***	4.31	10.50	No Odor
DW-1	Y	1/2/17	18:10	90-95	***	17.85	***	2.39	63.00	No Odor
DW-2	Y	1/2/17	14:40	90-95	***	17.41	***	3.12	63.50	No Odor
RW-1	N	1/2/17	PROD	5-20	7.00	7.11	0.11	PROD	PROD	PROD=Free phase petroleum product-0.11' thickness
RW-2	N	1/2/17	PROD	5-20	7.03	7.41	0.28	PROD	PROD	PROD=Free phase petroleum product-0.28' thickness
									254.00	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: T.E., P.W., J.P., J.F., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
RW-3	Y	1/2/17	13:20	5-20	***	4.50	***	SHEEN	39.0	4" Well; SHEEN=noticable petroleum sheen on purged water-field readings not taken; Odor
RW-4	Y	1/2/17	14:00	5-20	***	4.72	***	0.80	37.5	Odor
RW-5	Y	1/2/17	11:47	5-20	***	4.35	***	SHEEN	37.0	4" Well; SHEEN=noticable petroleum sheen on purged water-field readings not taken; Odor
RW-6	Y	1/2/17	10:45	5-20	***	4.24	***	SHEEN	35.0	4" Well; SHEEN=noticable petroleum sheen on purged water-field readings not taken; Odor
DUP-1	Y	1/2/17	10:45	***	***	***	***	***	***	Duplicate Sample; Collected from RW-6
DUP-2	Y	1/2/17	12:55	***	***	***	***	***	***	Duplicate Sample; Collected from MW-21
DUP-3	Y	1/2/17	17:00	***	***	***	***	***	***	Duplicate Sample; Collected from MW-3R
Field Blank	Y	1/2/17	16:35	***	***	***	***	***	***	Field Blank
Trip Blank 1	Y	1/2/17	16:35	***	***	***	***	***	***	Trip Blank
Trip Blank 2	Y	1/2/17	16:40	***	***	***	***	***	***	Trip Blank
Trip Blank 3	Y	1/2/17	16:40	***	***	***	***	***	***	Trip Blank
WSW-1	Y	1/2/17	13:20	***	***	***	***	***	***	Taken from spigot on well
WSW-2	Y	1/2/17	13:16	***	***	***	***	***	***	Taken from spigot beside well
WSW-3	Y	1/2/17	11:10	***	***	***	***	***	***	Taken from spigot in yard
WSW-4	Y	1/2/17	11:05	***	***	***	***	***	***	Taken from spigot on back of well; Duplicated as WSW DUP-1
									148.5	**TOTAL GALLONS PURGED**

Site Activity Summary

UST Permit #: 04877
Facility Name: Nickelpumper 235
County: Hampton
Field Personnel: T.E., P.W., J.P., J.F., C.H., C.P.

Midlands Environmental Consultants, Inc.

Sample ID	Sampled?	Date	Time	Screened Interval	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Initial Dissolved Oxygen (mg/l)	# Gals. Purged	Comments
WSW-5	Y	1/2/17	14:30	***	***	***	***	***	***	Taken from spigot on well
WSW-6	N	1/2/17	NS	***	***	***	***	***	***	NS-Not sampled, Well inactive
WSW-7	Y	1/2/17	14:40	***	***	***	***	***	***	Taken from spigot on well
WSW DUP-1	Y	1/2/17	11:05	***	***	***	***	***	***	Duplicate Sample; Collected from WSW-4
WSW Field Blank	Y	1/2/17	14:50	***	***	***	***	***	***	Field Blank
WSW Trip Blank	Y	1/2/17	14:55	***	***	***	***	***	***	Trip Blank
									0.0	TOTAL GALLONS PURGED

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-2R	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	10-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.37	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.63	**1 casing volume (CV = LWC x C) (gals.):**	2.87	**5 casing volumes (5 x CV) (gals.):**	14.37

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.87	5.75	8.62	11.49	14.37		
Time (military)	13:25	13:28	13:31	13:34	13:37	13:40		
PH (s.u.)	4.78	4.61	4.63	4.59	4.58	4.57		
Specific Conductivity (µS/cm)	251.3	252.9	254.7	251.2	248.6	240.3		
Water Temperature (°C)	24.0	24.3	24.2	24.3	24.7	25.2		
Dissolved Oxygen (mg/L)	1.78	1.70	1.69	1.68	1.66	1.64		
Turbidity (NTU)	28.94	211.3	281.7	253.2	310.9	360.1		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	13:40	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-3R	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	10-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.68	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.32	**1 casing volume (CV = LWC x C) (gals.):**	2.99	**5 casing volumes (5 x CV) (gals.):**	14.93

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.99	5.97	8.96	11.94	14.93		
Time (military)	16:40	16:44	16:48	16:52	16:56	17:00		
PH (s.u.)	6.76	6.83	6.86	6.81	6.72	6.70		
Specific Conductivity (µS/cm)	201.6	192.8	183.5	175.1	170.2	168.0		
Water Temperature (°C)	24.3	24.0	23.8	23.6	23.5	23.4		
Dissolved Oxygen (mg/L)	1.44	1.28	1.19	1.08	1.02	1.00		
Turbidity (NTU)	16.82	29.35	43.61	67.47	82.19	100.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	17:00	**Duplicate: Y or N**	Y	**If yes, Duplicate Time:**	17:00	**Total Gallons Purged:**	15.00

Notes: Odor; Duplicated as DUP-3

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-4D	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	80-85	**Total Well Depth (TWD) (ft.):**	85
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	15.00	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	70	**1 casing volume (CV = LWC x C) (gals.):**	11.41	**5 casing volumes (5 x CV) (gals.):**	57.05

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	11.41	22.82	34.23	45.64	57.05		
Time (military)	13:30	13:43	13:56	14:09	14:22	14:35		
PH (s.u.)	5.89	5.91	5.94	5.98	6.00	6.02		
Specific Conductivity (µS/cm)	123.3	135.6	159	163.2	170.1	176.0		
Water Temperature (°C)	26.5	26.0	27.2	25.9	25.3	24.5		
Dissolved Oxygen (mg/L)	2.93	2.07	1.76	1.31	1.00	0.83		
Turbidity (NTU)	10.07	19.44	46.33	131.7	152	183.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:35	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	58.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-7	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.38	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.62	**1 casing volume (CV = LWC x C) (gals.):**	2.87	**5 casing volumes (5 x CV) (gals.):**	14.36

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.87	5.74	8.62	11.49	14.36		
Time (military)	10:44	10:47	10:50	10:53	10:56	10:59		
PH (s.u.)	4.57	4.47	4.42	4.39	4.36	4.31		
Specific Conductivity (µS/cm)	161.3	166.2	172.0	173.2	172.4	171.8		
Water Temperature (°C)	22.2	22.9	23.0	23.1	23.2	23.1		
Dissolved Oxygen (mg/L)	3.9	3.65	3.6	3.55	3.52	3.49		
Turbidity (NTU)	18.11	41.09	78.66	83.24	99.74	91.01		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	10:59	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.25

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-8R	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.10	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.9	**1 casing volume (CV = LWC x C) (gals.):**	3.08	**5 casing volumes (5 x CV) (gals.):**	15.40

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.08	6.16	9.24	12.32	15.40		
Time (military)	11:04	11:07	11:10	11:13	11:16	11:19		
PH (s.u.)	4.77	4.84	4.88	4.91	4.90	4.86		
Specific Conductivity (µS/cm)	91.3	89.4	90.6	92.3	91.4	90.2		
Water Temperature (°C)	22.2	23.0	23.4	23.6	23.9	23.8		
Dissolved Oxygen (mg/L)	0.69	0.73	0.74	0.72	0.73	0.71		
Turbidity (NTU)	22.73	69.9	100.4	118.6	139.7	171.2		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	10:59	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.25

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-9	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.19	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.81	**1 casing volume (CV = LWC x C) (gals.):**	3.07	**5 casing volumes (5 x CV) (gals.):**	15.33

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.07	6.13	9.20	12.26	15.33		
Time (military)	12:23	12:26	12:29	12:32	12:35	12:38		
PH (s.u.)	6.32	6.28	6.27	6.25	6.24	6.23		
Specific Conductivity (µS/cm)	173.2	170.9	168.3	166.9	165.7	165.1		
Water Temperature (°C)	21.3	21.5	21.7	21.9	22.3	22.4		
Dissolved Oxygen (mg/L)	1.37	1.29	1.20	1.10	1.03	1.05		
Turbidity (NTU)	29.62	37.41	96.24	130.6	216.3	235.4		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:38	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.50

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-10	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.52	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	20.48	**1 casing volume (CV = LWC x C) (gals.):**	3.34	**5 casing volumes (5 x CV) (gals.):**	16.69

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.34	6.68	10.01	13.35	16.69		
Time (military)	15:42	15:45	15:48	15:51	15:54	15:57		
PH (s.u.)	6.07	6.10	6.12	6.15	6.20	6.18		
Specific Conductivity (µS/cm)	220.6	215.4	214.3	210.6	208.3	207.9		
Water Temperature (°C)	20.0	20.2	205.0	20.7	21.0	21.0		
Dissolved Oxygen (mg/L)	0.9	0.83	0.75	0.69	0.64	0.69		
Turbidity (NTU)	17.36	36.14	73.28	143.6	222.2	311.4		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:57	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	17.00

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-11	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.33	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.67	**1 casing volume (CV = LWC x C) (gals.):**	3.04	**5 casing volumes (5 x CV) (gals.):**	15.22

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	3.04	6.09	9.13	12.17	15.22		
Time (military)	16:15	16:18	16:21	16:24	16:27	16:30		
PH (s.u.)	6.13	6.10	6.08	6.07	6.00	6.02		
Specific Conductivity (µS/cm)	95.9	93.2	90.7	89.3	88.4	88.0		
Water Temperature (°C)	20.6	20.7	20.9	21.3	21.4	21.3		
Dissolved Oxygen (mg/L)	2.04	2.16	2.23	2.37	2.30	2.31		
Turbidity (NTU)	12.62	40.32	76.17	89.32	150.3	200.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:57	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	17.00

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-12	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.68	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.32	**1 casing volume (CV = LWC x C) (gals.):**	2.82	**5 casing volumes (5 x CV) (gals.):**	14.12

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.82	5.65	8.47	11.29	14.12		
Time (military)	12:50	12:53	12:56	12:59	13:02	13:05		
PH (s.u.)	4.98	4.97	5.01	5.03	5.10	5.16		
Specific Conductivity (µS/cm)	46.7	46.8	46.9	48.1	49.2	46.4		
Water Temperature (°C)	21.2	21.5	21.6	21.8	21.6	21.7		
Dissolved Oxygen (mg/L)	4.06	3.86	3.60	3.52	3.33	3.00		
Turbidity (NTU)	37.6	94.22	186.8	223.4	300.7	378.9		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	13:05	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.25

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-13	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.68	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.32	**1 casing volume (CV = LWC x C) (gals.):**	2.82	**5 casing volumes (5 x CV) (gals.):**	14.12

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.82	5.65	8.47	11.29	14.12		
Time (military)	12:50	12:53	12:56	12:59	13:02	13:05		
PH (s.u.)	4.98	4.97	5.01	5.03	5.10	5.16		
Specific Conductivity (µS/cm)	46.7	46.8	46.9	48.1	49.2	46.4		
Water Temperature (°C)	21.2	21.5	21.6	21.8	21.6	21.7		
Dissolved Oxygen (mg/L)	4.06	3.86	3.60	3.52	3.33	3.00		
Turbidity (NTU)	37.6	94.22	186.8	223.4	300.7	378.9		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	13:05	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.25

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-14	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	15-25	Total Well Depth (TWD) (ft.):	25
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.25	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.75	1 casing volume (CV = LWC x C) (gals.):	2.89	5 casing volumes (5 x CV) (gals.):	14.47

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.89	5.79	8.68	11.57	14.47		
Time (military)	11:27	11:30	11:33	11:36	11:39	11:42		
PH (s.u.)	4.47	4.43	4.35	4.3	4.29	4.28		
Specific Conductivity (µS/cm)	85.5	86.4	87.3	89.4	88.6	88.0		
Water Temperature (°C)	20.9	21.8	21.9	22.0	22.0	22.0		
Dissolved Oxygen (mg/L)	4.25	4.16	4.15	4.12	4.14	4.13		
Turbidity (NTU)	9.17	89.44	121.5	215.0	231.2	249.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	Sampling Time:	11:42	Duplicate: Y or N	N	If yes, Duplicate Time:	N/A	Total Gallons Purged:	14.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-15	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.98	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.02	**1 casing volume (CV = LWC x C) (gals.):**	2.94	**5 casing volumes (5 x CV) (gals.):**	14.69

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.94	5.87	8.81	11.75	14.69		
Time (military)	12:10	12:13	12:16	12:19	12:21	12:24		
PH (s.u.)	5.48	5.51	5.53	5.57	5.58	5.55		
Specific Conductivity (µS/cm)	158.2	182.2	161.9	157.8	156.4	155.3		
Water Temperature (°C)	20.0	20.7	20.8	20.6	21.0	20.9		
Dissolved Oxygen (mg/L)	0.84	0.89	0.87	0.84	0.81	0.64		
Turbidity (NTU)	13.13	49.94	71.19	98.3	120.7	132.9		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:24	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.75

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-16	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.12	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.88	**1 casing volume (CV = LWC x C) (gals.):**	2.91	**5 casing volumes (5 x CV) (gals.):**	14.57

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.91	5.83	8.74	11.66	14.57		
Time (military)	11:50	11:53	11:56	11:59	12:02	12:05		
PH (s.u.)	5.14	4.98	4.91	4.85	4.80	4.77		
Specific Conductivity (µS/cm)	85.6	86.3	86.4	87.0	87.1	86.6		
Water Temperature (°C)	19.6	20.5	20.6	20.7	20.8	20.7		
Dissolved Oxygen (mg/L)	1.69	1.39	1.32	1.30	1.29	1.26		
Turbidity (NTU)	11.43	49.17	70.92	113.4	176.0	188.3		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:05	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.75

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-17	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.81	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.19	**1 casing volume (CV = LWC x C) (gals.):**	2.80	**5 casing volumes (5 x CV) (gals.):**	14.01

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.80	5.60	8.41	11.21	14.01		
Time (military)	15:45	15:49	15:53	15:57	16:01	16:05		
PH (s.u.)	6.25	6.34	6.37	6.31	6.22	6.18		
Specific Conductivity (µS/cm)	56.7	52	48.3	46.9	44.1	43.4		
Water Temperature (°C)	22.9	22.3	21.9	21.7	21.6	21.7		
Dissolved Oxygen (mg/L)	4.07	4.12	3.99	3.85	3.77	3.74		
Turbidity (NTU)	13.54	22.90	37.62	52.31	74.9	95.23		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	16:05	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-18	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.89	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.11	**1 casing volume (CV = LWC x C) (gals.):**	2.95	**5 casing volumes (5 x CV) (gals.):**	14.76

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.95	5.90	8.86	11.81	14.76		
Time (military)	11:40	11:44	11:48	11:52	11:56	12:00		
PH (s.u.)	6.72	6.83	6.74	6.65	6.62	6.67		
Specific Conductivity (µS/cm)	30.6	32.2	35.9	38.3	37.0	39.4		
Water Temperature (°C)	21.0	22.2	22.5	22.4	22.2	22.1		
Dissolved Oxygen (mg/L)	3.70	3.62	3.54	3.51	3.49	3.48		
Turbidity (NTU)	8.49	17.27	39.61	54.08	62.3	67.82		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:00	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-19	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.32	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.68	**1 casing volume (CV = LWC x C) (gals.):**	2.88	**5 casing volumes (5 x CV) (gals.):**	14.41

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.88	5.76	8.65	11.53	14.41		
Time (military)	14:45	14:49	14:53	14:57	15:01	15:05		
PH (s.u.)	9.44	9.18	8.96	8.88	8.81	8.76		
Specific Conductivity (µS/cm)	62.8	60.6	57.3	53.1	52.0	51.4		
Water Temperature (°C)	21.4	22.0	22.3	22.4	22.4	22.2		
Dissolved Oxygen (mg/L)	4.14	4.00	3.82	3.69	3.57	3.52		
Turbidity (NTU)	6.56	24.03	51.27	74.18	92.49	108.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:05	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	14.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-20	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.20	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.8	**1 casing volume (CV = LWC x C) (gals.):**	3.06	**5 casing volumes (5 x CV) (gals.):**	15.32

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	3.06	6.13	9.19	12.26	15.32		
Time (military)	15:15	15:19	15:23	15:27	15:31	15:35		
PH (s.u.)	7.54	7.38	7.29	7.21	7.14	7.09		
Specific Conductivity (µS/cm)	52.3	56.7	54.0	51.6	48.2	46.9		
Water Temperature (°C)	21.1	22.3	22.5	22.4	22.2	22.0		
Dissolved Oxygen (mg/L)	3.64	3.72	3.75	3.68	3.62	3.59		
Turbidity (NTU)	10.59	18.07	25.41	36.82	53.73	72.56		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:35	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-21	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.10	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	17.9	**1 casing volume (CV = LWC x C) (gals.):**	2.92	**5 casing volumes (5 x CV) (gals.):**	14.59

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.92	5.84	8.75	11.67	14.59		
Time (military)	12:35	12:39	12:43	12:47	12:51	12:55		
PH (s.u.)	6.62	6.59	6.65	6.68	6.72	6.73		
Specific Conductivity (µS/cm)	45.0	42.4	44.7	46.1	48.3	47.8		
Water Temperature (°C)	21.4	22.3	22.5	22.2	22.1	22.2		
Dissolved Oxygen (mg/L)	4.29	4.34	4.26	4.18	4.15	4.16		
Turbidity (NTU)	12.13	26.70	49.65	62.48	83.02	75.43		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:55	**Duplicate: Y or N**	Y	**If yes, Duplicate Time:**	12:55	**Total Gallons Purged:**	15.00

Notes: No Odor; Duplicated as DUP-2

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-22	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.68	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.32	**1 casing volume (CV = LWC x C) (gals.):**	2.99	**5 casing volumes (5 x CV) (gals.):**	14.93

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.99	5.97	8.96	11.94	14.93		
Time (military)	11:15	11:19	11:23	11:27	11:31	11:35		
PH (s.u.)	7.35	7.21	7.26	7.18	7.22	7.19		
Specific Conductivity (µS/cm)	50.5	56.3	59.1	57.2	55.8	56.7		
Water Temperature (°C)	21.0	22.1	22.3	22.4	22.4	22.2		
Dissolved Oxygen (mg/L)	3.87	3.50	3.66	3.58	3.51	3.53		
Turbidity (NTU)	22.67	41.03	68.14	82.50	74.98	63.22		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	11:35	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-24	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	15-25	**Total Well Depth (TWD) (ft.):**	25
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.67	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	18.33	**1 casing volume (CV = LWC x C) (gals.):**	2.99	**5 casing volumes (5 x CV) (gals.):**	14.94

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.99	5.98	8.96	11.95	14.94		
Time (military)	10:40	10:44	10:48	10:52	10:56	11:00		
PH (s.u.)	8.64	8.25	8.12	8.05	7.99	8.02		
Specific Conductivity (µS/cm)	68.5	67.3	64.1	60.6	58.5	59.0		
Water Temperature (°C)	21.7	22.4	22.5	22.3	22.1	22.2		
Dissolved Oxygen (mg/L)	3.26	3.63	3.48	3.39	3.44	3.41		
Turbidity (NTU)	16.84	35.29	60.51	75.26	78.35	69.07		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	11:00	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	15.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-25	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.65	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.35	**1 casing volume (CV = LWC x C) (gals.):**	2.34	**5 casing volumes (5 x CV) (gals.):**	11.70

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.34	4.68	7.02	9.36	11.70		
Time (military)	16:00	16:02	16:04	16:06	16:08	16:10		
PH (s.u.)	6.34	6.29	6.25	6.20	6.18	6.19		
Specific Conductivity (µS/cm)	167.3	160.9	159.3	157.7	156.9	156.5		
Water Temperature (°C)	21.0	21.1	21.3	21.4	21.4	21.3		
Dissolved Oxygen (mg/L)	3.62	3.49	3.37	3.21	3.30	3.25		
Turbidity (NTU)	14.43	70.32	75.62	120.3	147.9	200.3		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	16:10	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-26	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.85	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.15	**1 casing volume (CV = LWC x C) (gals.):**	2.31	**5 casing volumes (5 x CV) (gals.):**	11.53

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.31	4.61	6.92	9.23	11.53		
Time (military)	12:10	12:13	12:16	12:19	12:22	12:25		
PH (s.u.)	6.69	6.76	6.82	6.79	6.72	6.65		
Specific Conductivity (µS/cm)	48.6	52.9	55.1	53.5	50.7	45.3		
Water Temperature (°C)	21.5	22.6	22.7	22.7	22.4	22.3		
Dissolved Oxygen (mg/L)	2.94	2.91	2.78	2.65	2.61	2.64		
Turbidity (NTU)	23.18	57.40	76.35	92.28	104.7	113.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:25	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-27	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	6.92	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	13.08	**1 casing volume (CV = LWC x C) (gals.):**	2.13	**5 casing volumes (5 x CV) (gals.):**	10.66

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.13	4.26	6.40	8.53	10.66		
Time (military)	13:05	13:08	13:11	13:14	13:17	13:20		
PH (s.u.)	6.59	6.55	6.51	6.52	6.50	6.46		
Specific Conductivity (µS/cm)	81.5	73	75.2	70.6	67.1	64.8		
Water Temperature (°C)	23.3	22.8	22.5	22.3	22.1	22.2		
Dissolved Oxygen (mg/L)	3.14	3.18	3.21	3.22	3.16	3.11		
Turbidity (NTU)	13.60	42.51	78.26	101.40	128.9	136.7		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	13:20	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	11.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-28	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.90	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	12.1	**1 casing volume (CV = LWC x C) (gals.):**	1.97	**5 casing volumes (5 x CV) (gals.):**	9.86

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	1.97	3.94	5.92	7.89	9.86		
Time (military)	16:15	16:18	16:21	16:24	16:27	16:30		
PH (s.u.)	6.36	6.43	6.49	6.55	6.58	6.61		
Specific Conductivity (µS/cm)	53.6	56.1	54.8	52.0	49.5	48.2		
Water Temperature (°C)	22.2	21.4	21.1	20.9	20.9	20.8		
Dissolved Oxygen (mg/L)	5.24	5.02	4.89	4.83	4.80	4.79		
Turbidity (NTU)	36.15	64.27	91.46	123.80	146.3	159.9		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	16:30	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	10.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-29	Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652	0.163	Method of Purging/Sample Collection	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	Screened Interval (ft.):	5-20	Total Well Depth (TWD) (ft.):	20
Depth to Free Product (DFP) (ft.):	ND	Depth to Groundwater (DGW) (ft.):	7.74	Free Product Thickness (ft.):	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	12.26	1 casing volume (CV = LWC x C) (gals.):	2.00	5 casing volumes (5 x CV) (gals.):	9.99

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.00	4.00	6.00	7.99	9.99		
Time (military)	12:30	12:32	12:34	12:36	12:38	12:40		
PH (s.u.)	5.78	5.68	5.63	5.60	5.59	5.56		
Specific Conductivity (µS/cm)	93.6	90.1	86.1	85.3	81.9	81.4		
Water Temperature (°C)	21.1	20.6	20.8	21.0	21.2	21.3		
Dissolved Oxygen (mg/L)	4.23	4.45	4.10	4.02	3.69	3.25		
Turbidity (NTU)	15.17	92.76	186.9	257.6	279.2	314.7		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:40	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	10.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-30	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.93	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	12.07	**1 casing volume (CV = LWC x C) (gals.):**	1.97	**5 casing volumes (5 x CV) (gals.):**	9.84

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	1.97	3.93	5.90	7.87	9.84		
Time (military)	10:15	10:17	10:19	10:21	10:23	10:25		
PH (s.u.)	7.42	7.29	7.20	7.11	7.13	7.15		
Specific Conductivity (µS/cm)	102.3	102.0	100.9	104.2	103.7	103.6		
Water Temperature (°C)	22.9	23.8	24.0	24.2	24.5	24.7		
Dissolved Oxygen (mg/L)	3.98	4.17	4.32	4.69	4.83	5.20		
Turbidity (NTU)	296.7	81.90	99.71	149.2	176.6	201.1		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	10:25	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	10.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-32	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.13	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.87	**1 casing volume (CV = LWC x C) (gals.):**	2.42	**5 casing volumes (5 x CV) (gals.):**	12.12

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.42	4.85	7.27	9.70	12.12		
Time (military)	10:50	10:52	10:54	10:56	10:58	11:00		
PH (s.u.)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Water Temperature (°C)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Turbidity (NTU)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	11:00	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.50

Notes: SHEEN=Noticable petroleum sheen on purged water-field readings not taken

Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-32	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.51	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.49	**1 casing volume (CV = LWC x C) (gals.):**	2.52	**5 casing volumes (5 x CV) (gals.):**	12.62

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.52	5.05	7.57	10.10	12.62		
Time (military)	10:50	10:52	10:54	10:56	10:58	11:00		
PH (s.u.)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Water Temperature (°C)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		
Turbidity (NTU)	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN	SHEEN		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	11:00	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.50

Notes: SHEEN=Noticable petroleum sheen on purged water-field readings not taken

Odor

Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-33	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.51	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.49	**1 casing volume (CV = LWC x C) (gals.):**	2.52	**5 casing volumes (5 x CV) (gals.):**	12.62

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.52	5.05	7.57	10.10	12.62		
Time (military)	11:52	11:54	11:56	11:58	12:00	12:02		
PH (s.u.)	7.25	7.20	7.12	7.15	7.10	7.09		
Specific Conductivity (µS/cm)	191.3	190.4	187.3	186.9	186.0	187.1		
Water Temperature (°C)	21.8	21.5	21.3	21.2	21.0	20.9		
Dissolved Oxygen (mg/L)	2.48	2.51	2.27	2.39	2.20	2.16		
Turbidity (NTU)	26.97	46.15	93.21	116.4	139.1	170.5		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:02	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-34	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	5.06	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	14.94	**1 casing volume (CV = LWC x C) (gals.):**	2.44	**5 casing volumes (5 x CV) (gals.):**	12.18

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.44	4.87	7.31	9.74	12.18		
Time (military)	14:05	14:07	14:09	14:11	14:13	14:15		
PH (s.u.)	6.36	6.30	6.27	6.25	6.24	6.23		
Specific Conductivity (µS/cm)	121.0	122.6	125.9	126.6	127.3	127.7		
Water Temperature (°C)	21.6	22.1	22.4	22.5	22.6	22.9		
Dissolved Oxygen (mg/L)	1.15	1.10	1.03	0.97	0.90	0.94		
Turbidity (NTU)	10.71	76.97	43.24	111.4	137.9	166.2		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:15	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.50

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-35	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.29	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.71	**1 casing volume (CV = LWC x C) (gals.):**	2.56	**5 casing volumes (5 x CV) (gals.):**	12.80

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.56	5.12	7.68	10.24	12.80		
Time (military)	14:20	14:22	14:24	14:26	14:28	14:30		
PH (s.u.)	5.60	5.55	5.54	5.52	5.51	5.51		
Specific Conductivity (µS/cm)	95.6	94.1	93.7	91.0	90.7	90.2		
Water Temperature (°C)	21.7	21.9	22.1	22.3	22.7	22.9		
Dissolved Oxygen (mg/L)	1.16	1.10	1.24	1.06	1.01	0.93		
Turbidity (NTU)	13.69	29.62	74.4	164.7	155.3	216.8		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:30	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-36	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Baller
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.02	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.98	**1 casing volume (CV = LWC x C) (gals.):**	2.60	**5 casing volumes (5 x CV) (gals.):**	13.02

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.60	5.21	7.81	10.42	13.02		
Time (military)	14:35	14:38	14:41	14:44	14:47	14:50		
PH (s.u.)	5.48	5.41	5.39	5.37	5.35	5.36		
Specific Conductivity (µS/cm)	88.4	85.7	84.3	82.9	81.4	81.7		
Water Temperature (°C)	22.3	22.5	22.6	22.7	22.6	22.6		
Dissolved Oxygen (mg/L)	1.55	1.47	1.40	1.35	1.31	1.37		
Turbidity (NTU)	17.34	52.16	106.5	127.1	139.6	172.6		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:50	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	MW-36	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	5.08	**Depth to Groundwater (DGW) (ft.):**	5.10	**Free Product Thickness (ft.):**	0.02
Length of water column (LWC = TWD – DGW) (ft.):	14.9	**1 casing volume (CV = LWC x C) (gals.):**	2.43	**5 casing volumes (5 x CV) (gals.):**	12.14

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	2.43	4.86	7.29	9.71	12.14		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	PROD	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	0.00

Notes: PROD=Free phase petroleum product-Not Sampled

Product thickness=0.02'

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-38	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	3.84	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.16	**1 casing volume (CV = LWC x C) (gals.):**	2.63	**5 casing volumes (5 x CV) (gals.):**	13.17

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.63	5.27	7.90	10.54	13.17		
Time (military)	14:55	14:57	15:00	15:02	15:04	15:06		
PH (s.u.)	5.17	5.20	5.22	5.27	5.30	5.29		
Specific Conductivity (µS/cm)	75.8	71.6	70.3	69.7	69.1	68.5		
Water Temperature (°C)	20.4	20.6	20.8	20.9	21.1	21.1		
Dissolved Oxygen (mg/L)	1.62	1.58	1.50	1.47	1.44	1.40		
Turbidity (NTU)	12.62	36.55	57.26	162.3	179.1	212.4		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:06	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-39	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.16	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.84	**1 casing volume (CV = LWC x C) (gals.):**	2.58	**5 casing volumes (5 x CV) (gals.):**	12.91

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.58	5.16	7.75	10.33	12.91		
Time (military)	15:27	15:29	15:31	15:33	15:35	15:37		
PH (s.u.)	5.63	5.60	5.38	5.55	5.54	5.50		
Specific Conductivity (µS/cm)	110.2	108.1	105.7	104.8	104.1	103.9		
Water Temperature (°C)	20.6	20.8	20.8	21.4	21.3	21.3		
Dissolved Oxygen (mg/L)	0.76	0.70	0.68	0.72	0.73	0.79		
Turbidity (NTU)	17.36	40.51	89.14	125.3	172.3	199.9		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:37	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-40	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	3.73	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	16.27	**1 casing volume (CV = LWC x C) (gals.):**	2.65	**5 casing volumes (5 x CV) (gals.):**	13.26

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.65	5.30	7.96	10.61	13.26		
Time (military)	15:10	15:12	15:15	15:18	15:20	15:22		
PH (s.u.)	5.07	5.05	5.01	4.97	4.95	4.94		
Specific Conductivity (µS/cm)	83.0	81.4	80.9	79.3	78.1	78.5		
Water Temperature (°C)	18.6	18.9	19.2	19.5	19.7	19.8		
Dissolved Oxygen (mg/L)	2.83	2.65	2.59	2.50	2.45	2.41		
Turbidity (NTU)	56.79	97.33	115.4	129.6	173.3	226.5		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	15:22	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	13.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-41	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	4.85	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.15	**1 casing volume (CV = LWC x C) (gals.):**	2.47	**5 casing volumes (5 x CV) (gals.):**	12.35

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.47	4.94	7.41	9.88	12.35		
Time (military)	12:07	12:09	12:11	12:13	12:15	12:17		
PH (s.u.)	6.23	6.20	6.18	6.22	6.27	6.29		
Specific Conductivity (µS/cm)	226.0	220.3	224.7	227.9	230.1	232.9		
Water Temperature (°C)	21.6	21.9	21.9	22.2	22.4	22.7		
Dissolved Oxygen (mg/L)	0.87	0.89	0.94	1.03	0.94	0.87		
Turbidity (NTU)	52.35	73.97	140.0	216.3	391.6	277.4		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	12:17	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	12.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	MW-42	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	7.35	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	12.65	**1 casing volume (CV = LWC x C) (gals.):**	2.06	**5 casing volumes (5 x CV) (gals.):**	10.31

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	2.06	4.12	6.19	8.25	10.31		
Time (military)	10:15	10:18	10:21	10:24	10:27	10:30		
PH (s.u.)	8.09	8.37	8.32	7.64	7.23	7.08		
Specific Conductivity (µS/cm)	87.0	53.4	81.6	37.9	79.4	73.7		
Water Temperature (°C)	21.0	22.1	22.2	22.3	22.4	22.5		
Dissolved Oxygen (mg/L)	4.31	3.65	3.50	3.50	3.61	3.54		
Turbidity (NTU)	22.51	69.04	83.68	83.68	58.13	71.45		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	10:30	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	10.50

Notes:

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	DW-1	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	90-95	**Total Well Depth (TWD) (ft.):**	95
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	17.85	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	77.15	**1 casing volume (CV = LWC x C) (gals.):**	12.58	**5 casing volumes (5 x CV) (gals.):**	62.88

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	12.58	25.15	37.73	50.30	62.88		
Time (military)	17:05	17:18	17:31	17:44	17:57	18:10		
PH (s.u.)	8.18	8.05	7.93	7.84	7.81	7.79		
Specific Conductivity (µS/cm)	139.9	134.7	131.2	126.4	122.0	124.3		
Water Temperature (°C)	25.4	24.5	23.7	23.1	22.8	22.7		
Dissolved Oxygen (mg/L)	2.39	2.46	2.41	2.35	2.31	2.27		
Turbidity (NTU)	28.17	45.66	69.38	84.05	113.2	130.4		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	18:10	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	63.00

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	DW-2	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.163	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	MW	**Screened Interval (ft.):**	90-95	**Total Well Depth (TWD) (ft.):**	95
Depth to Free Product (DFP) (ft.):	ND	**Depth to Groundwater (DGW) (ft.):**	17.41	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	77.59	**1 casing volume (CV = LWC x C) (gals.):**	12.65	**5 casing volumes (5 x CV) (gals.):**	63.24

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	12.65	25.29	37.94	50.59	63.24		
Time (military)	13:30	13:44	13:58	14:12	14:26	14:40		
PH (s.u.)	7.69	7.74	7.81	7.70	7.62	7.58		
Specific Conductivity (µS/cm)	110.4	116.2	112.7	105.6	101.3	103.1		
Water Temperature (°C)	23.8	23.1	22.4	22.0	21.8	21.8		
Dissolved Oxygen (mg/L)	3.12	3.15	3.17	3.13	3.08	3.07		
Turbidity (NTU)	8.62	14.95	23.17	31.48	38.53	41.24		

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:40	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	63.50

Notes: No Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	RW-1	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	7.00	**Depth to Groundwater (DGW) (ft.):**	7.11	**Free Product Thickness (ft.):**	0.11
Length of water column (LWC = TWD – DGW) (ft.):	12.89	**1 casing volume (CV = LWC x C) (gals.):**	8.40	**5 casing volumes (5 x CV) (gals.):**	42.02

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	8.40	16.81	25.21	33.62	42.02		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	PROD	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	0.00

Notes: PROD=Free phase petroleum product-Not Sampled

Product thickness=0.11'

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	RW-2	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	7.03	**Depth to Groundwater (DGW) (ft.):**	7.41	**Free Product Thickness (ft.):**	0.11
Length of water column (LWC = TWD – DGW) (ft.):	12.59	**1 casing volume (CV = LWC x C) (gals.):**	8.21	**5 casing volumes (5 x CV) (gals.):**	41.04

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	8.21	16.42	24.63	32.83	41.04		
Time (military)	PROD							
PH (s.u.)	PROD							
Specific Conductivity (µS/cm)	PROD							
Water Temperature (°C)	PROD							
Dissolved Oxygen (mg/L)	PROD							
Turbidity (NTU)	PROD							

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	PROD	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	0.00

Notes: PROD=Free phase petroleum product-Not Sampled

Product thickness=0.28'

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.		
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70		

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	RW-3	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	Not Detected	**Depth to Groundwater (DGW) (ft.):**	4.50	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.5	**1 casing volume (CV = LWC x C) (gals.):**	10.11	**5 casing volumes (5 x CV) (gals.):**	50.53

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	10.11	20.21	30.32	40.42	50.53		39.00
Time (military)	12:42	12:52	13:02	13:12				13:20
PH (s.u.)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Water Temperature (°C)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Turbidity (NTU)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	13:20	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	39.00

Notes: SHEEN=Noticable petroleum sheen on purged wate-field readings not taken

Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	RW-4	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	Not Detected	**Depth to Groundwater (DGW) (ft.):**	4.72	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.28	**1 casing volume (CV = LWC x C) (gals.):**	9.96	**5 casing volumes (5 x CV) (gals.):**	49.81

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	9.96	19.93	29.89	39.85	49.81		37.50
Time (military)	12:25	12:34	12:43	12:52				14:00
PH (s.u.)	6.29	6.25	6.20	6.18				6.17
Specific Conductivity (µS/cm)	243.3	235.6	230.9	228.7				227.9
Water Temperature (°C)	22.0	22.4	22.6	22.7				22.8
Dissolved Oxygen (mg/L)	0.80	0.85	0.91	0.83				0.75
Turbidity (NTU)	30.16	47.92	72.37	141.30				159.6

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	14:00	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	37.50

Notes: Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	**Serial #:**	**Calibration:**							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	**pH 4.0: Y or N**	Y	**pH 7.0: Y or N**	Y	**pH 10.0: Y or N**	Y	**S.C.: Y or N**	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	**Y or N**	Y						
MicroTPI/TPW (Turbidity)	201301174	**0.0 NTU: Y or N**	Y	**1.0 NTU: Y or N**	Y	**10.0 NTU: Y or N**	Y		

Well Information

Well ID:	RW-5	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	Not Detected	**Depth to Groundwater (DGW) (ft.):**	4.35	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.65	**1 casing volume (CV = LWC x C) (gals.):**	10.20	**5 casing volumes (5 x CV) (gals.):**	51.02

Purging Data

	Initial	**1st Vol.**	**2nd Vol.**	**3rd Vol.**	**4th Vol.**	**5th Vol.**	**Post**	**Sampling**
Volume Purged (gallons)	0.00	10.20	20.41	30.61	40.82	51.02		37.00
Time (military)	11:05	11:15	11:25	11:35				11:47
PH (s.u.)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Water Temperature (°C)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Turbidity (NTU)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	11:47	**Duplicate: Y or N**	N	**If yes, Duplicate Time:**	N/A	**Total Gallons Purged:**	37.00

Notes: SHEEN=Noticable petroleum sheen on purged water-field readings not taken

Odor

Underground Storage Tank Management Division Field Data Information Sheet – Sampling

Date:	1/2/2017	**Site ID #:**	04877	**Site Name:**	Nickelpumper 235	**Field Personnel:**	T.E., P.W., J. F., J.P., C.H., C.P.
County:	Hampton	**Project Manager:**	J. Bryant	**General Weather Conditions:**	Clear	**Ambient Air Temp (°F):**	70

Quality Assurance

Meter Name	Serial #:	Calibration:							
YSI Pro1030 (pH, Specific Conductivity, Temp.)	15E101481	pH 4.0: Y or N	Y	pH 7.0: Y or N	Y	pH 10.0: Y or N	Y	S.C.: Y or N	Y
YSI Pro 20 (Dissolved Oxygen)	14H103098	Y or N	Y						
MicroTPI/TPW (Turbidity)	201301174	0.0 NTU: Y or N	Y	1.0 NTU: Y or N	Y	10.0 NTU: Y or N	Y		

Well Information

Well ID:	RW-6	**Well Diameter (ft.): Conversion Factor (C): 1" well = 0.047, 2" well = 0.16, 4" well = 0.652**	0.652	**Method of Purging/Sample Collection**	Bailer
Sample Type: (i.e. MW, IW, RW, WSW)	RW	**Screened Interval (ft.):**	5-20	**Total Well Depth (TWD) (ft.):**	20
Depth to Free Product (DFP) (ft.):	Not Detected	**Depth to Groundwater (DGW) (ft.):**	4.24	**Free Product Thickness (ft.):**	Not Detected
Length of water column (LWC = TWD – DGW) (ft.):	15.76	**1 casing volume (CV = LWC x C) (gals.):**	10.28	**5 casing volumes (5 x CV) (gals.):**	51.38

Purging Data

	Initial	1st Vol.	2nd Vol.	3rd Vol.	4th Vol.	5th Vol.	Post	Sampling
Volume Purged (gallons)	0.00	10.28	20.55	30.83	41.10	51.38		35.00
Time (military)	10:00	10:10	10:20	10:30				10:45
PH (s.u.)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Specific Conductivity (µS/cm)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Water Temperature (°C)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Dissolved Oxygen (mg/L)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN
Turbidity (NTU)	SHEEN	SHEEN	SHEEN	SHEEN				SHEEN

Sampling Data

Sampled By:	T.E., P.W., J. F., J.P., C.H., C.P.	**Sampling Time:**	10:45	**Duplicate: Y or N**	Y	**If yes, Duplicate Time:**	10:45	**Total Gallons Purged:**	35.00

Notes: SHEEN=Noticable petroleum sheen on purged water-field readings not taken

Odor; Duplicated as DUP-1

Midlands
Environmental
Consultants, Inc.

January 3, 2017

Re: Treatment of Purge Water
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 16-5774

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

A total of 805.5 gallons were treated on November 9, 2015, at the referenced site.

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Todd D. Elder
Staff Hydrogeologist

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 1 of 5

2036724

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street Columbia, SC 29201
Email To:	bryantjc@dhec.sc.gov
Phone:	803-898-0606
Fax:	803-898-0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J. Bryant - UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST 04877

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: RTEX/MTBE 8260B	1,2-DCA 8260B	8 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1																								Not sampled
2	MW-2R	WT	G			1/2/17	13:40		6				6						X	X	X	X			No odor
3	MW-3R	WT	G			1/2/17	17:00		6				6						X	X	X	X			Odor
4	MW-4D	WT	G			1/2/17	14:35		6				6						X	X	X	X			No odor
5	MW-5																								Not sampled
6	MW-6																								Not sampled
7	MW-7	WT	G			1/2/17	10:59		6				6						X	X	X	X			No odor
8	MW-8R	↓	↓			↓	11:19		↓				↓						↓	↓	↓	↓			No odor
9	MW-9						12:38																		Odor
10	MW-10						15:57																		Odor
11	MW-11	↓	↓			↓	16:30		↓				↓						↓	↓	↓	↓			No odor
12	MW-12	WT	G			1/2/17	11:05		6				6						X	X	X	X			No odor

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie/MECI	1/2/17	18:30				

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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2084870

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street
	Columbia, SC 29201
Email To:	bryantjc@dhec.sc.gov
Phone:	803-898-0606
Fax:	803-898-0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J. Bryant-UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST 04877

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX N M 82603	1,2 DCA 82603	8 Oxys 82603	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-14	WT	G			12/17	1:42		6				6						X	X	X	X		No odor
2	MW-15						12:24																	Slight odor
3	MW-16						2:05																	No odor
4	MW-17						6:05																	No odor
5	MW-18						2:00																	
6	MW-19						5:05																	
7	MW-20						5:35																	
8	MW-21						2:55																	
9	MW-22	WT	G			12/17	1:35		6				6						X	X	X	X		No odor
10	MW-23																							Not sampled
11	MW-24	WT	G			12/17	1:00		6				6						X	X	X	X		No odor
12	MW-25	WT	G			12/17	6:10		6				6						X	X	X	X		No odor

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie/MEI	12/17	8:30				

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

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Page: 3 of 5

2084871

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street
	Columbia, SC 29201
Email To:	bryantje@dhec.sc.gov
Phone: 803-898-0604	Fax: 803-898-0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J. Bryant-UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST 04877

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
✓ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE)

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX N M 8260B	1,2 DCA 8260B	2 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-26	WT	G			1/2/17	12:25		6				6					X	X	X	X		No odor
2	MW-27						13:20																
3	MW-28						16:30																
4	MW-29						12:40																
5	MW-30						10:25																
6	MW-31						10:40																No odor
7	MW-32						11:00																Odor; sheen
8	MW-33						12:02																No odor
9	MW-34						14:15																Odor
10	MW-35						14:30																No odor
11	MW-36	WT	G			1/2/17	14:50		6				6					X	X	X	X		No odor
12	MW-37																						Not sampled

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie / MECI	1/2/17	18:30				

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 4 of 5

2084872

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To: bryantjc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant-UST
Copy To:
Purchase Order No: 4600422513
Project Name: Nickel pumper 235
Project Number: UST 04877

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX N/M 8260B	1,2-DCA 8260B	8 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-38	WT	G			1/2/17	15:06		6				6						X	X	X	X		
2	MW-39						15:37																	No odor
3	MW-40						15:22																	
4	MW-41						2:17																	
5	MW-42						10:30																	
6	DW-1						18:10																	
7	DW-2	WT	G			1/2/17	14:40		6				6						X	X	X	X		No odor
8	RW-1																							Not sampled
9	RW-2																							Not sampled
10	RW-3	WT	G			1/2/17	13:20		6				6						X	X	X	X		Odor; slight sheen
11	RW-4	WT	G			1/2/17	14:00		6				6						X	X	X	X		Odor
12	RW-5	WT	G			1/2/17	1:47		6				6						X	X	X	X		Odor; slight sheen

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie/MEI	1/2/17	18:30				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie
SIGNATURE of SAMPLER: Peter J. Wylie
DATE Signed (MM/DD/YY): 1/2/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

2

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 5 of 5

2084873

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street
	Columbia, SC 29201
Email To:	bryantjc@dhec.sc.gov
Phone:	803-898-0606
Fax:	803-898-0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J. Bryant - UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST 04877

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX N M 8260B	1,2-DCA 8260B	8 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	RW-6	WT	G			1/2/17	10:45		6				6					X	X	X	X		Odor; sheen
2	Dup 1						10:45																Odor; sheen
3	Dup 2						12:55																No odor
4	Dup 3						17:00																Odor
5	Field blank						16:35		6				6								X		Field blank
6	Trip blank 1						16:35		2				2										Trip blank 1
7	Trip blank 2						16:40		2				2										Trip blank 2
8	Trip blank 3	WT	G			1/2/17	16:40		2				2					X	X	X			Trip blank 3
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie / MEI	1/2/17	18:30				

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie

DATE Signed (MM/DD/YY): 1/2/17

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 1 of 1

2084874

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street, Columbia, SC 29201
Email To: bryantjc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant - UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nichelpumper 235
Project Number: UST 04877

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: BTEX NMS 542	8Oxys 8260B	EDB 504.1	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	WSW-1	DW	G			1/2/17	3:20		9				6		3			X	X	X		LDLs
2	WSW-2	"	"			"	3:16		"				"		"			"	"	"		"
3	WSW-3	"	"			"	1:10		"				"		"			"	"	"		
4	WSW-4	"	"			"	1:05		"				"		"			"	"	"		
5	WSW-5	DW	G			1/2/17	4:30		9				6		3			X	X	X		LDLs
6	WSW-6																					Not sampled
7	WSW-7	DW	G			1/2/17	4:40		9				6		3			X	X	X		LDLs
8	WSW Dup	DW	"			"	1:05		9				"		"			"	"	X		LDLs
9	WSW Field blank	WT	"			"	4:50		9				"		"			"	"	X		WSW Field blank
10	WSW Trip blank	WT	G			1/2/17	4:55		6				6					X	X			WSW Trip blank
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Peter J. Wylie / MECI	1/2/17	8:30				

2

SAMPLER NAME AND SIGNATURE

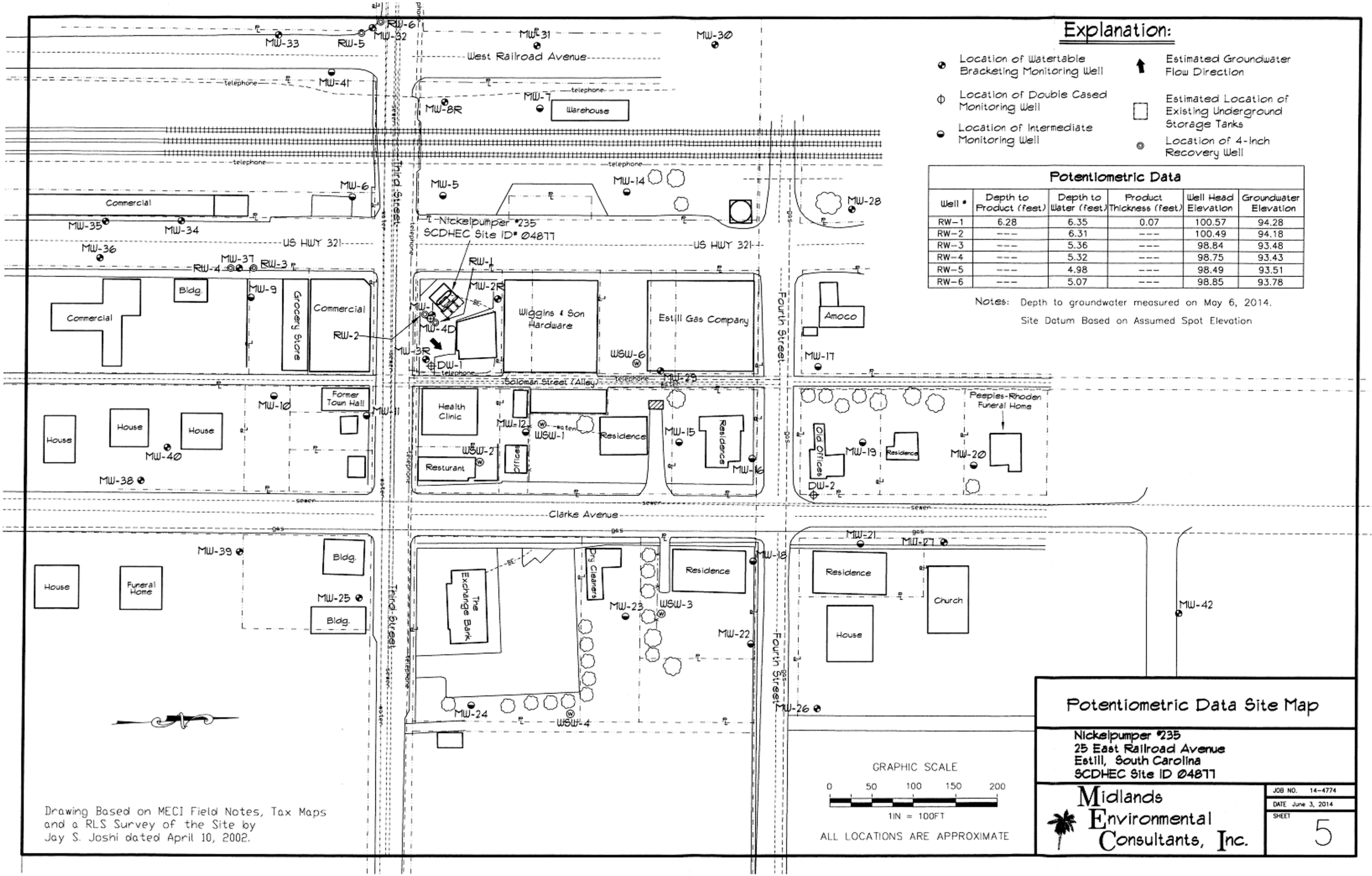
PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie

DATE Signed (MM/DD/YY): 1/2/17

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Potentiometric Data

Well #	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	---	6.31	---	100.49	94.18
RW-3	---	5.36	---	98.84	93.48
RW-4	---	5.32	---	98.75	93.43
RW-5	---	4.98	---	98.49	93.51
RW-6	---	5.07	---	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID 04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 5

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 11, 2017

Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201



RE: Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Dear Mr. Bryant:
Enclosed are the analytical results for sample(s) received by the laboratory on January 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Trey Carter
trey.carter@pacelabs.com
Project Manager

Enclosures

cc: Ashleigh Thrash, SCHDEC



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92325169001	MW-2R	Water	01/02/17 13:40	01/04/17 09:46
92325169002	MW-3R	Water	01/02/17 17:00	01/04/17 09:46
92325169003	MW-4D	Water	01/02/17 14:35	01/04/17 09:46
92325169004	MW-7	Water	01/02/17 10:59	01/04/17 09:46
92325169005	MW-8R	Water	01/02/17 11:19	01/04/17 09:46
92325169006	MW-9	Water	01/02/17 12:38	01/04/17 09:46
92325169007	MW-10	Water	01/02/17 15:57	01/04/17 09:46
92325169008	MW-11	Water	01/02/17 16:30	01/04/17 09:46
92325169009	MW-12	Water	01/02/17 11:05	01/04/17 09:46
92325169010	MW-14	Water	01/02/17 11:42	01/04/17 09:46
92325169011	MW-15	Water	01/02/17 12:24	01/04/17 09:46
92325169012	MW-16	Water	01/02/17 12:05	01/04/17 09:46
92325169013	MW-17	Water	01/02/17 16:05	01/04/17 09:46
92325169014	MW-18	Water	01/02/17 12:00	01/04/17 09:46
92325169015	MW-19	Water	01/02/17 15:05	01/04/17 09:46
92325169016	MW-20	Water	01/02/17 15:35	01/04/17 09:46
92325169017	MW-21	Water	01/02/17 12:55	01/04/17 09:46
92325169018	MW-22	Water	01/02/17 11:35	01/04/17 09:46
92325169019	MW-24	Water	01/02/17 11:00	01/04/17 09:46
92325169020	MW-25	Water	01/02/17 16:10	01/04/17 09:46
92325169021	MW-26	Water	01/02/17 12:25	01/04/17 09:46
92325169022	MW-27	Water	01/02/17 13:20	01/04/17 09:46
92325169023	MW-28	Water	01/02/17 16:30	01/04/17 09:46
92325169024	MW-29	Water	01/02/17 12:40	01/04/17 09:46
92325169025	MW-30	Water	01/02/17 10:25	01/04/17 09:46
92325169026	MW-31	Water	01/02/17 10:40	01/04/17 09:46
92325169027	MW-32	Water	01/02/17 11:00	01/04/17 09:46
92325169028	MW-33	Water	01/02/17 12:02	01/04/17 09:46
92325169029	MW-34	Water	01/02/17 14:15	01/04/17 09:46
92325169030	MW-35	Water	01/02/17 14:30	01/04/17 09:46
92325169031	MW-36	Water	01/02/17 14:50	01/04/17 09:46
92325169032	MW-38	Water	01/02/17 15:06	01/04/17 09:46
92325169033	MW-39	Water	01/02/17 15:37	01/04/17 09:46
92325169034	MW-40	Water	01/02/17 15:22	01/04/17 09:46
92325169035	MW-41	Water	01/02/17 12:17	01/04/17 09:46
92325169036	MW-42	Water	01/02/17 10:30	01/04/17 09:46
92325169037	DW-1	Water	01/02/17 18:10	01/04/17 09:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92325169038	DW-2	Water	01/02/17 14:40	01/04/17 09:46
92325169039	RW-3	Water	01/02/17 13:20	01/04/17 09:46
92325169040	RW-4	Water	01/02/17 14:00	01/04/17 09:46
92325169041	RW-5	Water	01/02/17 11:47	01/04/17 09:46
92325169042	RW-6	Water	01/02/17 10:45	01/04/17 09:46
92325169043	DUP1	Water	01/02/17 10:45	01/04/17 09:46
92325169044	DUP2	Water	01/02/17 12:55	01/04/17 09:46
92325169045	DUP3	Water	01/02/17 17:00	01/04/17 09:46
92325169046	FIELD BLANK	Water	01/02/17 16:35	01/04/17 09:46
92325169047	TRIP BLANK 1	Water	01/02/17 16:35	01/04/17 09:46
92325169048	TRIP BLANK 2	Water	01/02/17 16:40	01/04/17 09:46
92325169049	TRIP BLANK 3	Water	01/02/17 16:40	01/04/17 09:46

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92325169001	MW-2R	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169002	MW-3R	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169003	MW-4D	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169004	MW-7	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169005	MW-8R	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169006	MW-9	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169007	MW-10	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169008	MW-11	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169009	MW-12	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169010	MW-14	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169011	MW-15	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169012	MW-16	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169013	MW-17	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169014	MW-18	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169015	MW-19	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169016	MW-20	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169017	MW-21	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169018	MW-22	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169019	MW-24	EPA 8011	HSK	2	PASI-C

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8260	ZDO	20	PASI-C
92325169020	MW-25	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169021	MW-26	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169022	MW-27	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169023	MW-28	EPA 8011	HSK	2	PASI-C
		EPA 8260	ZDO	20	PASI-C
92325169024	MW-29	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169025	MW-30	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169026	MW-31	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169027	MW-32	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169028	MW-33	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169029	MW-34	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169030	MW-35	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169031	MW-36	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169032	MW-38	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169033	MW-39	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169034	MW-40	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169035	MW-41	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169036	MW-42	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169037	DW-1	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92325169038	DW-2	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169039	RW-3	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169040	RW-4	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169041	RW-5	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169042	RW-6	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169043	DUP1	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169044	DUP2	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169045	DUP3	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169046	FIELD BLANK	EPA 8011	HSK	2	PASI-C
		EPA 8260	GAW	20	PASI-C
92325169047	TRIP BLANK 1	EPA 8260	GAW	20	PASI-C
92325169048	TRIP BLANK 2	EPA 8260	GAW	20	PASI-C
92325169049	TRIP BLANK 3	EPA 8260	GAW	20	PASI-C

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SUMMARY OF DETECTION

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92325169002	**MW-3R**					
EPA 8260	tert-Amyl Alcohol	1480	ug/L	1000	01/09/17 20:28	
EPA 8260	Benzene	1360	ug/L	50.0	01/09/17 20:28	
EPA 8260	Ethylbenzene	202	ug/L	50.0	01/09/17 20:28	
EPA 8260	Methyl-tert-butyl ether	33.4J	ug/L	50.0	01/09/17 20:28	
EPA 8260	Naphthalene	95.8	ug/L	50.0	01/09/17 20:28	
EPA 8260	Toluene	121	ug/L	50.0	01/09/17 20:28	
EPA 8260	Xylene (Total)	396	ug/L	100	01/09/17 20:28	
EPA 8260	m&p-Xylene	286	ug/L	100	01/09/17 20:28	
EPA 8260	o-Xylene	110	ug/L	50.0	01/09/17 20:28	
92325169005	**MW-8R**					
EPA 8260	Benzene	4.5J	ug/L	5.0	01/07/17 01:58	
EPA 8260	Ethylbenzene	3.9J	ug/L	5.0	01/07/17 01:58	
EPA 8260	Naphthalene	4.1J	ug/L	5.0	01/07/17 01:58	
EPA 8260	Toluene	1.9J	ug/L	5.0	01/07/17 01:58	
92325169006	**MW-9**					
EPA 8011	1,2-Dibromoethane (EDB)	3.4	ug/L	0.099	01/06/17 10:03	
EPA 8260	Benzene	1110	ug/L	100	01/06/17 05:10	
EPA 8260	Ethylbenzene	1120	ug/L	100	01/06/17 05:10	
EPA 8260	Naphthalene	320	ug/L	100	01/06/17 05:10	
EPA 8260	Toluene	3840	ug/L	100	01/06/17 05:10	
EPA 8260	Xylene (Total)	3390	ug/L	200	01/06/17 05:10	
EPA 8260	m&p-Xylene	2400	ug/L	200	01/06/17 05:10	
EPA 8260	o-Xylene	990	ug/L	100	01/06/17 05:10	
92325169007	**MW-10**					
EPA 8011	1,2-Dibromoethane (EDB)	2.2	ug/L	0.080	01/06/17 10:22	
EPA 8260	Benzene	4030	ug/L	125	01/09/17 19:54	
EPA 8260	Ethylbenzene	732	ug/L	125	01/09/17 19:54	
EPA 8260	Naphthalene	242	ug/L	125	01/09/17 19:54	
EPA 8260	Toluene	3600	ug/L	125	01/09/17 19:54	
EPA 8260	Xylene (Total)	4300	ug/L	250	01/09/17 19:54	
EPA 8260	m&p-Xylene	2790	ug/L	250	01/09/17 19:54	
EPA 8260	o-Xylene	1510	ug/L	125	01/09/17 19:54	
92325169009	**MW-12**					
EPA 8260	Methyl-tert-butyl ether	3.4J	ug/L	5.0	01/05/17 22:11	
92325169011	**MW-15**					
EPA 8011	1,2-Dibromoethane (EDB)	0.19	ug/L	0.020	01/06/17 05:06	
EPA 8260	tert-Amyl Alcohol	2060	ug/L	1000	01/09/17 19:37	
EPA 8260	tert-Amylmethyl ether	129	ug/L	100	01/09/17 19:37	
EPA 8260	Benzene	1050	ug/L	50.0	01/09/17 19:37	
EPA 8260	Ethylbenzene	150	ug/L	50.0	01/09/17 19:37	
EPA 8260	Methyl-tert-butyl ether	449	ug/L	50.0	01/09/17 19:37	
EPA 8260	Naphthalene	86.3	ug/L	50.0	01/09/17 19:37	
EPA 8260	Toluene	681	ug/L	50.0	01/09/17 19:37	
EPA 8260	Xylene (Total)	435	ug/L	100	01/09/17 19:37	

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SUMMARY OF DETECTION

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92325169011	**MW-15**					
EPA 8260	m&p-Xylene	180	ug/L	100	01/09/17 19:37	
EPA 8260	o-Xylene	255	ug/L	50.0	01/09/17 19:37	
92325169012	**MW-16**					
EPA 8260	tert-Amyl Alcohol	83.2J	ug/L	100	01/07/17 02:34	
EPA 8260	Benzene	3.2J	ug/L	5.0	01/07/17 02:34	
92325169014	**MW-18**					
EPA 8011	1,2-Dibromoethane (EDB)	0.023	ug/L	0.020	01/06/17 18:20	C2
EPA 8260	tert-Amyl Alcohol	413	ug/L	100	01/07/17 02:52	
EPA 8260	1,2-Dichloroethane	11.5	ug/L	5.0	01/07/17 02:52	
EPA 8260	Methyl-tert-butyl ether	67.8	ug/L	5.0	01/07/17 02:52	
92325169017	**MW-21**					
EPA 8260	Methyl-tert-butyl ether	12.6	ug/L	5.0	01/07/17 03:27	
92325169018	**MW-22**					
EPA 8260	1,2-Dichloroethane	4.6J	ug/L	5.0	01/05/17 20:09	
92325169027	**MW-32**					
EPA 8011	1,2-Dibromoethane (EDB)	0.80	ug/L	0.020	01/06/17 06:47	
EPA 8260	Ethylbenzene	2830J	ug/L	5000	01/06/17 17:24	
EPA 8260	Naphthalene	3690J	ug/L	5000	01/06/17 17:24	
EPA 8260	Toluene	83100	ug/L	5000	01/06/17 17:24	
EPA 8260	m&p-Xylene	9040J	ug/L	10000	01/06/17 17:24	
EPA 8260	o-Xylene	4430J	ug/L	5000	01/06/17 17:24	
92325169029	**MW-34**					
EPA 8011	1,2-Dibromoethane (EDB)	0.14	ug/L	0.020	01/06/17 07:27	
EPA 8260	Benzene	57.9J	ug/L	100	01/06/17 17:40	
EPA 8260	Ethylbenzene	1410	ug/L	100	01/06/17 17:40	
EPA 8260	Naphthalene	505	ug/L	100	01/06/17 17:40	
EPA 8260	Xylene (Total)	1200	ug/L	200	01/06/17 17:40	
EPA 8260	m&p-Xylene	1090	ug/L	200	01/06/17 17:40	
EPA 8260	o-Xylene	110	ug/L	100	01/06/17 17:40	
92325169036	**MW-42**					
EPA 8011	1,2-Dibromoethane (EDB)	0.11	ug/L	0.020	01/05/17 22:30	
EPA 8260	tert-Amyl Alcohol	152	ug/L	100	01/06/17 09:34	
EPA 8260	Benzene	182	ug/L	5.0	01/06/17 09:34	
EPA 8260	1,2-Dichloroethane	2.0J	ug/L	5.0	01/06/17 09:34	
EPA 8260	Methyl-tert-butyl ether	4.3J	ug/L	5.0	01/06/17 09:34	
EPA 8260	Naphthalene	14.5	ug/L	5.0	01/06/17 09:34	
EPA 8260	Xylene (Total)	22.6	ug/L	10.0	01/06/17 09:34	
EPA 8260	o-Xylene	22.6	ug/L	5.0	01/06/17 09:34	
92325169039	**RW-3**					
EPA 8260	Benzene	670	ug/L	100	01/06/17 17:56	
EPA 8260	Ethylbenzene	3120	ug/L	100	01/06/17 17:56	
EPA 8260	Naphthalene	1100	ug/L	100	01/06/17 17:56	

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SUMMARY OF DETECTION

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92325169039	**RW-3**					
EPA 8260	Toluene	297	ug/L	100	01/06/17 17:56	
EPA 8260	Xylene (Total)	4080	ug/L	200	01/06/17 17:56	
EPA 8260	m&p-Xylene	3520	ug/L	200	01/06/17 17:56	
EPA 8260	o-Xylene	553	ug/L	100	01/06/17 17:56	
92325169040	**RW-4**					
EPA 8011	1,2-Dibromoethane (EDB)	1.2	ug/L	0.040	01/06/17 08:49	
EPA 8260	Benzene	2060	ug/L	250	01/06/17 18:12	
EPA 8260	Ethylbenzene	2110	ug/L	250	01/06/17 18:12	
EPA 8260	Naphthalene	770	ug/L	250	01/06/17 18:12	
EPA 8260	Toluene	5540	ug/L	250	01/06/17 18:12	
EPA 8260	Xylene (Total)	7460	ug/L	500	01/06/17 18:12	
EPA 8260	m&p-Xylene	5070	ug/L	500	01/06/17 18:12	
EPA 8260	o-Xylene	2380	ug/L	250	01/06/17 18:12	
92325169041	**RW-5**					
EPA 8260	Ethylbenzene	225	ug/L	12.5	01/06/17 18:44	
EPA 8260	Naphthalene	282	ug/L	12.5	01/06/17 18:44	
EPA 8260	Xylene (Total)	42.6	ug/L	25.0	01/06/17 18:44	
EPA 8260	m&p-Xylene	42.6	ug/L	25.0	01/06/17 18:44	
92325169042	**RW-6**					
EPA 8011	1,2-Dibromoethane (EDB)	0.034	ug/L	0.020	01/06/17 01:23	
EPA 8260	Ethylbenzene	2890	ug/L	500	01/10/17 16:21	
EPA 8260	Naphthalene	1340	ug/L	500	01/10/17 16:21	
EPA 8260	Toluene	10700	ug/L	500	01/10/17 16:21	
EPA 8260	Xylene (Total)	9610	ug/L	1000	01/10/17 16:21	
EPA 8260	m&p-Xylene	6740	ug/L	1000	01/10/17 16:21	
EPA 8260	o-Xylene	2860	ug/L	500	01/10/17 16:21	
92325169043	**DUP1**					
EPA 8011	1,2-Dibromoethane (EDB)	0.040	ug/L	0.020	01/06/17 01:42	
EPA 8260	Benzene	184J	ug/L	500	01/10/17 16:04	
EPA 8260	Ethylbenzene	3110	ug/L	500	01/10/17 16:04	
EPA 8260	Naphthalene	1340	ug/L	500	01/10/17 16:04	
EPA 8260	Toluene	11900	ug/L	500	01/10/17 16:04	
EPA 8260	Xylene (Total)	10300	ug/L	1000	01/10/17 16:04	
EPA 8260	m&p-Xylene	7280	ug/L	1000	01/10/17 16:04	
EPA 8260	o-Xylene	3020	ug/L	500	01/10/17 16:04	
92325169044	**DUP2**					
EPA 8260	1,2-Dichloroethane	1.9J	ug/L	5.0	01/10/17 13:35	
EPA 8260	Methyl-tert-butyl ether	7.7	ug/L	5.0	01/10/17 13:35	
92325169045	**DUP3**					
EPA 8260	tert-Amyl Alcohol	1120	ug/L	1000	01/10/17 16:39	
EPA 8260	Benzene	1360	ug/L	50.0	01/10/17 16:39	
EPA 8260	Ethylbenzene	184	ug/L	50.0	01/10/17 16:39	
EPA 8260	Methyl-tert-butyl ether	28.3J	ug/L	50.0	01/10/17 16:39	
EPA 8260	Naphthalene	91.4	ug/L	50.0	01/10/17 16:39	

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SUMMARY OF DETECTION

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92325169045	**DUP3**					
EPA 8260	Toluene	116	ug/L	50.0	01/10/17 16:39	
EPA 8260	Xylene (Total)	352	ug/L	100	01/10/17 16:39	
EPA 8260	m&p-Xylene	255	ug/L	100	01/10/17 16:39	
EPA 8260	o-Xylene	97.0	ug/L	50.0	01/10/17 16:39	

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8011**
Description: 8011 GCS EDB and DBCP
Client: SCDHEC
Date: January 11, 2017

General Information:
46 samples were analyzed for EPA 8011. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 8011 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 343471

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169007

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1905095)
  - 1,2-Dibromoethane (EDB)
- MSD (Lab ID: 1905096)
  - 1,2-Dibromoethane (EDB)

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8011**
Description: 8011 GCS EDB and DBCP
Client: SCDHEC
Date: January 11, 2017

Analyte Comments:

QC Batch: 343621

C2: Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
- MW-18 (Lab ID: 92325169014)
  - 1,2-Dibromoethane (EDB)

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8260**
Description: 8260 MSV
Client: SCDHEC
Date: January 11, 2017

General Information:
49 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 343501

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples.
- MW-17 (Lab ID: 92325169013)
  - Toluene-d8 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 343501

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 1905327)
  - 3,3-Dimethyl-1-Butanol
  - Ethanol
  - tert-Amyl Alcohol
  - tert-Butyl Alcohol

QC Batch: 343536

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 1905502)
  - 3,3-Dimethyl-1-Butanol
  - Ethanol
  - tert-Amyl Alcohol

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8260**
Description: 8260 MSV
Client: SCDHEC
Date: January 11, 2017

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 343501

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1905328)
  - Ethanol
  - tert-Butyl Alcohol

P5: The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

- MS (Lab ID: 1905328)
  - tert-Butyl Formate

QC Batch: 343536

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325168007

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1905984)
  - Ethanol

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1905984)
  - tert-Butyl Alcohol
  - tert-Butyl Formate

QC Batch: 343566

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169038

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1905700)
  - Ethanol
  - tert-Butyl Formate

P5: The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

- MS (Lab ID: 1905700)
  - tert-Butyl Formate

QC Batch: 343650

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169029

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1906052)
  - Ethanol

QC Batch: 343691

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169017

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1906548)

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8260**
Description: 8260 MSV
Client: SCDHEC
Date: January 11, 2017

QC Batch: 343691

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325169017

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- tert-Amyl Alcohol

P5: The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

- MS (Lab ID: 1906548)
  - tert-Butyl Formate

QC Batch: 343755

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325172024

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1907105)
  - Ethanol
  - tert-Butyl Alcohol
  - tert-Butyl Formate

P5: The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

- MS (Lab ID: 1907105)
  - tert-Butyl Formate

QC Batch: 343861

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325172003

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1907607)
  - Benzene
  - Ethylbenzene
  - Toluene
  - m&p-Xylene
  - o-Xylene
  - tert-Butyl Formate

P5: The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

- MS (Lab ID: 1907607)
  - tert-Butyl Formate

QC Batch: 343900

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 92325546001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1907758)
  - Ethanol

R1: RPD value was outside control limits.

- MSD (Lab ID: 1907759)
  - Ethanol

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PROJECT NARRATIVE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Method: **EPA 8260**
Description: 8260 MSV
Client: SCDHEC
Date: January 11, 2017

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 343650

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- MW-32 (Lab ID: 92325169027)
  - 4-Bromofluorobenzene (S)
- MW-34 (Lab ID: 92325169029)
  - 4-Bromofluorobenzene (S)

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-2R **Lab ID: 92325169001** Collected: 01/02/17 13:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:17	01/06/17 01:03	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	96	%	60-140		1	01/05/17 14:17	01/06/17 01:03	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 18:07	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 18:07	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 18:07	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 18:07	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 18:07	75-65-0	L3,M0
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 18:07	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 18:07	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:07	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 18:07	64-17-5	L3,M0
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 18:07	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 18:07	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:07	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 18:07	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 18:07	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 18:07	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 18:07	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 18:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/05/17 18:07	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		01/05/17 18:07	17060-07-0	
Toluene-d8 (S)	130	%	70-130		1		01/05/17 18:07	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-3R **Lab ID: 92325169002** Collected: 01/02/17 17:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:17	01/06/17 01:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	103	%	60-140		1	01/05/17 14:17	01/06/17 01:23	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**1480**	ug/L	1000	768	10		01/09/17 20:28	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		01/09/17 20:28	994-05-8	
Benzene	**1360**	ug/L	50.0	17.0	10		01/09/17 20:28	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		01/09/17 20:28	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		01/09/17 20:28	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		01/09/17 20:28	762-75-4	
1,2-Dichloroethane	ND	ug/L	50.0	18.0	10		01/09/17 20:28	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		01/09/17 20:28	108-20-3	
Ethanol	ND	ug/L	2000	1310	10		01/09/17 20:28	64-17-5	
Ethylbenzene	**202**	ug/L	50.0	16.0	10		01/09/17 20:28	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		01/09/17 20:28	637-92-3	
Methyl-tert-butyl ether	**33.4J**	ug/L	50.0	17.0	10		01/09/17 20:28	1634-04-4	
Naphthalene	**95.8**	ug/L	50.0	20.0	10		01/09/17 20:28	91-20-3	
Toluene	**121**	ug/L	50.0	16.0	10		01/09/17 20:28	108-88-3	
Xylene (Total)	**396**	ug/L	100	27.0	10		01/09/17 20:28	1330-20-7	
m&p-Xylene	**286**	ug/L	100	31.0	10		01/09/17 20:28	179601-23-1	
o-Xylene	**110**	ug/L	50.0	16.0	10		01/09/17 20:28	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		10		01/09/17 20:28	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		10		01/09/17 20:28	17060-07-0	
Toluene-d8 (S)	100	%	70-130		10		01/09/17 20:28	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-4D **Lab ID: 92325169003** Collected: 01/02/17 14:35 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:17	01/06/17 01:43	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	64	%	60-140		1	01/05/17 14:17	01/06/17 01:43	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 18:24	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 18:24	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 18:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 18:24	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 18:24	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 18:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 18:24	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:24	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 18:24	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 18:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 18:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:24	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 18:24	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 18:24	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 18:24	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 18:24	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 18:24	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/05/17 18:24	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		01/05/17 18:24	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		01/05/17 18:24	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-7 **Lab ID: 92325169004** Collected: 01/02/17 10:59 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 02:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	88	%	60-140		1	01/05/17 14:18	01/06/17 02:04	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 18:59	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 18:59	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 18:59	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 18:59	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 18:59	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 18:59	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 18:59	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:59	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 18:59	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 18:59	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 18:59	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 18:59	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 18:59	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 18:59	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 18:59	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 18:59	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 18:59	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/05/17 18:59	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		01/05/17 18:59	17060-07-0	
Toluene-d8 (S)	107	%	70-130		1		01/05/17 18:59	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-8R **Lab ID: 92325169005** Collected: 01/02/17 11:19 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 14:18	01/06/17 02:24	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	104	%	60-140		1	01/05/17 14:18	01/06/17 02:24	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/07/17 01:58	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 01:58	994-05-8	
Benzene	**4.5J**	ug/L	5.0	1.7	1		01/07/17 01:58	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 01:58	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 01:58	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 01:58	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/07/17 01:58	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 01:58	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 01:58	64-17-5	
Ethylbenzene	**3.9J**	ug/L	5.0	1.6	1		01/07/17 01:58	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 01:58	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/07/17 01:58	1634-04-4	
Naphthalene	**4.1J**	ug/L	5.0	2.0	1		01/07/17 01:58	91-20-3	
Toluene	**1.9J**	ug/L	5.0	1.6	1		01/07/17 01:58	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 01:58	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 01:58	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 01:58	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/07/17 01:58	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		01/07/17 01:58	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/07/17 01:58	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-9 **Lab ID: 92325169006** Collected: 01/02/17 12:38 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**3.4**	ug/L	0.099	0.099	5	01/05/17 14:18	01/06/17 10:03	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	127	%	60-140		5	01/05/17 14:18	01/06/17 10:03	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2000	1540	20		01/06/17 05:10	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		01/06/17 05:10	994-05-8	
Benzene	**1110**	ug/L	100	34.0	20		01/06/17 05:10	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		01/06/17 05:10	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		01/06/17 05:10	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		01/06/17 05:10	762-75-4	
1,2-Dichloroethane	ND	ug/L	100	36.0	20		01/06/17 05:10	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		01/06/17 05:10	108-20-3	
Ethanol	ND	ug/L	4000	2620	20		01/06/17 05:10	64-17-5	L3
Ethylbenzene	**1120**	ug/L	100	32.0	20		01/06/17 05:10	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		01/06/17 05:10	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		01/06/17 05:10	1634-04-4	
Naphthalene	**320**	ug/L	100	40.0	20		01/06/17 05:10	91-20-3	
Toluene	**3840**	ug/L	100	32.0	20		01/06/17 05:10	108-88-3	
Xylene (Total)	**3390**	ug/L	200	54.0	20		01/06/17 05:10	1330-20-7	
m&p-Xylene	**2400**	ug/L	200	62.0	20		01/06/17 05:10	179601-23-1	
o-Xylene	**990**	ug/L	100	32.0	20		01/06/17 05:10	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		20		01/06/17 05:10	460-00-4	
1,2-Dichloroethane-d4 (S)	111	%	70-130		20		01/06/17 05:10	17060-07-0	
Toluene-d8 (S)	101	%	70-130		20		01/06/17 05:10	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-10 **Lab ID: 92325169007** Collected: 01/02/17 15:57 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**2.2**	ug/L	0.080	0.080	4	01/05/17 14:18	01/06/17 10:22	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	126	%	60-140		4	01/05/17 14:18	01/06/17 10:22	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2500	1920	25		01/09/17 19:54	75-85-4	
tert-Amylmethyl ether	ND	ug/L	250	85.0	25		01/09/17 19:54	994-05-8	
Benzene	**4030**	ug/L	125	42.5	25		01/09/17 19:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2500	802	25		01/09/17 19:54	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2500	1440	25		01/09/17 19:54	75-65-0	
tert-Butyl Formate	ND	ug/L	1250	182	25		01/09/17 19:54	762-75-4	
1,2-Dichloroethane	ND	ug/L	125	45.0	25		01/09/17 19:54	107-06-2	
Diisopropyl ether	ND	ug/L	125	42.5	25		01/09/17 19:54	108-20-3	
Ethanol	ND	ug/L	5000	3280	25		01/09/17 19:54	64-17-5	
Ethylbenzene	**732**	ug/L	125	40.0	25		01/09/17 19:54	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	250	90.0	25		01/09/17 19:54	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	125	42.5	25		01/09/17 19:54	1634-04-4	
Naphthalene	**242**	ug/L	125	50.0	25		01/09/17 19:54	91-20-3	
Toluene	**3600**	ug/L	125	40.0	25		01/09/17 19:54	108-88-3	
Xylene (Total)	**4300**	ug/L	250	67.5	25		01/09/17 19:54	1330-20-7	
m&p-Xylene	**2790**	ug/L	250	77.5	25		01/09/17 19:54	179601-23-1	
o-Xylene	**1510**	ug/L	125	40.0	25		01/09/17 19:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		25		01/09/17 19:54	460-00-4	
1,2-Dichloroethane-d4 (S)	106	%	70-130		25		01/09/17 19:54	17060-07-0	
Toluene-d8 (S)	99	%	70-130		25		01/09/17 19:54	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-11 **Lab ID: 92325169008** Collected: 01/02/17 16:30 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 04:05	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	100	%	60-140		1	01/05/17 14:18	01/06/17 04:05	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/07/17 02:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 02:16	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/07/17 02:16	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 02:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 02:16	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 02:16	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/07/17 02:16	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 02:16	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 02:16	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/07/17 02:16	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 02:16	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/07/17 02:16	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/07/17 02:16	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/07/17 02:16	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 02:16	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 02:16	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 02:16	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/07/17 02:16	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		01/07/17 02:16	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/07/17 02:16	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-12 **Lab ID: 92325169009** Collected: 01/02/17 11:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 14:18	01/06/17 04:26	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	66	%	60-140		1	01/05/17 14:18	01/06/17 04:26	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 22:11	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 22:11	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 22:11	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 22:11	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 22:11	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 22:11	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 22:11	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 22:11	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 22:11	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 22:11	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 22:11	637-92-3	
Methyl-tert-butyl ether	**3.4J**	ug/L	5.0	1.7	1		01/05/17 22:11	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 22:11	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 22:11	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 22:11	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 22:11	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 22:11	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/05/17 22:11	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		01/05/17 22:11	17060-07-0	
Toluene-d8 (S)	113	%	70-130		1		01/05/17 22:11	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-14 **Lab ID: 92325169010** Collected: 01/02/17 11:42 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 04:46	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	75	%	60-140		1	01/05/17 14:18	01/06/17 04:46	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 21:18	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 21:18	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 21:18	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 21:18	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 21:18	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 21:18	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 21:18	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:18	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 21:18	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 21:18	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 21:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:18	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 21:18	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 21:18	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 21:18	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 21:18	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 21:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/05/17 21:18	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		01/05/17 21:18	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/05/17 21:18	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-15 **Lab ID: 92325169011** Collected: 01/02/17 12:24 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.19**	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 05:06	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	75	%	60-140		1	01/05/17 14:18	01/06/17 05:06	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**2060**	ug/L	1000	768	10		01/09/17 19:37	75-85-4	
tert-Amylmethyl ether	**129**	ug/L	100	34.0	10		01/09/17 19:37	994-05-8	
Benzene	**1050**	ug/L	50.0	17.0	10		01/09/17 19:37	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		01/09/17 19:37	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		01/09/17 19:37	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		01/09/17 19:37	762-75-4	
1,2-Dichloroethane	ND	ug/L	50.0	18.0	10		01/09/17 19:37	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		01/09/17 19:37	108-20-3	
Ethanol	ND	ug/L	2000	1310	10		01/09/17 19:37	64-17-5	
Ethylbenzene	**150**	ug/L	50.0	16.0	10		01/09/17 19:37	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		01/09/17 19:37	637-92-3	
Methyl-tert-butyl ether	**449**	ug/L	50.0	17.0	10		01/09/17 19:37	1634-04-4	
Naphthalene	**86.3**	ug/L	50.0	20.0	10		01/09/17 19:37	91-20-3	
Toluene	**681**	ug/L	50.0	16.0	10		01/09/17 19:37	108-88-3	
Xylene (Total)	**435**	ug/L	100	27.0	10		01/09/17 19:37	1330-20-7	
m&p-Xylene	**180**	ug/L	100	31.0	10		01/09/17 19:37	179601-23-1	
o-Xylene	**255**	ug/L	50.0	16.0	10		01/09/17 19:37	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		10		01/09/17 19:37	460-00-4	
1,2-Dichloroethane-d4 (S)	108	%	70-130		10		01/09/17 19:37	17060-07-0	
Toluene-d8 (S)	101	%	70-130		10		01/09/17 19:37	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-16 **Lab ID: 92325169012** Collected: 01/02/17 12:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 05:26	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	73	%	60-140		1	01/05/17 14:18	01/06/17 05:26	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**83.2J**	ug/L	100	76.8	1		01/07/17 02:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 02:34	994-05-8	
Benzene	**3.2J**	ug/L	5.0	1.7	1		01/07/17 02:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 02:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 02:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 02:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/07/17 02:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 02:34	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 02:34	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/07/17 02:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 02:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/07/17 02:34	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/07/17 02:34	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/07/17 02:34	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 02:34	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 02:34	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 02:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/07/17 02:34	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		01/07/17 02:34	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		01/07/17 02:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-17 **Lab ID: 92325169013** Collected: 01/02/17 16:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:18	01/06/17 05:47	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	99	%	60-140		1	01/05/17 14:18	01/06/17 05:47	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 19:17	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 19:17	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 19:17	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 19:17	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 19:17	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 19:17	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 19:17	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:17	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 19:17	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 19:17	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 19:17	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:17	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 19:17	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 19:17	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 19:17	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 19:17	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 19:17	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		01/05/17 19:17	460-00-4	
1,2-Dichloroethane-d4 (S)	113	%	70-130		1		01/05/17 19:17	17060-07-0	
Toluene-d8 (S)	133	%	70-130		1		01/05/17 19:17	2037-26-5	S3

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-18 **Lab ID: 92325169014** Collected: 01/02/17 12:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.023**	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 18:20	106-93-4	C2
Surrogates									
1-Chloro-2-bromopropane (S)	71	%	60-140		1	01/06/17 15:24	01/06/17 18:20	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**413**	ug/L	100	76.8	1		01/07/17 02:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 02:52	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/07/17 02:52	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 02:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 02:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 02:52	762-75-4	
1,2-Dichloroethane	**11.5**	ug/L	5.0	1.8	1		01/07/17 02:52	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 02:52	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 02:52	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/07/17 02:52	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 02:52	637-92-3	
Methyl-tert-butyl ether	**67.8**	ug/L	5.0	1.7	1		01/07/17 02:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/07/17 02:52	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/07/17 02:52	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 02:52	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 02:52	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 02:52	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/07/17 02:52	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		01/07/17 02:52	17060-07-0	
Toluene-d8 (S)	102	%	70-130		1		01/07/17 02:52	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-19 **Lab ID: 92325169015** Collected: 01/02/17 15:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 18:41	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	116	%	60-140		1	01/06/17 15:24	01/06/17 18:41	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 19:34	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 19:34	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 19:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 19:34	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 19:34	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 19:34	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 19:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:34	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 19:34	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 19:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 19:34	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:34	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 19:34	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 19:34	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 19:34	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 19:34	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 19:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/05/17 19:34	460-00-4	
1,2-Dichloroethane-d4 (S)	115	%	70-130		1		01/05/17 19:34	17060-07-0	
Toluene-d8 (S)	108	%	70-130		1		01/05/17 19:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-20 **Lab ID: 92325169016** Collected: 01/02/17 15:35 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 19:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	01/06/17 15:24	01/06/17 19:01	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 19:51	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 19:51	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 19:51	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 19:51	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 19:51	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 19:51	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 19:51	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:51	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 19:51	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 19:51	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 19:51	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 19:51	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 19:51	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 19:51	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 19:51	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 19:51	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 19:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		01/05/17 19:51	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		01/05/17 19:51	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		01/05/17 19:51	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-21 **Lab ID: 92325169017** Collected: 01/02/17 12:55 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/06/17 15:24	01/06/17 19:21	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	60-140		1	01/06/17 15:24	01/06/17 19:21	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/07/17 03:27	75-85-4	M1
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 03:27	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/07/17 03:27	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 03:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 03:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 03:27	762-75-4	P5
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/07/17 03:27	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 03:27	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 03:27	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/07/17 03:27	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 03:27	637-92-3	
Methyl-tert-butyl ether	**12.6**	ug/L	5.0	1.7	1		01/07/17 03:27	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/07/17 03:27	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/07/17 03:27	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 03:27	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 03:27	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 03:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/07/17 03:27	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		01/07/17 03:27	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/07/17 03:27	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-22 **Lab ID: 92325169018** Collected: 01/02/17 11:35 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 19:41	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	114	%	60-140		1	01/06/17 15:24	01/06/17 19:41	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 20:09	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 20:09	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 20:09	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 20:09	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 20:09	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 20:09	762-75-4	
1,2-Dichloroethane	**4.6J**	ug/L	5.0	1.8	1		01/05/17 20:09	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:09	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 20:09	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 20:09	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 20:09	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:09	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 20:09	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 20:09	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 20:09	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 20:09	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 20:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		01/05/17 20:09	460-00-4	
1,2-Dichloroethane-d4 (S)	116	%	70-130		1		01/05/17 20:09	17060-07-0	
Toluene-d8 (S)	112	%	70-130		1		01/05/17 20:09	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-24 **Lab ID: 92325169019** Collected: 01/02/17 11:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 20:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	01/06/17 15:24	01/06/17 20:42	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 21:54	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 21:54	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 21:54	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 21:54	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 21:54	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 21:54	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 21:54	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:54	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 21:54	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 21:54	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 21:54	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:54	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 21:54	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 21:54	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 21:54	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 21:54	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 21:54	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/05/17 21:54	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		01/05/17 21:54	17060-07-0	
Toluene-d8 (S)	127	%	70-130		1		01/05/17 21:54	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-25 **Lab ID: 92325169020** Collected: 01/02/17 16:10 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 21:02	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	76	%	60-140		1	01/06/17 15:24	01/06/17 21:02	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 21:36	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 21:36	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 21:36	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 21:36	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 21:36	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 21:36	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 21:36	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:36	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 21:36	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 21:36	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 21:36	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:36	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 21:36	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 21:36	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 21:36	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 21:36	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 21:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/05/17 21:36	460-00-4	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		01/05/17 21:36	17060-07-0	
Toluene-d8 (S)	114	%	70-130		1		01/05/17 21:36	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-26 **Lab ID: 92325169021** Collected: 01/02/17 12:25 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:24	01/06/17 21:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	62	%	60-140		1	01/06/17 15:24	01/06/17 21:23	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 20:26	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 20:26	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 20:26	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 20:26	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 20:26	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 20:26	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 20:26	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:26	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 20:26	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 20:26	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 20:26	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:26	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 20:26	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 20:26	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 20:26	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 20:26	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 20:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	86	%	70-130		1		01/05/17 20:26	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	70-130		1		01/05/17 20:26	17060-07-0	
Toluene-d8 (S)	111	%	70-130		1		01/05/17 20:26	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-27 **Lab ID: 92325169022** Collected: 01/02/17 13:20 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:25	01/06/17 21:43	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	96	%	60-140		1	01/06/17 15:25	01/06/17 21:43	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 20:44	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 20:44	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 20:44	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 20:44	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 20:44	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 20:44	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 20:44	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:44	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 20:44	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 20:44	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 20:44	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 20:44	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 20:44	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 20:44	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 20:44	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 20:44	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 20:44	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	107	%	70-130		1		01/05/17 20:44	460-00-4	
1,2-Dichloroethane-d4 (S)	112	%	70-130		1		01/05/17 20:44	17060-07-0	
Toluene-d8 (S)	128	%	70-130		1		01/05/17 20:44	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-28 **Lab ID: 92325169023** Collected: 01/02/17 16:30 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/06/17 15:25	01/06/17 22:03	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	86	%	60-140		1	01/06/17 15:25	01/06/17 22:03	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/05/17 21:01	75-85-4	L3
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/05/17 21:01	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/05/17 21:01	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/05/17 21:01	624-95-3	L3
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/05/17 21:01	75-65-0	L3
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/05/17 21:01	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/05/17 21:01	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:01	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 21:01	64-17-5	L3
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/05/17 21:01	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/05/17 21:01	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/05/17 21:01	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/05/17 21:01	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/05/17 21:01	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/05/17 21:01	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/05/17 21:01	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/05/17 21:01	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/05/17 21:01	460-00-4	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		01/05/17 21:01	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/05/17 21:01	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-29 **Lab ID: 92325169024** Collected: 01/02/17 12:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:25	01/06/17 22:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	92	%	60-140		1	01/06/17 15:25	01/06/17 22:23	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/07/17 06:08	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/07/17 06:08	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/07/17 06:08	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/07/17 06:08	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/07/17 06:08	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/07/17 06:08	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/07/17 06:08	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/07/17 06:08	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/07/17 06:08	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/07/17 06:08	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/07/17 06:08	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/07/17 06:08	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/07/17 06:08	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/07/17 06:08	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/07/17 06:08	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/07/17 06:08	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/07/17 06:08	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/07/17 06:08	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		01/07/17 06:08	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/07/17 06:08	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-30 **Lab ID: 92325169025** Collected: 01/02/17 10:25 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:25	01/06/17 22:43	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	115	%	60-140		1	01/06/17 15:25	01/06/17 22:43	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 07:09	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 07:09	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 07:09	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 07:09	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 07:09	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 07:09	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 07:09	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:09	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 07:09	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 07:09	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 07:09	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:09	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 07:09	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 07:09	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 07:09	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 07:09	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 07:09	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/06/17 07:09	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/06/17 07:09	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/06/17 07:09	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-31 **Lab ID: 92325169026** Collected: 01/02/17 10:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/06/17 15:25	01/06/17 23:03	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	116	%	60-140		1	01/06/17 15:25	01/06/17 23:03	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 07:25	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 07:25	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 07:25	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 07:25	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 07:25	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 07:25	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 07:25	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:25	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 07:25	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 07:25	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 07:25	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:25	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 07:25	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 07:25	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 07:25	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 07:25	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 07:25	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 07:25	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		01/06/17 07:25	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 07:25	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-32 **Lab ID: 92325169027** Collected: 01/02/17 11:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.80**	ug/L	0.020	0.020	1	01/05/17 14:19	01/06/17 06:47	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	93	%	60-140		1	01/05/17 14:19	01/06/17 06:47	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100000	76800	1000		01/06/17 17:24	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10000	3400	1000		01/06/17 17:24	994-05-8	
Benzene	ND	ug/L	5000	1700	1000		01/06/17 17:24	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100000	32100	1000		01/06/17 17:24	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100000	57700	1000		01/06/17 17:24	75-65-0	
tert-Butyl Formate	ND	ug/L	50000	7300	1000		01/06/17 17:24	762-75-4	
1,2-Dichloroethane	ND	ug/L	5000	1800	1000		01/06/17 17:24	107-06-2	
Diisopropyl ether	ND	ug/L	5000	1700	1000		01/06/17 17:24	108-20-3	
Ethanol	ND	ug/L	200000	131000	1000		01/06/17 17:24	64-17-5	
Ethylbenzene	**2830J**	ug/L	5000	1600	1000		01/06/17 17:24	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10000	3600	1000		01/06/17 17:24	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5000	1700	1000		01/06/17 17:24	1634-04-4	
Naphthalene	**3690J**	ug/L	5000	2000	1000		01/06/17 17:24	91-20-3	
Toluene	**83100**	ug/L	5000	1600	1000		01/06/17 17:24	108-88-3	
Xylene (Total)	ND	ug/L	10000	2700	1000		01/06/17 17:24	1330-20-7	
m&p-Xylene	**9040J**	ug/L	10000	3100	1000		01/06/17 17:24	179601-23-1	
o-Xylene	**4430J**	ug/L	5000	1600	1000		01/06/17 17:24	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1000		01/06/17 17:24	460-00-4	D3
1,2-Dichloroethane-d4 (S)	89	%	70-130		1000		01/06/17 17:24	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1000		01/06/17 17:24	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-33 **Lab ID: 92325169028** Collected: 01/02/17 12:02 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:19	01/06/17 07:07	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	75	%	60-140		1	01/05/17 14:19	01/06/17 07:07	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 07:41	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 07:41	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 07:41	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 07:41	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 07:41	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 07:41	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 07:41	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:41	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 07:41	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 07:41	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 07:41	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:41	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 07:41	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 07:41	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 07:41	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 07:41	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 07:41	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/06/17 07:41	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/06/17 07:41	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 07:41	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-34 **Lab ID: 92325169029** Collected: 01/02/17 14:15 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.14**	ug/L	0.020	0.020	1	01/05/17 14:19	01/06/17 07:27	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	101	%	60-140		1	01/05/17 14:19	01/06/17 07:27	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2000	1540	20		01/06/17 17:40	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		01/06/17 17:40	994-05-8	
Benzene	**57.9J**	ug/L	100	34.0	20		01/06/17 17:40	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		01/06/17 17:40	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		01/06/17 17:40	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		01/06/17 17:40	762-75-4	
1,2-Dichloroethane	ND	ug/L	100	36.0	20		01/06/17 17:40	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		01/06/17 17:40	108-20-3	
Ethanol	ND	ug/L	4000	2620	20		01/06/17 17:40	64-17-5	M1
Ethylbenzene	**1410**	ug/L	100	32.0	20		01/06/17 17:40	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		01/06/17 17:40	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		01/06/17 17:40	1634-04-4	
Naphthalene	**505**	ug/L	100	40.0	20		01/06/17 17:40	91-20-3	
Toluene	ND	ug/L	100	32.0	20		01/06/17 17:40	108-88-3	
Xylene (Total)	**1200**	ug/L	200	54.0	20		01/06/17 17:40	1330-20-7	
m&p-Xylene	**1090**	ug/L	200	62.0	20		01/06/17 17:40	179601-23-1	
o-Xylene	**110**	ug/L	100	32.0	20		01/06/17 17:40	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		20		01/06/17 17:40	460-00-4	D3
1,2-Dichloroethane-d4 (S)	89	%	70-130		20		01/06/17 17:40	17060-07-0	
Toluene-d8 (S)	99	%	70-130		20		01/06/17 17:40	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-35 **Lab ID: 92325169030** Collected: 01/02/17 14:30 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 14:19	01/06/17 08:08	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	95	%	60-140		1	01/05/17 14:19	01/06/17 08:08	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 07:57	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 07:57	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 07:57	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 07:57	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 07:57	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 07:57	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 07:57	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:57	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 07:57	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 07:57	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 07:57	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 07:57	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 07:57	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 07:57	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 07:57	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 07:57	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 07:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	105	%	70-130		1		01/06/17 07:57	460-00-4	
1,2-Dichloroethane-d4 (S)	93	%	70-130		1		01/06/17 07:57	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/06/17 07:57	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-36 **Lab ID: 92325169031** Collected: 01/02/17 14:50 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 14:19	01/06/17 08:28	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	99	%	60-140		1	01/05/17 14:19	01/06/17 08:28	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 08:13	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 08:13	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 08:13	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 08:13	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 08:13	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 08:13	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 08:13	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:13	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 08:13	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 08:13	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 08:13	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:13	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 08:13	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 08:13	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 08:13	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 08:13	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 08:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 08:13	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		01/06/17 08:13	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/06/17 08:13	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-38 **Lab ID: 92325169032** Collected: 01/02/17 15:06 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 21:13	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	01/05/17 13:28	01/05/17 21:13	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 08:29	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 08:29	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 08:29	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 08:29	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 08:29	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 08:29	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 08:29	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:29	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 08:29	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 08:29	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 08:29	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:29	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 08:29	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 08:29	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 08:29	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 08:29	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 08:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/06/17 08:29	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		01/06/17 08:29	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/06/17 08:29	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-39 **Lab ID: 92325169033** Collected: 01/02/17 15:37 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 21:32	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	72	%	60-140		1	01/05/17 13:28	01/05/17 21:32	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 08:45	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 08:45	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 08:45	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 08:45	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 08:45	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 08:45	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 08:45	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:45	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 08:45	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 08:45	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 08:45	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 08:45	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 08:45	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 08:45	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 08:45	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 08:45	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 08:45	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/06/17 08:45	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 08:45	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 08:45	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-40 **Lab ID: 92325169034** Collected: 01/02/17 15:22 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 21:51	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	74	%	60-140		1	01/05/17 13:28	01/05/17 21:51	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 09:02	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 09:02	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 09:02	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 09:02	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 09:02	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 09:02	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 09:02	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:02	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 09:02	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 09:02	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 09:02	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:02	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 09:02	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 09:02	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 09:02	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 09:02	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 09:02	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 09:02	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 09:02	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 09:02	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-41 **Lab ID: 92325169035** Collected: 01/02/17 12:17 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 22:11	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	60-140		1	01/05/17 13:28	01/05/17 22:11	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 09:18	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 09:18	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 09:18	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 09:18	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 09:18	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 09:18	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 09:18	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:18	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 09:18	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 09:18	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 09:18	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:18	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 09:18	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 09:18	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 09:18	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 09:18	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 09:18	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/06/17 09:18	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		01/06/17 09:18	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 09:18	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: MW-42 **Lab ID: 92325169036** Collected: 01/02/17 10:30 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.11**	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 22:30	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	80	%	60-140		1	01/05/17 13:28	01/05/17 22:30	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**152**	ug/L	100	76.8	1		01/06/17 09:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 09:34	994-05-8	
Benzene	**182**	ug/L	5.0	1.7	1		01/06/17 09:34	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 09:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 09:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 09:34	762-75-4	
1,2-Dichloroethane	**2.0J**	ug/L	5.0	1.8	1		01/06/17 09:34	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:34	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 09:34	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 09:34	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 09:34	637-92-3	
Methyl-tert-butyl ether	**4.3J**	ug/L	5.0	1.7	1		01/06/17 09:34	1634-04-4	
Naphthalene	**14.5**	ug/L	5.0	2.0	1		01/06/17 09:34	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 09:34	108-88-3	
Xylene (Total)	**22.6**	ug/L	10.0	2.7	1		01/06/17 09:34	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 09:34	179601-23-1	
o-Xylene	**22.6**	ug/L	5.0	1.6	1		01/06/17 09:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		1		01/06/17 09:34	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 09:34	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/06/17 09:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: DW-1 **Lab ID: 92325169037** Collected: 01/02/17 18:10 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 22:49	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	121	%	60-140		1	01/05/17 13:28	01/05/17 22:49	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 09:50	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 09:50	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 09:50	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 09:50	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 09:50	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 09:50	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 09:50	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:50	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 09:50	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 09:50	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 09:50	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 09:50	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 09:50	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 09:50	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 09:50	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 09:50	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 09:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 09:50	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		1		01/06/17 09:50	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 09:50	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: DW-2 **Lab ID: 92325169038** Collected: 01/02/17 14:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/05/17 23:47	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	109	%	60-140		1	01/05/17 13:28	01/05/17 23:47	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 10:22	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 10:22	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 10:22	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 10:22	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 10:22	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 10:22	762-75-4	M1
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 10:22	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 10:22	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 10:22	64-17-5	M1
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 10:22	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 10:22	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 10:22	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 10:22	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 10:22	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 10:22	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 10:22	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 10:22	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 10:22	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		1		01/06/17 10:22	17060-07-0	
Toluene-d8 (S)	99	%	70-130		1		01/06/17 10:22	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: RW-3 **Lab ID: 92325169039** Collected: 01/02/17 13:20 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:28	01/06/17 00:06	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	98	%	60-140		1	01/05/17 13:28	01/06/17 00:06	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	2000	1540	20		01/06/17 17:56	75-85-4	
tert-Amylmethyl ether	ND	ug/L	200	68.0	20		01/06/17 17:56	994-05-8	
Benzene	**670**	ug/L	100	34.0	20		01/06/17 17:56	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	2000	642	20		01/06/17 17:56	624-95-3	
tert-Butyl Alcohol	ND	ug/L	2000	1150	20		01/06/17 17:56	75-65-0	
tert-Butyl Formate	ND	ug/L	1000	146	20		01/06/17 17:56	762-75-4	
1,2-Dichloroethane	ND	ug/L	100	36.0	20		01/06/17 17:56	107-06-2	
Diisopropyl ether	ND	ug/L	100	34.0	20		01/06/17 17:56	108-20-3	
Ethanol	ND	ug/L	4000	2620	20		01/06/17 17:56	64-17-5	
Ethylbenzene	**3120**	ug/L	100	32.0	20		01/06/17 17:56	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	200	72.0	20		01/06/17 17:56	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	100	34.0	20		01/06/17 17:56	1634-04-4	
Naphthalene	**1100**	ug/L	100	40.0	20		01/06/17 17:56	91-20-3	
Toluene	**297**	ug/L	100	32.0	20		01/06/17 17:56	108-88-3	
Xylene (Total)	**4080**	ug/L	200	54.0	20		01/06/17 17:56	1330-20-7	
m&p-Xylene	**3520**	ug/L	200	62.0	20		01/06/17 17:56	179601-23-1	
o-Xylene	**553**	ug/L	100	32.0	20		01/06/17 17:56	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		20		01/06/17 17:56	460-00-4	
1,2-Dichloroethane-d4 (S)	89	%	70-130		20		01/06/17 17:56	17060-07-0	
Toluene-d8 (S)	99	%	70-130		20		01/06/17 17:56	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: RW-4 **Lab ID: 92325169040** Collected: 01/02/17 14:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**1.2**	ug/L	0.040	0.040	2	01/05/17 13:29	01/06/17 08:49	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		2	01/05/17 13:29	01/06/17 08:49	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	5000	3840	50		01/06/17 18:12	75-85-4	
tert-Amylmethyl ether	ND	ug/L	500	170	50		01/06/17 18:12	994-05-8	
Benzene	**2060**	ug/L	250	85.0	50		01/06/17 18:12	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	5000	1600	50		01/06/17 18:12	624-95-3	
tert-Butyl Alcohol	ND	ug/L	5000	2880	50		01/06/17 18:12	75-65-0	
tert-Butyl Formate	ND	ug/L	2500	365	50		01/06/17 18:12	762-75-4	
1,2-Dichloroethane	ND	ug/L	250	90.0	50		01/06/17 18:12	107-06-2	
Diisopropyl ether	ND	ug/L	250	85.0	50		01/06/17 18:12	108-20-3	
Ethanol	ND	ug/L	10000	6550	50		01/06/17 18:12	64-17-5	
Ethylbenzene	**2110**	ug/L	250	80.0	50		01/06/17 18:12	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	500	180	50		01/06/17 18:12	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	250	85.0	50		01/06/17 18:12	1634-04-4	
Naphthalene	**770**	ug/L	250	100	50		01/06/17 18:12	91-20-3	
Toluene	**5540**	ug/L	250	80.0	50		01/06/17 18:12	108-88-3	
Xylene (Total)	**7460**	ug/L	500	135	50		01/06/17 18:12	1330-20-7	
m&p-Xylene	**5070**	ug/L	500	155	50		01/06/17 18:12	179601-23-1	
o-Xylene	**2380**	ug/L	250	80.0	50		01/06/17 18:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		50		01/06/17 18:12	460-00-4	
1,2-Dichloroethane-d4 (S)	91	%	70-130		50		01/06/17 18:12	17060-07-0	
Toluene-d8 (S)	97	%	70-130		50		01/06/17 18:12	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: RW-5 **Lab ID: 92325169041** Collected: 01/02/17 11:47 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:29	01/06/17 01:03	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	108	%	60-140		1	01/05/17 13:29	01/06/17 01:03	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	250	192	2.5		01/06/17 18:44	75-85-4	
tert-Amylmethyl ether	ND	ug/L	25.0	8.5	2.5		01/06/17 18:44	994-05-8	
Benzene	ND	ug/L	12.5	4.2	2.5		01/06/17 18:44	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	250	80.2	2.5		01/06/17 18:44	624-95-3	
tert-Butyl Alcohol	ND	ug/L	250	144	2.5		01/06/17 18:44	75-65-0	
tert-Butyl Formate	ND	ug/L	125	18.2	2.5		01/06/17 18:44	762-75-4	
1,2-Dichloroethane	ND	ug/L	12.5	4.5	2.5		01/06/17 18:44	107-06-2	
Diisopropyl ether	ND	ug/L	12.5	4.2	2.5		01/06/17 18:44	108-20-3	
Ethanol	ND	ug/L	500	328	2.5		01/06/17 18:44	64-17-5	
Ethylbenzene	**225**	ug/L	12.5	4.0	2.5		01/06/17 18:44	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	25.0	9.0	2.5		01/06/17 18:44	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	12.5	4.2	2.5		01/06/17 18:44	1634-04-4	
Naphthalene	**282**	ug/L	12.5	5.0	2.5		01/06/17 18:44	91-20-3	
Toluene	ND	ug/L	12.5	4.0	2.5		01/06/17 18:44	108-88-3	
Xylene (Total)	**42.6**	ug/L	25.0	6.8	2.5		01/06/17 18:44	1330-20-7	
m&p-Xylene	**42.6**	ug/L	25.0	7.8	2.5		01/06/17 18:44	179601-23-1	
o-Xylene	ND	ug/L	12.5	4.0	2.5		01/06/17 18:44	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		2.5		01/06/17 18:44	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		2.5		01/06/17 18:44	17060-07-0	
Toluene-d8 (S)	98	%	70-130		2.5		01/06/17 18:44	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: RW-6 **Lab ID: 92325169042** Collected: 01/02/17 10:45 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.034**	ug/L	0.020	0.020	1	01/05/17 13:29	01/06/17 01:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	121	%	60-140		1	01/05/17 13:29	01/06/17 01:23	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	10000	7680	100		01/10/17 16:21	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	340	100		01/10/17 16:21	994-05-8	
Benzene	ND	ug/L	500	170	100		01/10/17 16:21	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	3210	100		01/10/17 16:21	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	5770	100		01/10/17 16:21	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	730	100		01/10/17 16:21	762-75-4	
1,2-Dichloroethane	ND	ug/L	500	180	100		01/10/17 16:21	107-06-2	
Diisopropyl ether	ND	ug/L	500	170	100		01/10/17 16:21	108-20-3	
Ethanol	ND	ug/L	20000	13100	100		01/10/17 16:21	64-17-5	
Ethylbenzene	**2890**	ug/L	500	160	100		01/10/17 16:21	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	360	100		01/10/17 16:21	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	170	100		01/10/17 16:21	1634-04-4	
Naphthalene	**1340**	ug/L	500	200	100		01/10/17 16:21	91-20-3	
Toluene	**10700**	ug/L	500	160	100		01/10/17 16:21	108-88-3	
Xylene (Total)	**9610**	ug/L	1000	270	100		01/10/17 16:21	1330-20-7	
m&p-Xylene	**6740**	ug/L	1000	310	100		01/10/17 16:21	179601-23-1	
o-Xylene	**2860**	ug/L	500	160	100		01/10/17 16:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		100		01/10/17 16:21	460-00-4	
1,2-Dichloroethane-d4 (S)	81	%	70-130		100		01/10/17 16:21	17060-07-0	
Toluene-d8 (S)	100	%	70-130		100		01/10/17 16:21	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: DUP1 **Lab ID: 92325169043** Collected: 01/02/17 10:45 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	**0.040**	ug/L	0.020	0.020	1	01/05/17 13:29	01/06/17 01:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	117	%	60-140		1	01/05/17 13:29	01/06/17 01:42	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	10000	7680	100		01/10/17 16:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	1000	340	100		01/10/17 16:04	994-05-8	
Benzene	**184J**	ug/L	500	170	100		01/10/17 16:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	10000	3210	100		01/10/17 16:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	10000	5770	100		01/10/17 16:04	75-65-0	
tert-Butyl Formate	ND	ug/L	5000	730	100		01/10/17 16:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	500	180	100		01/10/17 16:04	107-06-2	
Diisopropyl ether	ND	ug/L	500	170	100		01/10/17 16:04	108-20-3	
Ethanol	ND	ug/L	20000	13100	100		01/10/17 16:04	64-17-5	
Ethylbenzene	**3110**	ug/L	500	160	100		01/10/17 16:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	1000	360	100		01/10/17 16:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	500	170	100		01/10/17 16:04	1634-04-4	
Naphthalene	**1340**	ug/L	500	200	100		01/10/17 16:04	91-20-3	
Toluene	**11900**	ug/L	500	160	100		01/10/17 16:04	108-88-3	
Xylene (Total)	**10300**	ug/L	1000	270	100		01/10/17 16:04	1330-20-7	
m&p-Xylene	**7280**	ug/L	1000	310	100		01/10/17 16:04	179601-23-1	
o-Xylene	**3020**	ug/L	500	160	100		01/10/17 16:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		100		01/10/17 16:04	460-00-4	
1,2-Dichloroethane-d4 (S)	80	%	70-130		100		01/10/17 16:04	17060-07-0	
Toluene-d8 (S)	103	%	70-130		100		01/10/17 16:04	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: DUP2 **Lab ID: 92325169044** Collected: 01/02/17 12:55 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 13:29	01/06/17 02:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	119	%	60-140		1	01/05/17 13:29	01/06/17 02:01	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/10/17 13:35	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/10/17 13:35	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/10/17 13:35	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/10/17 13:35	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/10/17 13:35	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/10/17 13:35	762-75-4	
1,2-Dichloroethane	**1.9J**	ug/L	5.0	1.8	1		01/10/17 13:35	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/10/17 13:35	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/10/17 13:35	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/10/17 13:35	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/10/17 13:35	637-92-3	
Methyl-tert-butyl ether	**7.7**	ug/L	5.0	1.7	1		01/10/17 13:35	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/10/17 13:35	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/10/17 13:35	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/10/17 13:35	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/10/17 13:35	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/10/17 13:35	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/10/17 13:35	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/10/17 13:35	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		01/10/17 13:35	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: DUP3 **Lab ID: 92325169045** Collected: 01/02/17 17:00 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:29	01/06/17 02:20	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	115	%	60-140		1	01/05/17 13:29	01/06/17 02:20	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	**1120**	ug/L	1000	768	10		01/10/17 16:39	75-85-4	
tert-Amylmethyl ether	ND	ug/L	100	34.0	10		01/10/17 16:39	994-05-8	
Benzene	**1360**	ug/L	50.0	17.0	10		01/10/17 16:39	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	1000	321	10		01/10/17 16:39	624-95-3	
tert-Butyl Alcohol	ND	ug/L	1000	577	10		01/10/17 16:39	75-65-0	
tert-Butyl Formate	ND	ug/L	500	73.0	10		01/10/17 16:39	762-75-4	
1,2-Dichloroethane	ND	ug/L	50.0	18.0	10		01/10/17 16:39	107-06-2	
Diisopropyl ether	ND	ug/L	50.0	17.0	10		01/10/17 16:39	108-20-3	
Ethanol	ND	ug/L	2000	1310	10		01/10/17 16:39	64-17-5	
Ethylbenzene	**184**	ug/L	50.0	16.0	10		01/10/17 16:39	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	100	36.0	10		01/10/17 16:39	637-92-3	
Methyl-tert-butyl ether	**28.3J**	ug/L	50.0	17.0	10		01/10/17 16:39	1634-04-4	
Naphthalene	**91.4**	ug/L	50.0	20.0	10		01/10/17 16:39	91-20-3	
Toluene	**116**	ug/L	50.0	16.0	10		01/10/17 16:39	108-88-3	
Xylene (Total)	**352**	ug/L	100	27.0	10		01/10/17 16:39	1330-20-7	
m&p-Xylene	**255**	ug/L	100	31.0	10		01/10/17 16:39	179601-23-1	
o-Xylene	**97.0**	ug/L	50.0	16.0	10		01/10/17 16:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		10		01/10/17 16:39	460-00-4	
1,2-Dichloroethane-d4 (S)	86	%	70-130		10		01/10/17 16:39	17060-07-0	
Toluene-d8 (S)	103	%	70-130		10		01/10/17 16:39	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: FIELD BLANK **Lab ID: 92325169046** Collected: 01/02/17 16:35 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8011 GCS EDB and DBCP	Analytical Method: EPA 8011 Preparation Method: EPA 8011								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 13:29	01/06/17 02:40	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	113	%	60-140		1	01/05/17 13:29	01/06/17 02:40	301-79-56	
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 05:32	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 05:32	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 05:32	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 05:32	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 05:32	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 05:32	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 05:32	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 05:32	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 05:32	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 05:32	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 05:32	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 05:32	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 05:32	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 05:32	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 05:32	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 05:32	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 05:32	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/06/17 05:32	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 05:32	17060-07-0	
Toluene-d8 (S)	98	%	70-130		1		01/06/17 05:32	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: TRIP BLANK 1 **Lab ID: 92325169047** Collected: 01/02/17 16:35 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 05:48	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 05:48	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 05:48	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 05:48	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 05:48	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 05:48	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 05:48	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 05:48	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 05:48	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 05:48	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 05:48	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 05:48	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 05:48	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 05:48	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 05:48	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 05:48	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 05:48	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 05:48	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 05:48	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/06/17 05:48	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: TRIP BLANK 2 **Lab ID: 92325169048** Collected: 01/02/17 16:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 06:04	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 06:04	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 06:04	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 06:04	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 06:04	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 06:04	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 06:04	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 06:04	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 06:04	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 06:04	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 06:04	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 06:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 06:04	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 06:04	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 06:04	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 06:04	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 06:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	102	%	70-130		1		01/06/17 06:04	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 06:04	17060-07-0	
Toluene-d8 (S)	96	%	70-130		1		01/06/17 06:04	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Sample: TRIP BLANK 3 **Lab ID: 92325169049** Collected: 01/02/17 16:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	76.8	1		01/06/17 06:20	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	3.4	1		01/06/17 06:20	994-05-8	
Benzene	ND	ug/L	5.0	1.7	1		01/06/17 06:20	71-43-2	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	32.1	1		01/06/17 06:20	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	57.7	1		01/06/17 06:20	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	7.3	1		01/06/17 06:20	762-75-4	
1,2-Dichloroethane	ND	ug/L	5.0	1.8	1		01/06/17 06:20	107-06-2	
Diisopropyl ether	ND	ug/L	5.0	1.7	1		01/06/17 06:20	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 06:20	64-17-5	
Ethylbenzene	ND	ug/L	5.0	1.6	1		01/06/17 06:20	100-41-4	
Ethyl-tert-butyl ether	ND	ug/L	10.0	3.6	1		01/06/17 06:20	637-92-3	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.7	1		01/06/17 06:20	1634-04-4	
Naphthalene	ND	ug/L	5.0	2.0	1		01/06/17 06:20	91-20-3	
Toluene	ND	ug/L	5.0	1.6	1		01/06/17 06:20	108-88-3	
Xylene (Total)	ND	ug/L	10.0	2.7	1		01/06/17 06:20	1330-20-7	
m&p-Xylene	ND	ug/L	10.0	3.1	1		01/06/17 06:20	179601-23-1	
o-Xylene	ND	ug/L	5.0	1.6	1		01/06/17 06:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	103	%	70-130		1		01/06/17 06:20	460-00-4	
1,2-Dichloroethane-d4 (S)	90	%	70-130		1		01/06/17 06:20	17060-07-0	
Toluene-d8 (S)	97	%	70-130		1		01/06/17 06:20	2037-26-5	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343501 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169001, 92325169003, 92325169004, 92325169009, 92325169010, 92325169013, 92325169015, 92325169016, 92325169018, 92325169019, 92325169020, 92325169021, 92325169022, 92325169023

METHOD BLANK: 1905326 Matrix: Water
Associated Lab Samples: 92325169001, 92325169003, 92325169004, 92325169009, 92325169010, 92325169013, 92325169015, 92325169016, 92325169018, 92325169019, 92325169020, 92325169021, 92325169022, 92325169023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/05/17 14:03	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/05/17 14:03	
Benzene	ug/L	ND	5.0	1.7	01/05/17 14:03	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/05/17 14:03	
Ethanol	ug/L	ND	200	131	01/05/17 14:03	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/05/17 14:03	
Ethylbenzene	ug/L	ND	5.0	1.6	01/05/17 14:03	
m&p-Xylene	ug/L	ND	10.0	3.1	01/05/17 14:03	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/05/17 14:03	
Naphthalene	ug/L	ND	5.0	2.0	01/05/17 14:03	
o-Xylene	ug/L	ND	5.0	1.6	01/05/17 14:03	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/05/17 14:03	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/05/17 14:03	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/05/17 14:03	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/05/17 14:03	
Toluene	ug/L	ND	5.0	1.6	01/05/17 14:03	
Xylene (Total)	ug/L	ND	10.0	2.7	01/05/17 14:03	
1,2-Dichloroethane-d4 (S)	%	111	70-130		01/05/17 14:03	
4-Bromofluorobenzene (S)	%	99	70-130		01/05/17 14:03	
Toluene-d8 (S)	%	106	70-130		01/05/17 14:03	

LABORATORY CONTROL SAMPLE: 1905327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.2	100	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1510	151	70-130	L0
Benzene	ug/L	50	51.6	103	70-130	
Diisopropyl ether	ug/L	50	51.9	104	70-130	
Ethanol	ug/L	2000	3610	180	70-130	L0
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	49.3	99	70-130	
m&p-Xylene	ug/L	100	99.5	100	70-130	
Methyl-tert-butyl ether	ug/L	50	56.0	112	70-130	
Naphthalene	ug/L	50	55.7	111	70-130	
o-Xylene	ug/L	50	49.7	99	70-130	
tert-Amyl Alcohol	ug/L	1000	1470	147	70-130	L0
tert-Amylmethyl ether	ug/L	100	111	111	70-130	
tert-Butyl Alcohol	ug/L	500	716	143	70-130	L0

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1905327

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	400	389	97	70-130	
Toluene	ug/L	50	48.8	98	70-130	
Xylene (Total)	ug/L	150	149	99	70-130	
1,2-Dichloroethane-d4 (S)	%			109	70-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1905328

Parameter	Units	92325169001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	23.7	117	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	355	89	70-130	
Benzene	ug/L	ND	20	21.0	105	70-130	
Diisopropyl ether	ug/L	ND	20	22.1	111	70-130	
Ethanol	ug/L	ND	800	1050	131	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	45.4	113	70-130	
Ethylbenzene	ug/L	ND	20	23.1	115	70-130	
m&p-Xylene	ug/L	ND	40	45.6	114	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	22.9	114	70-130	
Naphthalene	ug/L	ND	20	19.4	97	70-130	
o-Xylene	ug/L	ND	20	21.9	110	70-130	
tert-Amyl Alcohol	ug/L	ND	400	374	94	70-130	
tert-Amylmethyl ether	ug/L	ND	40	37.8	95	70-130	
tert-Butyl Alcohol	ug/L	ND	200	310	155	70-130	M0
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
Toluene	ug/L	ND	20	21.3	106	70-130	
1,2-Dichloroethane-d4 (S)	%				118	70-130	
4-Bromofluorobenzene (S)	%				98	70-130	
Toluene-d8 (S)	%				92	70-130	

SAMPLE DUPLICATE: 1905329

Parameter	Units	92325169003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1905329

Parameter	Units	92325169003 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	116	115	1		
4-Bromofluorobenzene (S)	%	98	98	0		
Toluene-d8 (S)	%	107	109	2		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343536
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169006

METHOD BLANK: 1905501
Matrix: Water
Associated Lab Samples: 92325169006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/06/17 01:58	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/06/17 01:58	
Benzene	ug/L	ND	5.0	1.7	01/06/17 01:58	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/06/17 01:58	
Ethanol	ug/L	ND	200	131	01/06/17 01:58	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/06/17 01:58	
Ethylbenzene	ug/L	ND	5.0	1.6	01/06/17 01:58	
m&p-Xylene	ug/L	ND	10.0	3.1	01/06/17 01:58	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/06/17 01:58	
Naphthalene	ug/L	ND	5.0	2.0	01/06/17 01:58	
o-Xylene	ug/L	ND	5.0	1.6	01/06/17 01:58	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/06/17 01:58	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/06/17 01:58	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/06/17 01:58	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/06/17 01:58	
Toluene	ug/L	ND	5.0	1.6	01/06/17 01:58	
Xylene (Total)	ug/L	ND	10.0	2.7	01/06/17 01:58	
1,2-Dichloroethane-d4 (S)	%	114	70-130		01/06/17 01:58	
4-Bromofluorobenzene (S)	%	96	70-130		01/06/17 01:58	
Toluene-d8 (S)	%	104	70-130		01/06/17 01:58	

LABORATORY CONTROL SAMPLE: 1905502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	47.7	95	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1470	147	70-130	L0
Benzene	ug/L	50	47.1	94	70-130	
Diisopropyl ether	ug/L	50	47.8	96	70-130	
Ethanol	ug/L	2000	3260	163	70-130	L0
Ethyl-tert-butyl ether	ug/L	100	99.0	99	70-130	
Ethylbenzene	ug/L	50	51.0	102	70-130	
m&p-Xylene	ug/L	100	103	103	70-130	
Methyl-tert-butyl ether	ug/L	50	50.4	101	70-130	
Naphthalene	ug/L	50	54.9	110	70-130	
o-Xylene	ug/L	50	51.4	103	70-130	
tert-Amyl Alcohol	ug/L	1000	1430	143	70-130	L0
tert-Amylmethyl ether	ug/L	100	111	111	70-130	
tert-Butyl Alcohol	ug/L	500	628	126	70-130	
tert-Butyl Formate	ug/L	400	327	82	70-130	
Toluene	ug/L	50	49.7	99	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1905502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	155	103	70-130	
1,2-Dichloroethane-d4 (S)	%			104	70-130	
4-Bromofluorobenzene (S)	%			95	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1905984

Parameter	Units	92325168007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	24.0	119	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	440	110	70-130	
Benzene	ug/L	ND	20	25.3	127	70-130	
Diisopropyl ether	ug/L	ND	20	25.4	127	70-130	
Ethanol	ug/L	ND	800	1140	143	70-130	M0
Ethyl-tert-butyl ether	ug/L	ND	40	50.0	125	70-130	
Ethylbenzene	ug/L	ND	20	23.0	115	70-130	
m&p-Xylene	ug/L	ND	40	48.0	120	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	25.3	126	70-130	
Naphthalene	ug/L	ND	20	21.1	105	70-130	
o-Xylene	ug/L	ND	20	25.1	126	70-130	
tert-Amyl Alcohol	ug/L	ND	400	455	114	70-130	
tert-Amylmethyl ether	ug/L	ND	40	43.8	109	70-130	
tert-Butyl Alcohol	ug/L	ND	200	308	154	70-130	M1
tert-Butyl Formate	ug/L	ND	160	107	67	70-130	M1
Toluene	ug/L	ND	20	22.0	110	70-130	
1,2-Dichloroethane-d4 (S)	%				116	70-130	
4-Bromofluorobenzene (S)	%				118	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1905985

Parameter	Units	92325168008 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1905985

Parameter	Units	92325168008 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	113	86	27		
4-Bromofluorobenzene (S)	%	88	100	13		
Toluene-d8 (S)	%	109	84	26		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343566 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169025, 92325169026, 92325169028, 92325169030, 92325169031, 92325169032, 92325169033, 92325169034, 92325169035, 92325169036, 92325169037, 92325169038, 92325169046, 92325169047, 92325169048, 92325169049

METHOD BLANK: 1905697 Matrix: Water
Associated Lab Samples: 92325169025, 92325169026, 92325169028, 92325169030, 92325169031, 92325169032, 92325169033, 92325169034, 92325169035, 92325169036, 92325169037, 92325169038, 92325169046, 92325169047, 92325169048, 92325169049

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/06/17 05:16	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/06/17 05:16	
Benzene	ug/L	ND	5.0	1.7	01/06/17 05:16	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/06/17 05:16	
Ethanol	ug/L	ND	200	131	01/06/17 05:16	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/06/17 05:16	
Ethylbenzene	ug/L	ND	5.0	1.6	01/06/17 05:16	
m&p-Xylene	ug/L	ND	10.0	3.1	01/06/17 05:16	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/06/17 05:16	
Naphthalene	ug/L	ND	5.0	2.0	01/06/17 05:16	
o-Xylene	ug/L	ND	5.0	1.6	01/06/17 05:16	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/06/17 05:16	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/06/17 05:16	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/06/17 05:16	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/06/17 05:16	
Toluene	ug/L	ND	5.0	1.6	01/06/17 05:16	
Xylene (Total)	ug/L	ND	10.0	2.7	01/06/17 05:16	
1,2-Dichloroethane-d4 (S)	%	93	70-130		01/06/17 05:16	
4-Bromofluorobenzene (S)	%	104	70-130		01/06/17 05:16	
Toluene-d8 (S)	%	97	70-130		01/06/17 05:16	

LABORATORY CONTROL SAMPLE: 1905698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.8	98	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	908	91	70-130	
Benzene	ug/L	50	53.8	108	70-130	
Diisopropyl ether	ug/L	50	51.3	103	70-130	
Ethanol	ug/L	2000	1600	80	70-130	
Ethyl-tert-butyl ether	ug/L	100	103	103	70-130	
Ethylbenzene	ug/L	50	48.5	97	70-130	
m&p-Xylene	ug/L	100	97.0	97	70-130	
Methyl-tert-butyl ether	ug/L	50	52.1	104	70-130	
Naphthalene	ug/L	50	53.5	107	70-130	
o-Xylene	ug/L	50	49.1	98	70-130	
tert-Amyl Alcohol	ug/L	1000	891	89	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1905698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Amylmethyl ether	ug/L	100	104	104	70-130	
tert-Butyl Alcohol	ug/L	500	415	83	70-130	
tert-Butyl Formate	ug/L	400	400	100	70-130	
Toluene	ug/L	50	53.3	107	70-130	
Xylene (Total)	ug/L	150	146	97	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			103	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE SAMPLE: 1905700

Parameter	Units	92325169038 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	21.2	106	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	327	82	70-130	
Benzene	ug/L	ND	20	24.2	118	70-130	
Diisopropyl ether	ug/L	ND	20	21.5	108	70-130	
Ethanol	ug/L	ND	800	314	39	70-130	M1
Ethyl-tert-butyl ether	ug/L	ND	40	43.8	109	70-130	
Ethylbenzene	ug/L	ND	20	21.4	105	70-130	
m&p-Xylene	ug/L	ND	40	43.5	106	70-130	
Methyl-tert-butyl ether	ug/L	ND	20	23.1	111	70-130	
Naphthalene	ug/L	ND	20	20.1	101	70-130	
o-Xylene	ug/L	ND	20	21.5	105	70-130	
tert-Amyl Alcohol	ug/L	ND	400	341	84	70-130	
tert-Amylmethyl ether	ug/L	ND	40	44.2	110	70-130	
tert-Butyl Alcohol	ug/L	ND	200	230	114	70-130	
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	M1,P5
Toluene	ug/L	ND	20	23.5	114	70-130	
1,2-Dichloroethane-d4 (S)	%				91	70-130	
4-Bromofluorobenzene (S)	%				102	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1905699

Parameter	Units	92325169037 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1905699

Parameter	Units	92325169037 Result	Dup Result	RPD	Max RPD	Qualifiers
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	91	91	0		
4-Bromofluorobenzene (S)	%	103	103	0		
Toluene-d8 (S)	%	98	97	2		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343650 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169027, 92325169029, 92325169039, 92325169040, 92325169041

METHOD BLANK: 1906049 Matrix: Water
Associated Lab Samples: 92325169027, 92325169029, 92325169039, 92325169040, 92325169041

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/06/17 13:02	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/06/17 13:02	
Benzene	ug/L	ND	5.0	1.7	01/06/17 13:02	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/06/17 13:02	
Ethanol	ug/L	ND	200	131	01/06/17 13:02	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/06/17 13:02	
Ethylbenzene	ug/L	ND	5.0	1.6	01/06/17 13:02	
m&p-Xylene	ug/L	ND	10.0	3.1	01/06/17 13:02	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/06/17 13:02	
Naphthalene	ug/L	ND	5.0	2.0	01/06/17 13:02	
o-Xylene	ug/L	ND	5.0	1.6	01/06/17 13:02	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/06/17 13:02	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/06/17 13:02	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/06/17 13:02	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/06/17 13:02	
Toluene	ug/L	ND	5.0	1.6	01/06/17 13:02	
Xylene (Total)	ug/L	ND	10.0	2.7	01/06/17 13:02	
1,2-Dichloroethane-d4 (S)	%	91	70-130		01/06/17 13:02	
4-Bromofluorobenzene (S)	%	103	70-130		01/06/17 13:02	
Toluene-d8 (S)	%	98	70-130		01/06/17 13:02	

LABORATORY CONTROL SAMPLE: 1906050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	48.4	97	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	942	94	70-130	
Benzene	ug/L	50	53.2	106	70-130	
Diisopropyl ether	ug/L	50	51.3	103	70-130	
Ethanol	ug/L	2000	1860	93	70-130	
Ethyl-tert-butyl ether	ug/L	100	103	103	70-130	
Ethylbenzene	ug/L	50	47.3	95	70-130	
m&p-Xylene	ug/L	100	95.2	95	70-130	
Methyl-tert-butyl ether	ug/L	50	52.1	104	70-130	
Naphthalene	ug/L	50	54.1	108	70-130	
o-Xylene	ug/L	50	47.8	96	70-130	
tert-Amyl Alcohol	ug/L	1000	955	95	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	440	88	70-130	
tert-Butyl Formate	ug/L	400	405	101	70-130	
Toluene	ug/L	50	53.0	106	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1906050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	143	95	70-130	
1,2-Dichloroethane-d4 (S)	%			95	70-130	
4-Bromofluorobenzene (S)	%			102	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1906052

Parameter	Units	92325169029 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	400	421	105	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	8000	6660	83	70-130	
Benzene	ug/L	57.9J	400	526	117	70-130	
Diisopropyl ether	ug/L	ND	400	439	110	70-130	
Ethanol	ug/L	ND	16000	7140	45	70-130	M1
Ethyl-tert-butyl ether	ug/L	ND	800	888	111	70-130	
Ethylbenzene	ug/L	1410	400	1840	108	70-130	
m&p-Xylene	ug/L	1090	800	1930	105	70-130	
Methyl-tert-butyl ether	ug/L	ND	400	421	105	70-130	
Naphthalene	ug/L	505	400	1020	129	70-130	
o-Xylene	ug/L	110	400	525	104	70-130	
tert-Amyl Alcohol	ug/L	ND	8000	6900	85	70-130	
tert-Amylmethyl ether	ug/L	ND	800	882	110	70-130	
tert-Butyl Alcohol	ug/L	ND	4000	3340	83	70-130	
tert-Butyl Formate	ug/L	ND	3200	2860	89	70-130	
Toluene	ug/L	ND	400	461	113	70-130	
1,2-Dichloroethane-d4 (S)	%				91	70-130	
4-Bromofluorobenzene (S)	%				101	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1906051

Parameter	Units	92325168004 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	184	182	1	30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	1190	1150	3	30	
m&p-Xylene	ug/L	1470	1430	3	30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	793	807	2	30	
o-Xylene	ug/L	2280	2210	3	30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1906051

Parameter	Units	92325168004 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	65.1	59.5J		30	
Xylene (Total)	ug/L	3750	3640	3	30	
1,2-Dichloroethane-d4 (S)	%	91	90	2		
4-Bromofluorobenzene (S)	%	100	101	2		
Toluene-d8 (S)	%	98	98	0		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343691 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169005, 92325169008, 92325169012, 92325169014, 92325169017, 92325169024

METHOD BLANK: 1906545 Matrix: Water
Associated Lab Samples: 92325169005, 92325169008, 92325169012, 92325169014, 92325169017, 92325169024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/07/17 01:23	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/07/17 01:23	
Benzene	ug/L	ND	5.0	1.7	01/07/17 01:23	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/07/17 01:23	
Ethanol	ug/L	ND	200	131	01/07/17 01:23	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/07/17 01:23	
Ethylbenzene	ug/L	ND	5.0	1.6	01/07/17 01:23	
m&p-Xylene	ug/L	ND	10.0	3.1	01/07/17 01:23	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/07/17 01:23	
Naphthalene	ug/L	ND	5.0	2.0	01/07/17 01:23	
o-Xylene	ug/L	ND	5.0	1.6	01/07/17 01:23	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/07/17 01:23	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/07/17 01:23	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/07/17 01:23	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/07/17 01:23	
Toluene	ug/L	ND	5.0	1.6	01/07/17 01:23	
Xylene (Total)	ug/L	ND	10.0	2.7	01/07/17 01:23	
1,2-Dichloroethane-d4 (S)	%	93	70-130		01/07/17 01:23	
4-Bromofluorobenzene (S)	%	96	70-130		01/07/17 01:23	
Toluene-d8 (S)	%	109	70-130		01/07/17 01:23	

LABORATORY CONTROL SAMPLE: 1906546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	46.4	93	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	849	85	70-130	
Benzene	ug/L	50	48.4	97	70-130	
Diisopropyl ether	ug/L	50	46.1	92	70-130	
Ethanol	ug/L	2000	2160	108	70-130	
Ethyl-tert-butyl ether	ug/L	100	101	101	70-130	
Ethylbenzene	ug/L	50	45.1	90	70-130	
m&p-Xylene	ug/L	100	91.0	91	70-130	
Methyl-tert-butyl ether	ug/L	50	52.6	105	70-130	
Naphthalene	ug/L	50	45.2	90	70-130	
o-Xylene	ug/L	50	46.1	92	70-130	
tert-Amyl Alcohol	ug/L	1000	904	90	70-130	
tert-Amylmethyl ether	ug/L	100	102	102	70-130	
tert-Butyl Alcohol	ug/L	500	433	87	70-130	
tert-Butyl Formate	ug/L	400	412	103	70-130	
Toluene	ug/L	50	47.4	95	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1906546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	137	91	70-130	
1,2-Dichloroethane-d4 (S)	%			93	70-130	
4-Bromofluorobenzene (S)	%			100	70-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE SAMPLE: 1906548

Parameter	Units	92325169017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	22.1	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	298	74	70-130	
Benzene	ug/L	ND	20	21.8	109	70-130	
Diisopropyl ether	ug/L	ND	20	19.1	94	70-130	
Ethanol	ug/L	ND	800	619	77	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	40.1	100	70-130	
Ethylbenzene	ug/L	ND	20	20.8	104	70-130	
m&p-Xylene	ug/L	ND	40	40.8	102	70-130	
Methyl-tert-butyl ether	ug/L	12.6	20	36.9	121	70-130	
Naphthalene	ug/L	ND	20	19.4	97	70-130	
o-Xylene	ug/L	ND	20	20.4	102	70-130	
tert-Amyl Alcohol	ug/L	ND	400	297	68	70-130	M1
tert-Amylmethyl ether	ug/L	ND	40	40.1	100	70-130	
tert-Butyl Alcohol	ug/L	ND	200	213	105	70-130	
tert-Butyl Formate	ug/L	ND	160	ND	1	70-130	P5
Toluene	ug/L	ND	20	21.4	107	70-130	
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				97	70-130	
Toluene-d8 (S)	%				99	70-130	

SAMPLE DUPLICATE: 1906547

Parameter	Units	92325169014 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	11.5	11.2	2	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	67.8	65.0	4	30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	413	449	8	30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1906547

Parameter	Units	92325169014 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	98	96	2		
4-Bromofluorobenzene (S)	%	100	100	1		
Toluene-d8 (S)	%	102	105	3		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343755 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169002, 92325169007, 92325169011

METHOD BLANK: 1907102 Matrix: Water
Associated Lab Samples: 92325169002, 92325169007, 92325169011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/09/17 14:14	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/09/17 14:14	
Benzene	ug/L	ND	5.0	1.7	01/09/17 14:14	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/09/17 14:14	
Ethanol	ug/L	ND	200	131	01/09/17 14:14	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/09/17 14:14	
Ethylbenzene	ug/L	ND	5.0	1.6	01/09/17 14:14	
m&p-Xylene	ug/L	ND	10.0	3.1	01/09/17 14:14	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/09/17 14:14	
Naphthalene	ug/L	ND	5.0	2.0	01/09/17 14:14	
o-Xylene	ug/L	ND	5.0	1.6	01/09/17 14:14	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/09/17 14:14	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/09/17 14:14	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/09/17 14:14	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/09/17 14:14	
Toluene	ug/L	ND	5.0	1.6	01/09/17 14:14	
Xylene (Total)	ug/L	ND	10.0	2.7	01/09/17 14:14	
1,2-Dichloroethane-d4 (S)	%	108	70-130		01/09/17 14:14	
4-Bromofluorobenzene (S)	%	95	70-130		01/09/17 14:14	
Toluene-d8 (S)	%	100	70-130		01/09/17 14:14	

LABORATORY CONTROL SAMPLE: 1907103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	50.9	102	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1130	113	70-130	
Benzene	ug/L	50	53.1	106	70-130	
Diisopropyl ether	ug/L	50	56.8	114	70-130	
Ethanol	ug/L	2000	2530	126	70-130	
Ethyl-tert-butyl ether	ug/L	100	111	111	70-130	
Ethylbenzene	ug/L	50	52.8	106	70-130	
m&p-Xylene	ug/L	100	107	107	70-130	
Methyl-tert-butyl ether	ug/L	50	53.9	108	70-130	
Naphthalene	ug/L	50	52.0	104	70-130	
o-Xylene	ug/L	50	52.7	105	70-130	
tert-Amyl Alcohol	ug/L	1000	1160	116	70-130	
tert-Amylmethyl ether	ug/L	100	106	106	70-130	
tert-Butyl Alcohol	ug/L	500	563	113	70-130	
tert-Butyl Formate	ug/L	400	430	108	70-130	
Toluene	ug/L	50	52.3	105	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1907103

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	160	106	70-130	
1,2-Dichloroethane-d4 (S)	%			102	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Toluene-d8 (S)	%			100	70-130	

MATRIX SPIKE SAMPLE: 1907105

Parameter	Units	92325172024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	200	206	103	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	4000	4320	108	70-130	
Benzene	ug/L	39.4J	200	266	113	70-130	
Diisopropyl ether	ug/L	ND	200	230	115	70-130	
Ethanol	ug/L	ND	8000	10600	132	70-130	M1
Ethyl-tert-butyl ether	ug/L	ND	400	446	111	70-130	
Ethylbenzene	ug/L	588	200	801	106	70-130	
m&p-Xylene	ug/L	1350	400	1780	109	70-130	
Methyl-tert-butyl ether	ug/L	ND	200	224	112	70-130	
Naphthalene	ug/L	191	200	399	104	70-130	
o-Xylene	ug/L	54.2	200	277	111	70-130	
tert-Amyl Alcohol	ug/L	ND	4000	4470	112	70-130	
tert-Amylmethyl ether	ug/L	ND	400	425	106	70-130	
tert-Butyl Alcohol	ug/L	ND	2000	2840	142	70-130	M1
tert-Butyl Formate	ug/L	ND	1600	759	47	70-130	M1,P5
Toluene	ug/L	48.9J	200	271	111	70-130	
1,2-Dichloroethane-d4 (S)	%				96	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				100	70-130	

SAMPLE DUPLICATE: 1907104

Parameter	Units	92325149003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	ND	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	4440	4490	1	30	
Diisopropyl ether	ug/L	859	854	1	30	
Ethanol	ug/L	32000	35300	10	30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	604	610	1	30	
m&p-Xylene	ug/L	2070	2130	3	30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	1090	1100	1	30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1907104

Parameter	Units	92325149003 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	9950	10100	2	30	
Xylene (Total)	ug/L	3160	3230	2	30	
1,2-Dichloroethane-d4 (S)	%	110	108	1		
4-Bromofluorobenzene (S)	%	94	94	1		
Toluene-d8 (S)	%	100	99	1		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343861
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169044

METHOD BLANK: 1907604
Matrix: Water
Associated Lab Samples: 92325169044

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/10/17 11:25	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/10/17 11:25	
Benzene	ug/L	ND	5.0	1.7	01/10/17 11:25	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/10/17 11:25	
Ethanol	ug/L	ND	200	131	01/10/17 11:25	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/10/17 11:25	
Ethylbenzene	ug/L	ND	5.0	1.6	01/10/17 11:25	
m&p-Xylene	ug/L	ND	10.0	3.1	01/10/17 11:25	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/10/17 11:25	
Naphthalene	ug/L	ND	5.0	2.0	01/10/17 11:25	
o-Xylene	ug/L	ND	5.0	1.6	01/10/17 11:25	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/10/17 11:25	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/10/17 11:25	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/10/17 11:25	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/10/17 11:25	
Toluene	ug/L	ND	5.0	1.6	01/10/17 11:25	
Xylene (Total)	ug/L	ND	10.0	2.7	01/10/17 11:25	
1,2-Dichloroethane-d4 (S)	%	93	70-130		01/10/17 11:25	
4-Bromofluorobenzene (S)	%	101	70-130		01/10/17 11:25	
Toluene-d8 (S)	%	106	70-130		01/10/17 11:25	

LABORATORY CONTROL SAMPLE: 1907605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	45.4	91	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	1000	100	70-130	
Benzene	ug/L	50	54.5	109	70-130	
Diisopropyl ether	ug/L	50	53.0	106	70-130	
Ethanol	ug/L	2000	1910	96	70-130	
Ethyl-tert-butyl ether	ug/L	100	109	109	70-130	
Ethylbenzene	ug/L	50	51.5	103	70-130	
m&p-Xylene	ug/L	100	102	102	70-130	
Methyl-tert-butyl ether	ug/L	50	47.5	95	70-130	
Naphthalene	ug/L	50	53.2	106	70-130	
o-Xylene	ug/L	50	49.9	100	70-130	
tert-Amyl Alcohol	ug/L	1000	948	95	70-130	
tert-Amylmethyl ether	ug/L	100	108	108	70-130	
tert-Butyl Alcohol	ug/L	500	469	94	70-130	
tert-Butyl Formate	ug/L	400	392	98	70-130	
Toluene	ug/L	50	49.7	99	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1907605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	152	101	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			95	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE SAMPLE: 1907607

Parameter	Units	92325172003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	ND	20	18.9	94	70-130	
3,3-Dimethyl-1-Butanol	ug/L	ND	400	369	92	70-130	
Benzene	ug/L	4.9J	20	33.4	142	70-130	M1
Diisopropyl ether	ug/L	ND	20	20.6	103	70-130	
Ethanol	ug/L	ND	800	933	117	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	39.2	98	70-130	
Ethylbenzene	ug/L	13.6	20	44.9	156	70-130	M1
m&p-Xylene	ug/L	46.1	40	127	203	70-130	M1
Methyl-tert-butyl ether	ug/L	ND	20	15.5	77	70-130	
Naphthalene	ug/L	ND	20	22.4	108	70-130	
o-Xylene	ug/L	23.9	20	59.4	178	70-130	M1
tert-Amyl Alcohol	ug/L	ND	400	395	99	70-130	
tert-Amylmethyl ether	ug/L	ND	40	37.4	93	70-130	
tert-Butyl Alcohol	ug/L	ND	200	238	119	70-130	
tert-Butyl Formate	ug/L	ND	160	28.4J	18	70-130	M1,P5
Toluene	ug/L	46.0	20	136	452	70-130	M1
1,2-Dichloroethane-d4 (S)	%				100	70-130	
4-Bromofluorobenzene (S)	%				99	70-130	
Toluene-d8 (S)	%				96	70-130	

SAMPLE DUPLICATE: 1907606

Parameter	Units	92325169044 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	1.9J	ND		30	
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	
m&p-Xylene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	7.7	7.0	9	30	
Naphthalene	ug/L	ND	ND		30	
o-Xylene	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

SAMPLE DUPLICATE: 1907606

Parameter	Units	92325169044 Result	Dup Result	RPD	Max RPD	Qualifiers
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	102	100	2		
4-Bromofluorobenzene (S)	%	99	100	1		
Toluene-d8 (S)	%	106	106	1		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343900 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92325169042, 92325169043, 92325169045

METHOD BLANK: 1907756 Matrix: Water
Associated Lab Samples: 92325169042, 92325169043, 92325169045

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	5.0	1.8	01/10/17 11:35	
3,3-Dimethyl-1-Butanol	ug/L	ND	100	32.1	01/10/17 11:35	
Benzene	ug/L	ND	5.0	1.7	01/10/17 11:35	
Diisopropyl ether	ug/L	ND	5.0	1.7	01/10/17 11:35	
Ethanol	ug/L	ND	200	131	01/10/17 11:35	
Ethyl-tert-butyl ether	ug/L	ND	10.0	3.6	01/10/17 11:35	
Ethylbenzene	ug/L	ND	5.0	1.6	01/10/17 11:35	
m&p-Xylene	ug/L	ND	10.0	3.1	01/10/17 11:35	
Methyl-tert-butyl ether	ug/L	ND	5.0	1.7	01/10/17 11:35	
Naphthalene	ug/L	ND	5.0	2.0	01/10/17 11:35	
o-Xylene	ug/L	ND	5.0	1.6	01/10/17 11:35	
tert-Amyl Alcohol	ug/L	ND	100	76.8	01/10/17 11:35	
tert-Amylmethyl ether	ug/L	ND	10.0	3.4	01/10/17 11:35	
tert-Butyl Alcohol	ug/L	ND	100	57.7	01/10/17 11:35	
tert-Butyl Formate	ug/L	ND	50.0	7.3	01/10/17 11:35	
Toluene	ug/L	ND	5.0	1.6	01/10/17 11:35	
Xylene (Total)	ug/L	ND	10.0	2.7	01/10/17 11:35	
1,2-Dichloroethane-d4 (S)	%	87	70-130		01/10/17 11:35	
4-Bromofluorobenzene (S)	%	95	70-130		01/10/17 11:35	
Toluene-d8 (S)	%	107	70-130		01/10/17 11:35	

LABORATORY CONTROL SAMPLE: 1907757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	50	45.9	92	70-130	
3,3-Dimethyl-1-Butanol	ug/L	1000	931	93	70-130	
Benzene	ug/L	50	55.0	110	70-130	
Diisopropyl ether	ug/L	50	48.9	98	70-130	
Ethanol	ug/L	2000	2080	104	70-130	
Ethyl-tert-butyl ether	ug/L	100	103	103	70-130	
Ethylbenzene	ug/L	50	50.1	100	70-130	
m&p-Xylene	ug/L	100	101	101	70-130	
Methyl-tert-butyl ether	ug/L	50	51.1	102	70-130	
Naphthalene	ug/L	50	49.7	99	70-130	
o-Xylene	ug/L	50	50.2	100	70-130	
tert-Amyl Alcohol	ug/L	1000	976	98	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	475	95	70-130	
tert-Butyl Formate	ug/L	400	420	105	70-130	
Toluene	ug/L	50	50.6	101	70-130	

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

LABORATORY CONTROL SAMPLE: 1907757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	150	151	101	70-130	
1,2-Dichloroethane-d4 (S)	%			91	70-130	
4-Bromofluorobenzene (S)	%			96	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1907758 1907759

Parameter	Units	92325546001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	4000	4000	3680	3800	91	94	70-130	3	30	
3,3-Dimethyl-1-Butanol	ug/L	ND	80000	80000	68400	86600	85	108	70-130	24	30	
Benzene	ug/L	3160	4000	4000	7840	7730	117	114	70-130	1	30	
Diisopropyl ether	ug/L	ND	4000	4000	3940	4060	95	98	70-130	3	30	
Ethanol	ug/L	ND	160000	160000	96500	162000	60	101	70-130	51	30	M1,R1
Ethyl-tert-butyl ether	ug/L	ND	8000	8000	8120	8110	102	101	70-130	0	30	
Ethylbenzene	ug/L	3630	4000	4000	7860	7830	106	105	70-130	0	30	
m&p-Xylene	ug/L	17100	8000	8000	26700	25400	120	103	70-130	5	30	
Methyl-tert-butyl ether	ug/L	ND	4000	4000	4300	4100	107	102	70-130	5	30	
Naphthalene	ug/L	ND	4000	4000	4780	4950	95	100	70-130	3	30	
o-Xylene	ug/L	8890	4000	4000	13800	13100	123	105	70-130	5	30	
tert-Amyl Alcohol	ug/L	ND	80000	80000	75600	95700	95	120	70-130	23	30	
tert-Amylmethyl ether	ug/L	ND	8000	8000	8200	8330	102	104	70-130	2	30	
tert-Butyl Alcohol	ug/L	ND	40000	40000	36100	43500	90	109	70-130	19	30	
tert-Butyl Formate	ug/L	ND	32000	32000	31700	32400	99	101	70-130	2	30	
Toluene	ug/L	30400	4000	4000	33500	33300	78	72	70-130	1	30	
1,2-Dichloroethane-d4 (S)	%						90	87	70-130			
4-Bromofluorobenzene (S)	%						100	96	70-130			
Toluene-d8 (S)	%						98	98	70-130			

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343471 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92325169001, 92325169002, 92325169003, 92325169004, 92325169005, 92325169006, 92325169007, 92325169008, 92325169009, 92325169010, 92325169011, 92325169012, 92325169013, 92325169027, 92325169028, 92325169029, 92325169030, 92325169031

METHOD BLANK: 1905092 Matrix: Water
Associated Lab Samples: 92325169001, 92325169002, 92325169003, 92325169004, 92325169005, 92325169006, 92325169007, 92325169008, 92325169009, 92325169010, 92325169011, 92325169012, 92325169013, 92325169027, 92325169028, 92325169029, 92325169030, 92325169031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	01/06/17 00:02	
1-Chloro-2-bromopropane (S)	%	101	60-140		01/06/17 00:02	

LABORATORY CONTROL SAMPLE & LCSD: 1905093 1905094

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.25	0.33	0.30	133	123	60-140	9	20	
1-Chloro-2-bromopropane (S)	%				104	101	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1905095 1905096

Parameter	Units	92325169007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	2.2	.25	.25	2.2	2.3	-10	24	60-140	4	20	M0
1-Chloro-2-bromopropane (S)	%						112	113	60-140			

SAMPLE DUPLICATE: 1905097

Parameter	Units	92325169029 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	0.14	0.14	2	20	
1-Chloro-2-bromopropane (S)	%	101	103	5		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343472 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92325169032, 92325169033, 92325169034, 92325169035, 92325169036, 92325169037, 92325169038, 92325169039, 92325169040, 92325169041, 92325169042, 92325169043, 92325169044, 92325169045, 92325169046

METHOD BLANK: 1905098 Matrix: Water
Associated Lab Samples: 92325169032, 92325169033, 92325169034, 92325169035, 92325169036, 92325169037, 92325169038, 92325169039, 92325169040, 92325169041, 92325169042, 92325169043, 92325169044, 92325169045, 92325169046

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	01/05/17 20:16	
1-Chloro-2-bromopropane (S)	%	111	60-140		01/05/17 20:16	

LABORATORY CONTROL SAMPLE & LCSD: 1905099 1905100

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.24	0.29	0.32	121	130	60-140	9	20	
1-Chloro-2-bromopropane (S)	%				114	120	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1905101 1905102

Parameter	Units	92325169037 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.25	.25	0.30	0.30	121	119	60-140	2	20	
1-Chloro-2-bromopropane (S)	%						114	107	60-140			

SAMPLE DUPLICATE: 1905103

Parameter	Units	92325169040 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	1.2	1.3	5	20	
1-Chloro-2-bromopropane (S)	%	108	112	3		

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QUALITY CONTROL DATA

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

QC Batch: 343621 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92325169014, 92325169015, 92325169016, 92325169017, 92325169018, 92325169019, 92325169020, 92325169021, 92325169022, 92325169023, 92325169024, 92325169025, 92325169026

METHOD BLANK: 1905928 Matrix: Water
Associated Lab Samples: 92325169014, 92325169015, 92325169016, 92325169017, 92325169018, 92325169019, 92325169020, 92325169021, 92325169022, 92325169023, 92325169024, 92325169025, 92325169026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	0.020	0.020	01/06/17 16:39	
1-Chloro-2-bromopropane (S)	%	95	60-140		01/06/17 16:39	

LABORATORY CONTROL SAMPLE & LCSD: 1905929 1905930

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.25	0.31	0.33	126	135	60-140	7	20	
1-Chloro-2-bromopropane (S)	%				98	106	60-140			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1905931 1905932

Parameter	Units	92325169018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.25	.25	0.30	0.30	121	121	60-140	0	20	
1-Chloro-2-bromopropane (S)	%						103	103	60-140			

SAMPLE DUPLICATE: 1905933

Parameter	Units	92325172006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	134	96	33		

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QUALIFIERS

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

C2	Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P5	The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.
R1	RPD value was outside control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated samples.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92325169001	MW-2R	EPA 8011	343471	EPA 8011	343513
92325169002	MW-3R	EPA 8011	343471	EPA 8011	343513
92325169003	MW-4D	EPA 8011	343471	EPA 8011	343513
92325169004	MW-7	EPA 8011	343471	EPA 8011	343513
92325169005	MW-8R	EPA 8011	343471	EPA 8011	343513
92325169006	MW-9	EPA 8011	343471	EPA 8011	343513
92325169007	MW-10	EPA 8011	343471	EPA 8011	343513
92325169008	MW-11	EPA 8011	343471	EPA 8011	343513
92325169009	MW-12	EPA 8011	343471	EPA 8011	343513
92325169010	MW-14	EPA 8011	343471	EPA 8011	343513
92325169011	MW-15	EPA 8011	343471	EPA 8011	343513
92325169012	MW-16	EPA 8011	343471	EPA 8011	343513
92325169013	MW-17	EPA 8011	343471	EPA 8011	343513
92325169014	MW-18	EPA 8011	343621	EPA 8011	343685
92325169015	MW-19	EPA 8011	343621	EPA 8011	343685
92325169016	MW-20	EPA 8011	343621	EPA 8011	343685
92325169017	MW-21	EPA 8011	343621	EPA 8011	343685
92325169018	MW-22	EPA 8011	343621	EPA 8011	343685
92325169019	MW-24	EPA 8011	343621	EPA 8011	343685
92325169020	MW-25	EPA 8011	343621	EPA 8011	343685
92325169021	MW-26	EPA 8011	343621	EPA 8011	343685
92325169022	MW-27	EPA 8011	343621	EPA 8011	343685
92325169023	MW-28	EPA 8011	343621	EPA 8011	343685
92325169024	MW-29	EPA 8011	343621	EPA 8011	343685
92325169025	MW-30	EPA 8011	343621	EPA 8011	343685
92325169026	MW-31	EPA 8011	343621	EPA 8011	343685
92325169027	MW-32	EPA 8011	343471	EPA 8011	343513
92325169028	MW-33	EPA 8011	343471	EPA 8011	343513
92325169029	MW-34	EPA 8011	343471	EPA 8011	343513
92325169030	MW-35	EPA 8011	343471	EPA 8011	343513
92325169031	MW-36	EPA 8011	343471	EPA 8011	343513
92325169032	MW-38	EPA 8011	343472	EPA 8011	343514
92325169033	MW-39	EPA 8011	343472	EPA 8011	343514
92325169034	MW-40	EPA 8011	343472	EPA 8011	343514
92325169035	MW-41	EPA 8011	343472	EPA 8011	343514
92325169036	MW-42	EPA 8011	343472	EPA 8011	343514
92325169037	DW-1	EPA 8011	343472	EPA 8011	343514
92325169038	DW-2	EPA 8011	343472	EPA 8011	343514
92325169039	RW-3	EPA 8011	343472	EPA 8011	343514
92325169040	RW-4	EPA 8011	343472	EPA 8011	343514
92325169041	RW-5	EPA 8011	343472	EPA 8011	343514
92325169042	RW-6	EPA 8011	343472	EPA 8011	343514
92325169043	DUP1	EPA 8011	343472	EPA 8011	343514
92325169044	DUP2	EPA 8011	343472	EPA 8011	343514
92325169045	DUP3	EPA 8011	343472	EPA 8011	343514
92325169046	FIELD BLANK	EPA 8011	343472	EPA 8011	343514
92325169001	MW-2R	EPA 8260	343501		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92325169002	MW-3R	EPA 8260	343755		
92325169003	MW-4D	EPA 8260	343501		
92325169004	MW-7	EPA 8260	343501		
92325169005	MW-8R	EPA 8260	343691		
92325169006	MW-9	EPA 8260	343536		
92325169007	MW-10	EPA 8260	343755		
92325169008	MW-11	EPA 8260	343691		
92325169009	MW-12	EPA 8260	343501		
92325169010	MW-14	EPA 8260	343501		
92325169011	MW-15	EPA 8260	343755		
92325169012	MW-16	EPA 8260	343691		
92325169013	MW-17	EPA 8260	343501		
92325169014	MW-18	EPA 8260	343691		
92325169015	MW-19	EPA 8260	343501		
92325169016	MW-20	EPA 8260	343501		
92325169017	MW-21	EPA 8260	343691		
92325169018	MW-22	EPA 8260	343501		
92325169019	MW-24	EPA 8260	343501		
92325169020	MW-25	EPA 8260	343501		
92325169021	MW-26	EPA 8260	343501		
92325169022	MW-27	EPA 8260	343501		
92325169023	MW-28	EPA 8260	343501		
92325169024	MW-29	EPA 8260	343691		
92325169025	MW-30	EPA 8260	343566		
92325169026	MW-31	EPA 8260	343566		
92325169027	MW-32	EPA 8260	343650		
92325169028	MW-33	EPA 8260	343566		
92325169029	MW-34	EPA 8260	343650		
92325169030	MW-35	EPA 8260	343566		
92325169031	MW-36	EPA 8260	343566		
92325169032	MW-38	EPA 8260	343566		
92325169033	MW-39	EPA 8260	343566		
92325169034	MW-40	EPA 8260	343566		
92325169035	MW-41	EPA 8260	343566		
92325169036	MW-42	EPA 8260	343566		
92325169037	DW-1	EPA 8260	343566		
92325169038	DW-2	EPA 8260	343566		
92325169039	RW-3	EPA 8260	343650		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKELPUMPER 235 04877/53610
Pace Project No.: 92325169

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92325169040	RW-4	EPA 8260	343650		
92325169041	RW-5	EPA 8260	343650		
92325169042	RW-6	EPA 8260	343900		
92325169043	DUP1	EPA 8260	343900		
92325169044	DUP2	EPA 8260	343861		
92325169045	DUP3	EPA 8260	343900		
92325169046	FIELD BLANK	EPA 8260	343566		
92325169047	TRIP BLANK 1	EPA 8260	343566		
92325169048	TRIP BLANK 2	EPA 8260	343566		
92325169049	TRIP BLANK 3	EPA 8260	343566		

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Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: Sept. 21, 2016 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.01	Issuing Authority: Pace Quality Office

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: SCDHEC-UST

Project #: WO# : 92325169

92325169

Courier: ☐ Commercial ☒ Pace ☐ Fed Ex ☐ UPS ☐ USPS ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☒ No **Seals Intact?** ☐ Yes ☒ No

Date/Initials Person Examining Contents: KP 1-4-17

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:____

Thermometer: ☐ IR Gun ID: T1603 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Correction Factor: **Cooler Temp Corrected (°C):** 1.8°C **Biological Tissue Frozen?** ☐ Yes ☒ No ☐ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☒ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

				Comments/Discrepancy:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☒ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	4.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	7.
Samples Field Filtered?	☐ Yes	☒ No	☐ N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☐ Yes	☒ No	☐ N/A	9. NO TIME, NO Date on Sample as per COC
-Includes Date/Time/ID/Analysis Matrix: Water				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☒ No	☐ N/A	10.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☒ No	☐ N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: _____

Project Manager SCURF Review: TC **Date:** 1/5/17

Project Manager SRF Review: TC **Date:** 1/5/17

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

16357

Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: Sept. 21, 2016 Page 2 of 2
	Document No.: F-CAR-CS-033-Rev.01	Issuing Authority: Pace Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92325169

1 of 5

PM: RNC Due Date: 01/11/17

CLIENT: 92-SCDHEC

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1																												
2																6												
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

16357 MRS

Pace Analytical®

Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: Sept. 21, 2016 Page 2 of 2
Document No.: F-CAR-CS-033-Rev.01	Issuing Authority: Pace Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92325169

2 of 5

PM: RHC Due Date: 01/11/17

CLIENT: 92-SCDHEC

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1																6												
2																6												
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12																6												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

16-35-17

***Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.**

****Bottom half of box is to list number of bottles**

Project # 3 of 5

WO# : 92324871

PM: RWC Due Date: 01/06/17

CLIENT: 92-MIDCARPRO

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1																6													
2																6													
3																6													
4																6													
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12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

16357488

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92324871

PM: RWC Due Date: 01/06/17

CLIENT: 92-MIDCARPRO

4 of 5

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1	\				\	\	\	\			\		\	\	\	6									\	\			
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

16-357RB

Pace Analytical®

Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: Sept. 21, 2016 Page 2 of 2
Document No.: F-CAR-CS-033-Rev.01	Issuing Authority: Pace Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO#: 92324871

5 of 5

PM: RWC Due Date: 01/06/17

CLIENT: 92-MIDCARPRO

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1	\				\	\	\	\			\		\	\	\	6									\	\			
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12	\				\	\	\	\			\		\	\	\										\	\			

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 5

2036724

Section A Required Client Information:

Company: SCDHEC-UST
Address: 7600 Bull Street
Columbia, SC 29201
Email To: bryantjc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant-UST
Copy To:
Purchase Order No.: 4600422573
Project Name: Nickelpumper 235
Project Number: UST 04877

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX/MM 8260B	1,2-DCA 8260B	60 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-1																							Not sampled —
2	MW-2R	WT	G			1/2/17	13:40		6				6						X	X	X	X		No odor 001
3	MW-3R	WT	G			1/2/17	17:00		6				6						X	X	X	X		Odor 002
4	MW-4D	WT	G			1/2/17	14:35		6				6						X	X	X	X		No odor 003
5	MW-5																							Not sampled —
6	MW-6																							Not sampled —
7	MW-7	WT	G			1/2/17	10:59		6				6						X	X	X	X		No odor 004
8	MW-8R	↓	↓				11:19		↓				↓						↓	↓	↓	↓		No odor 005
9	MW-9						12:38																	Odor 006
10	MW-10						15:57																	Odor 007
11	MW-11	↓	↓			↓	16:30		↓				↓						↓	↓	↓	↓		No odor 008
12	MW-12	WT	G			1/2/17	11:05		6				6						X	X	X	X		No odor 009

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Peter J. Wylie/MECI	1/2/17	18:30	James Johnson Pace	1-4-17	9:46				
	James Johnson Pace	1-4-17	1427	RP Pace MVL	1-4-17	1427	1-8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 5

2084870

Section A Required Client Information:

Company:	SCDHEC-UST
Address:	2600 Bull Street Columbia, SC 29201
Email To:	bryantjc@dhec.sc.gov
Phone:	803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:	

Section B Required Project Information:

Report To:	J. Bryant-UST
Copy To:	
Purchase Order No.:	4600422513
Project Name:	Nickelpumper 235
Project Number:	UST 04877

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	T. Carter
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: BTEX N M 8260B	1,2-DCA 8260B	8 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92325169
1	MW-14	WT	G			12/17	11:42		6				6						X	X	X	X		No odor 010
2	MW-15	↓	↓			↓	12:24		↓				↓						↓	↓	↓	↓		Slight odor 011
3	MW-16						12:05																	No odor 012
4	MW-17						16:05																	No odor 013
5	MW-18						12:00																	014
6	MW-19						15:05																	015
7	MW-20						15:35																	016
8	MW-21					↓	12:55		↓				↓						↓	↓	↓	↓		017
9	MW-22	WT	G			12/17	11:35		6				6						X	X	X	X		No odor 018
10	MW-23																							Not sampled —
11	MW-24	WT	G			12/17	11:00		6				6						X	X	X	X		No odor 019
12	MW-25	WT	G			12/17	16:10		6				6						X	X	X	X		No odor 020

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Peter J. Wylie/MECI	12/17	18:30	James Johnson Pace	1-4-17	946				
	James Johnson Pace	1-4-17	1427	RP Pace AVL	1-4-17	1427	1.8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 12/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 5

2084871

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC-UST	Report To: J. Bryant-UST	Attention:
Address: 2600 Bull Street Columbia, SC 29201	Copy To:	Company Name:
Email To: bryantjc@dhec.sc.gov	Purchase Order No.: 4600422513	Address:
Phone: 803-898-0606 Fax: 803-898-0673	Project Name: Nickelpumper 235	Pace Quote Reference:
Requested Due Date/TAT:	Project Number: UST 04877	Pace Project Manager: T. Carter
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC — Hampton

Requested Analysis Filtered (Y/N)

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX NM 8260B	1,2-DCA 8260B	5 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92325169	
1	MW-26	WT	G			1/2/17	12:25		6				6						X	X	X	X		No odor	021
2	MW-27						13:20																		022
3	MW-28						16:30																		023
4	MW-29						12:40																		024
5	MW-30						10:25																		025
6	MW-31						10:40																	No odor	026
7	MW-32						11:00																	Odor; sheen	027
8	MW-33						12:02																	No odor	028
9	MW-34						14:15																	Odor	029
10	MW-35						14:30																	No odor	030
11	MW-36	WT	G			1/2/17	14:50		6				6						X	X	X	X		No odor	031
12	MW-37																							Not sampled	—

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	Peter J. Wylie / MECI	1/2/17	18:30	James Johns Pace	1-4-17	946				
	James Johns Pace	1-4-17	1427	RP Pace AVL	1-4-17	1427	1-8	X	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 4 of 5

2084872

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: SCDHEC-UST	Report To: J. Bryant-UST	Attention:
Address: 2600 Bull Street Columbia, SC 29201	Copy To:	Company Name:
Email To: bryantjc@dhec.sc.gov	Purchase Order No.: 4600422513	Address:
Phone: 803-898-0606 Fax: 803-898-0673	Project Name: Nickel pumper 235	Pace Quote Reference:
Requested Due Date/TAT:	Project Number: UST 04877	Pace Project Manager: T. Carter
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX N/M 826013	1,2-DCA 826013	8 Oxys 826013	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-38	WT	G			1/2/17	15:06		6				6						X	X	X	X		No odor 032
2	MW-39						15:37																		033
3	MW-40						15:22																		034
4	MW-41						12:17																		035
5	MW-42						10:30																		036
6	DW-1						18:10																		037
7	DW-2	WT	G			1/2/17	14:40		6				6						X	X	X	X		No odor 038
8	RW-1																								Not sampled —
9	RW-2																								Not sampled —
10	RW-3	WT	G			1/2/17	13:20		6				6						X	X	X	X		Odor; slight sheen 039
11	RW-4	WT	G			1/2/17	14:00		6				6						X	X	X	X		Odor 040
12	RW-5	WT	G			1/2/17	11:47		6				6						X	X	X	X		Odor; slight sheen 041

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Peter J. Wylie/MECI	1/2/17	18:30	James Johns Pace	1-4-17	9:46				
	James Johns Pace	1-4-17	1427	RP PaceHVL	1-4-17	14:27	1-8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie — DATE Signed (MM/DD/YY): 1/2/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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Page: 5 of 5

2084873

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street
Columbia, SC 29201
Email To: bryantjc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant-UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST 04877

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	BTEX N M 8260B	1,2-DCA 8260B	8 Oxys 8260B	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92325169
1	RW-6	WT	G			1/2/17	10:45		6				6						X	X	X	X		Odor; sheen 042
2	Dup 1						10:45																	Odor; sheen 043
3	Dup 2						12:55																	No odor 044
4	Dup 3						17:00																	Odor 045
5	Field blank						16:35		6				6									X		Field blank 046
6	Trip blank 1						16:35		2				2											Trip blank 1 047
7	Trip blank 2						16:40		2				2											Trip blank 2 048
8	Trip blank 3	WT	G			1/2/17	16:40		2				2						X	X	X			Trip blank 3 049
9																								
10																								
11																								
12																								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Peter J. Wylie/MEI	1/2/17	18:30	James Johns Pace	1-4-17	946				
	James Johns Pace	1-4-17	1427	RP Pace HVL	1-4-17	14-22	1-8	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie

DATE Signed (MM/DD/YY): 1/2/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

January 10, 2017



Mr. John Bryant
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Dear Mr. Bryant:
Enclosed are the analytical results for sample(s) received by the laboratory on January 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Trey Carter
trey.carter@pacelabs.com
Project Manager

Enclosures

cc: Ashleigh Thrash, SCHDEC

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CERTIFICATIONS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Ormond Beach Certification IDs

8 East Tower Circle, Ormond Beach, FL 32174
Alabama Certification #: 41320
Connecticut Certification #: PH-0216
Delaware Certification: FL NELAC Reciprocity
Florida Certification #: E83079
Georgia Certification #: 955
Guam Certification: FL NELAC Reciprocity
Hawaii Certification: FL NELAC Reciprocity
Illinois Certification #: 200068
Indiana Certification: FL NELAC Reciprocity
Kansas Certification #: E-10383
Louisiana Certification #: FL NELAC Reciprocity
Louisiana Environmental Certificate #: 05007
Maryland Certification: #346
Michigan Certification #: 9911
Mississippi Certification: FL NELAC Reciprocity
Missouri Certification #: 236
Montana Certification #: Cert 0074
Nebraska Certification: NE-OS-28-14
Nevada Certification: FL NELAC Reciprocity
New York Certification #: 11608
North Carolina Environmental Certificate #: 667
North Carolina Certification #: 12710
Oklahoma Certification #: D9947
Pennsylvania Certification #: 68-00547
Puerto Rico Certification #: FL01264
South Carolina Certification: #96042001
Tennessee Certification #: TN02974
Texas Certification: FL NELAC Reciprocity
US Virgin Islands Certification: FL NELAC Reciprocity
Virginia Environmental Certification #: 460165
Wyoming Certification: FL NELAC Reciprocity
West Virginia Certification #: 9962C
Wisconsin Certification #: 399079670
Wyoming (EPA Region 8): FL NELAC Reciprocity

Charlotte Certification IDs

9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Virginia/VELAP Certification #: 460221

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92325174001	**WSW-1**	Water	01/02/17 13:20	01/04/17 09:46
92325174002	**WSW-2**	Water	01/02/17 13:16	01/04/17 09:46
92325174003	**WSW-3**	Water	01/02/17 11:10	01/04/17 09:46
92325174004	**WSW-4**	Water	01/02/17 11:05	01/04/17 09:46
92325174005	**WSW-5**	Water	01/02/17 14:30	01/04/17 09:46
92325174006	**WSW-7**	Water	01/02/17 14:40	01/04/17 09:46
92325174007	**WSW-DUP**	Water	01/02/17 11:05	01/04/17 09:46
92325174008	**WSW FIELD BLANK**	Water	01/02/17 14:50	01/04/17 09:46
92325174009	**WSW TRIP BLANK**	Water	01/02/17 14:55	01/04/17 09:46

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SAMPLE ANALYTE COUNT

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92325174001	WSW-1	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174002	WSW-2	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174003	WSW-3	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174004	WSW-4	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174005	WSW-5	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174006	WSW-7	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174007	WSW-DUP	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174008	WSW FIELD BLANK	EPA 504.1	HSK	2	PASI-C
		EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C
92325174009	WSW TRIP BLANK	EPA 524.2	JLR	10	PASI-O
		EPA 8260	GAW	11	PASI-C

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-1 **Lab ID: 92325174001** Collected: 01/02/17 13:20 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:12	01/05/17 15:08	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	70-130		1	01/05/17 13:12	01/05/17 15:08	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 18:05	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 18:05	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 18:05	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 18:05	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 18:05	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 18:05	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 18:05	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		01/09/17 18:05	460-00-4	
Toluene-d8 (S)	101	%	70-130		1		01/09/17 18:05	2037-26-5	
1,2-Dichloroethane-d4 (S)	105	%	70-130		1		01/09/17 18:05	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 22:59	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 22:59	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 22:59	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 22:59	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 22:59	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 22:59	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 22:59	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 22:59	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/05/17 22:59	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	70-130		1		01/05/17 22:59	17060-07-0	
Toluene-d8 (S)	106	%	70-130		1		01/05/17 22:59	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-2 **Lab ID: 92325174002** Collected: 01/02/17 13:16 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:12	01/05/17 16:06	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	70-130		1	01/05/17 13:12	01/05/17 16:06	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 18:31	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 18:31	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 18:31	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 18:31	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 18:31	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 18:31	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 18:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/09/17 18:31	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 18:31	2037-26-5	
1,2-Dichloroethane-d4 (S)	106	%	70-130		1		01/09/17 18:31	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 23:16	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 23:16	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 23:16	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 23:16	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 23:16	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 23:16	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 23:16	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 23:16	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/05/17 23:16	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		01/05/17 23:16	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/05/17 23:16	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-3 **Lab ID: 92325174003** Collected: 01/02/17 11:10 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:12	01/05/17 16:45	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	106	%	70-130		1	01/05/17 13:12	01/05/17 16:45	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 18:56	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 18:56	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 18:56	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 18:56	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 18:56	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 18:56	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 18:56	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/09/17 18:56	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 18:56	2037-26-5	
1,2-Dichloroethane-d4 (S)	109	%	70-130		1		01/09/17 18:56	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 23:34	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 23:34	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 23:34	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 23:34	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 23:34	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 23:34	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 23:34	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 23:34	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/05/17 23:34	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		01/05/17 23:34	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/05/17 23:34	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-4 **Lab ID: 92325174004** Collected: 01/02/17 11:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:12	01/05/17 17:04	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	70-130		1	01/05/17 13:12	01/05/17 17:04	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 19:22	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 19:22	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 19:22	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 19:22	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 19:22	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 19:22	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 19:22	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		01/09/17 19:22	460-00-4	
Toluene-d8 (S)	101	%	70-130		1		01/09/17 19:22	2037-26-5	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		01/09/17 19:22	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 23:52	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 23:52	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 23:52	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 23:52	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 23:52	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 23:52	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 23:52	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 23:52	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/05/17 23:52	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		01/05/17 23:52	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/05/17 23:52	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-5 **Lab ID: 92325174005** Collected: 01/02/17 14:30 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:13	01/05/17 17:23	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	105	%	70-130		1	01/05/17 13:13	01/05/17 17:23	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 19:48	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 19:48	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 19:48	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 19:48	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 19:48	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 19:48	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 19:48	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		01/09/17 19:48	460-00-4	
Toluene-d8 (S)	101	%	70-130		1		01/09/17 19:48	2037-26-5	
1,2-Dichloroethane-d4 (S)	102	%	70-130		1		01/09/17 19:48	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/06/17 00:10	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/06/17 00:10	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/06/17 00:10	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/06/17 00:10	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/06/17 00:10	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/06/17 00:10	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 00:10	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/06/17 00:10	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/06/17 00:10	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	70-130		1		01/06/17 00:10	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/06/17 00:10	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-7 **Lab ID: 92325174006** Collected: 01/02/17 14:40 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:13	01/05/17 17:42	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	70-130		1	01/05/17 13:13	01/05/17 17:42	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 20:13	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 20:13	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 20:13	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 20:13	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 20:13	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 20:13	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 20:13	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	70-130		1		01/09/17 20:13	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 20:13	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	70-130		1		01/09/17 20:13	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/06/17 00:27	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/06/17 00:27	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/06/17 00:27	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/06/17 00:27	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/06/17 00:27	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/06/17 00:27	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 00:27	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/06/17 00:27	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/06/17 00:27	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	70-130		1		01/06/17 00:27	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/06/17 00:27	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW-DUP **Lab ID: 92325174007** Collected: 01/02/17 11:05 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.020	0.020	1	01/05/17 13:13	01/05/17 18:01	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	102	%	70-130		1	01/05/17 13:13	01/05/17 18:01	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 20:39	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 20:39	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 20:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 20:39	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 20:39	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 20:39	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 20:39	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		01/09/17 20:39	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 20:39	2037-26-5	
1,2-Dichloroethane-d4 (S)	104	%	70-130		1		01/09/17 20:39	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/06/17 01:03	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/06/17 01:03	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/06/17 01:03	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/06/17 01:03	75-65-0	M1
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/06/17 01:03	762-75-4	M1
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/06/17 01:03	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/06/17 01:03	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/06/17 01:03	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		01/06/17 01:03	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	70-130		1		01/06/17 01:03	17060-07-0	
Toluene-d8 (S)	103	%	70-130		1		01/06/17 01:03	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW FIELD BLANK **Lab ID: 92325174008** Collected: 01/02/17 14:50 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
504 GCS EDB and DBCP	Analytical Method: EPA 504.1 Preparation Method: EPA 504.1								
1,2-Dibromoethane (EDB)	ND	ug/L	0.019	0.019	1	01/05/17 13:13	01/05/17 18:20	106-93-4	
Surrogates									
1-Chloro-2-bromopropane (S)	104	%	70-130		1	01/05/17 13:13	01/05/17 18:20	301-79-56	
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 17:14	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 17:14	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 17:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 17:14	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 17:14	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 17:14	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 17:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/09/17 17:14	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 17:14	2037-26-5	
1,2-Dichloroethane-d4 (S)	107	%	70-130		1		01/09/17 17:14	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 20:01	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 20:01	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 20:01	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 20:01	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 20:01	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 20:01	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 20:01	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 20:01	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		01/05/17 20:01	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	70-130		1		01/05/17 20:01	17060-07-0	
Toluene-d8 (S)	104	%	70-130		1		01/05/17 20:01	2037-26-5	

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ANALYTICAL RESULTS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Sample: WSW TRIP BLANK **Lab ID: 92325174009** Collected: 01/02/17 14:55 Received: 01/04/17 09:46 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
524.2 MSV	Analytical Method: EPA 524.2								
Benzene	ND	ug/L	0.50	0.25	1		01/09/17 15:31	71-43-2	
1,2-Dichloroethane	ND	ug/L	0.50	0.25	1		01/09/17 15:31	107-06-2	
Ethylbenzene	ND	ug/L	0.50	0.25	1		01/09/17 15:31	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	0.50	0.25	1		01/09/17 15:31	1634-04-4	
Naphthalene	ND	ug/L	0.50	0.25	1		01/09/17 15:31	91-20-3	
Toluene	ND	ug/L	0.50	0.25	1		01/09/17 15:31	108-88-3	
Xylene (Total)	ND	ug/L	0.50	0.25	1		01/09/17 15:31	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		01/09/17 15:31	460-00-4	
Toluene-d8 (S)	102	%	70-130		1		01/09/17 15:31	2037-26-5	
1,2-Dichloroethane-d4 (S)	118	%	70-130		1		01/09/17 15:31	17060-07-0	
8260 MSV Low Level SC	Analytical Method: EPA 8260								
tert-Amyl Alcohol	ND	ug/L	100	50.0	1		01/05/17 20:19	75-85-4	
tert-Amylmethyl ether	ND	ug/L	10.0	0.10	1		01/05/17 20:19	994-05-8	
3,3-Dimethyl-1-Butanol	ND	ug/L	100	50.0	1		01/05/17 20:19	624-95-3	
tert-Butyl Alcohol	ND	ug/L	100	3.6	1		01/05/17 20:19	75-65-0	
tert-Butyl Formate	ND	ug/L	50.0	1.9	1		01/05/17 20:19	762-75-4	
Diisopropyl ether	ND	ug/L	1.0	0.12	1		01/05/17 20:19	108-20-3	
Ethanol	ND	ug/L	200	131	1		01/05/17 20:19	64-17-5	
Ethyl-tert-butyl ether	ND	ug/L	10.0	0.070	1		01/05/17 20:19	637-92-3	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		01/05/17 20:19	460-00-4	
1,2-Dichloroethane-d4 (S)	94	%	70-130		1		01/05/17 20:19	17060-07-0	
Toluene-d8 (S)	105	%	70-130		1		01/05/17 20:19	2037-26-5	

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QUALITY CONTROL DATA

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

QC Batch: 343196 Analysis Method: EPA 524.2
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008, 92325174009

METHOD BLANK: 1841445 Matrix: Water
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008, 92325174009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	0.50	0.25	01/09/17 13:28	
Benzene	ug/L	ND	0.50	0.25	01/09/17 13:28	
Ethylbenzene	ug/L	ND	0.50	0.25	01/09/17 13:28	
Methyl-tert-butyl ether	ug/L	ND	0.50	0.25	01/09/17 13:28	
Naphthalene	ug/L	ND	0.50	0.25	01/09/17 13:28	
Toluene	ug/L	ND	0.50	0.25	01/09/17 13:28	
Xylene (Total)	ug/L	ND	0.50	0.25	01/09/17 13:28	
1,2-Dichloroethane-d4 (S)	%	104	70-130		01/09/17 13:28	
4-Bromofluorobenzene (S)	%	94	70-130		01/09/17 13:28	
Toluene-d8 (S)	%	102	70-130		01/09/17 13:28	

LABORATORY CONTROL SAMPLE & LCSD: 1841446 1841447

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	40	36.8	36.9	92	92	70-130	0	40	
Benzene	ug/L	40	36.4	35.6	91	89	70-130	2	40	
Ethylbenzene	ug/L	40	39.8	38.4	99	96	70-130	4	40	
Methyl-tert-butyl ether	ug/L	40	42.2	41.6	105	104	70-130	1	40	
Naphthalene	ug/L	40	38.6	39.6	97	99	70-130	3	40	
Toluene	ug/L	40	37.8	36.9	95	92	70-130	3	40	
Xylene (Total)	ug/L	120	118	115	99	96	70-130	3	40	
1,2-Dichloroethane-d4 (S)	%				99	95	70-130			
4-Bromofluorobenzene (S)	%				97	96	70-130			
Toluene-d8 (S)	%				103	102	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

QC Batch: 343547 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008, 92325174009

METHOD BLANK: 1905610 Matrix: Water
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008, 92325174009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
3,3-Dimethyl-1-Butanol	ug/L	ND	100	50.0	01/05/17 19:08	
Diisopropyl ether	ug/L	ND	1.0	0.12	01/05/17 19:08	
Ethanol	ug/L	ND	200	131	01/05/17 19:08	
Ethyl-tert-butyl ether	ug/L	ND	10.0	0.070	01/05/17 19:08	
tert-Amyl Alcohol	ug/L	ND	100	50.0	01/05/17 19:08	
tert-Amylmethyl ether	ug/L	ND	10.0	0.10	01/05/17 19:08	
tert-Butyl Alcohol	ug/L	ND	100	3.6	01/05/17 19:08	
tert-Butyl Formate	ug/L	ND	50.0	1.9	01/05/17 19:08	
1,2-Dichloroethane-d4 (S)	%	93	70-130		01/05/17 19:08	
4-Bromofluorobenzene (S)	%	95	70-130		01/05/17 19:08	
Toluene-d8 (S)	%	104	70-130		01/05/17 19:08	

LABORATORY CONTROL SAMPLE: 1905611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3,3-Dimethyl-1-Butanol	ug/L	1000	921	92	70-130	
Diisopropyl ether	ug/L	50	50.1	100	70-130	
Ethanol	ug/L	2000	1930	97	70-130	
Ethyl-tert-butyl ether	ug/L	100	108	108	70-130	
tert-Amyl Alcohol	ug/L	1000	936	94	70-130	
tert-Amylmethyl ether	ug/L	100	103	103	70-130	
tert-Butyl Alcohol	ug/L	500	473	95	70-130	
tert-Butyl Formate	ug/L	400	450	112	70-130	
1,2-Dichloroethane-d4 (S)	%			97	70-130	
4-Bromofluorobenzene (S)	%			101	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE SAMPLE: 1905613

Parameter	Units	92325174007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
3,3-Dimethyl-1-Butanol	ug/L	ND	400	357	89	70-130	
Diisopropyl ether	ug/L	ND	20	19.3	96	70-130	
Ethanol	ug/L	ND	800	870	109	70-130	
Ethyl-tert-butyl ether	ug/L	ND	40	40.7	102	70-130	
tert-Amyl Alcohol	ug/L	ND	400	381	95	70-130	
tert-Amylmethyl ether	ug/L	ND	40	40.9	102	70-130	
tert-Butyl Alcohol	ug/L	ND	200	263	132	70-130	M1

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QUALITY CONTROL DATA

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

MATRIX SPIKE SAMPLE: 1905613

Parameter	Units	92325174007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
tert-Butyl Formate	ug/L	ND	160	ND	0	70-130	P5
1,2-Dichloroethane-d4 (S)	%				97	70-130	
4-Bromofluorobenzene (S)	%				100	70-130	
Toluene-d8 (S)	%				98	70-130	

SAMPLE DUPLICATE: 1905612

Parameter	Units	92325174006 Result	Dup Result	RPD	Max RPD	Qualifiers
3,3-Dimethyl-1-Butanol	ug/L	ND	ND		30	
Diisopropyl ether	ug/L	ND	ND		30	
Ethanol	ug/L	ND	ND		30	
Ethyl-tert-butyl ether	ug/L	ND	ND		30	
tert-Amyl Alcohol	ug/L	ND	ND		30	
tert-Amylmethyl ether	ug/L	ND	ND		30	
tert-Butyl Alcohol	ug/L	ND	ND		30	
tert-Butyl Formate	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	96	96	0		
4-Bromofluorobenzene (S)	%	96	98	2		
Toluene-d8 (S)	%	104	105	1		

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

QC Batch: 343492 Analysis Method: EPA 504.1
QC Batch Method: EPA 504.1 Analysis Description: GCS 504 EDB DBCP
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008

METHOD BLANK: 1905221 Matrix: Water
Associated Lab Samples: 92325174001, 92325174002, 92325174003, 92325174004, 92325174005, 92325174006, 92325174007, 92325174008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	0.040	0.020	0.020	01/05/17 14:10	
1-Chloro-2-bromopropane (S)	%	96	70-130		01/05/17 14:10	

LABORATORY CONTROL SAMPLE & LCSD: 1905222 1905223

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	.25	0.26	0.28	105	110	70-130	5	20	
1-Chloro-2-bromopropane (S)	%				98	100	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1905224 1905225

Parameter	Units	92325174001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/L	ND	.25	.25	0.28	0.28	112	112	65-135	0	20	
1-Chloro-2-bromopropane (S)	%						103	104	70-130			

SAMPLE DUPLICATE: 1905226

Parameter	Units	92325174002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	ND	ND		20	
1-Chloro-2-bromopropane (S)	%	102	105	4		

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Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte
PASI-O	Pace Analytical Services - Ormond Beach

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
P5	The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes.

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Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NICKELPUMPER235WSW 04877/53612
Pace Project No.: 92325174

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92325174001	WSW-1	EPA 504.1	343492	EPA 504.1	343499
92325174002	WSW-2	EPA 504.1	343492	EPA 504.1	343499
92325174003	WSW-3	EPA 504.1	343492	EPA 504.1	343499
92325174004	WSW-4	EPA 504.1	343492	EPA 504.1	343499
92325174005	WSW-5	EPA 504.1	343492	EPA 504.1	343499
92325174006	WSW-7	EPA 504.1	343492	EPA 504.1	343499
92325174007	WSW-DUP	EPA 504.1	343492	EPA 504.1	343499
92325174008	WSW FIELD BLANK	EPA 504.1	343492	EPA 504.1	343499
92325174001	WSW-1	EPA 524.2	343196		
92325174002	WSW-2	EPA 524.2	343196		
92325174003	WSW-3	EPA 524.2	343196		
92325174004	WSW-4	EPA 524.2	343196		
92325174005	WSW-5	EPA 524.2	343196		
92325174006	WSW-7	EPA 524.2	343196		
92325174007	WSW-DUP	EPA 524.2	343196		
92325174008	WSW FIELD BLANK	EPA 524.2	343196		
92325174009	WSW TRIP BLANK	EPA 524.2	343196		
92325174001	WSW-1	EPA 8260	343547		
92325174002	WSW-2	EPA 8260	343547		
92325174003	WSW-3	EPA 8260	343547		
92325174004	WSW-4	EPA 8260	343547		
92325174005	WSW-5	EPA 8260	343547		
92325174006	WSW-7	EPA 8260	343547		
92325174007	WSW-DUP	EPA 8260	343547		
92325174008	WSW FIELD BLANK	EPA 8260	343547		
92325174009	WSW TRIP BLANK	EPA 8260	343547		

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Pace Analytical®	Document Name: Sample Condition Upon Receipt(SCUR)	Document Revised: Sept. 21, 2016 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.01	Issuing Authority: Pace Quality Office

Laboratory receiving samples:
Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐

Sample Condition Upon Receipt

Client Name: SCDHEC-UST

Project #: WO#: 92325174

92325174

Courier: ☐ Commercial ☑ Fed Ex ☐ UPS ☐ USPS ☐ Pace ☐ Other:____ ☐ Client

Custody Seal Present? ☐ Yes ☑ No **Seals Intact?** ☑ Yes ☐ No

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:____

Date/Initials Person Examining Contents: 1-4-17 KW

Thermometer: ☐ IR Gun ID: T1603

Type of Ice: ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Correction Factor: **Cooler Temp Corrected (°C):** 2.9

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☑ Yes	☐ No	☐ N/A	10. ~~MW~~ WSW-5 VOA 3 samples headspace
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Sample Discrepancy: _____

Project Manager SCURF Review: TC **Date:** 1/5/17

Project Manager SRF Review: TC **Date:** 1/5/17

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

**Bottom half of box is to list number of bottles

Project # WO# : 92325174

PM: RWC Due Date: 01/11/17

CLIENT: 92-SCDHEC

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP3S-250 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP3Z-250 mL Plastic ZN Acetate & NaOH (>9)	BP3C-250 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unp (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (6 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	Cubitainer	VSGU-20 mL Scintillation vials (N/A)	GN
1																6	3											
2																6	3											
3																6	3											
4																6	3											
5																6	3											
6																6	3											
7																6	3											
8																6												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

2084874

Section A Required Client Information:

Company: SCDHEC-UST
Address: 2600 Bull Street, Columbia, SC 29201
Email To: bryantjc@dhec.sc.gov
Phone: 803-898-0606 Fax: 803-898-0673
Requested Due Date/TAT:

Section B Required Project Information:

Report To: J. Bryant-UST
Copy To:
Purchase Order No.: 4600422513
Project Name: Nickelpumper 235
Project Number: UST 04877

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: T. Carter
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC — Hampton

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	STEX/MTBE 524.2	8260B	EDB 504.1	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92325174
1	WSW-1	DW	G			1/2/17	13:20		9				6		3			X	X	X	X		LDLs 001
2	WSW-2						13:16																002
3	WSW-3						11:10																003
4	WSW-4						11:05																004
5	WSW-5	DW	G			1/2/17	14:30		9				6		3			X	X	X	X		LDLs 005
6	WSW-6																						Not sampled
7	WSW-7	DW	G			1/2/17	14:40		9				6		3			X	X	X	X		LDLs 006
8	WSW Dup	DW					11:05		9						3					X	X		LDLs 007
9	WSW Field blank	WT					14:50		9						3					X	X		WSW Field blank 008
10	WSW Trip blank	WT	G			1/2/17	14:55		6				6					X	X				WSW Trip blank 009
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Peter J. Wylie/MECI	1/2/17	18:30	James Johnson Pace	1-4-17	0946				
	James Johnson Pace	1-4-17	1427	[illegible] pace	1-4-17	1427	2.9	Y	N	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Peter J. Wylie

SIGNATURE of SAMPLER: Peter J. Wylie DATE Signed (MM/DD/YY): 1/2/17

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

dhec
Healthy People Healthy Communities.

UST 32 Week DOCKETING

FEB 0 3 2017

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS INC
PO BOX 854
LEXINGTON SC 29071

Re: Site-Specific Work Plan Directive for Small Scope Contract
Solicitation # 5400006561; PO# 4600450850

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. Please submit the Site-specific Quality Assurance Project Plan for an IGWA, Tier I or Assessment Plan, and Assessment Component Cost Agreement as necessary, to my attention **within fifteen (15) days from the date of this correspondence**. Plan implementation shall not commence prior to receipt of written technical and financial approval from the Department. The facilities will be assigned a Cost Agreement (CA) numbers once the QAPP Contractor Addendum has been approved by the project manager. Please reference the CA numbers and Purchase Order # 4600368246 on the appropriate invoices submitted for payment. As specified in the referenced bid, **the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below) after the technical and cost approval from the project manager.**

04877

UST Permit #	Facility	County	Project Manager	Work Scope	Due Date*
~~104877~~	Nickelpumper 235	Hampton	Bryant	Well Installation	60 Days

*From receipt of Notice to Proceed letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. The site's UST owners have no obligation for payment for this scope of work.

Please note any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.

IGWA, Tier I or Assessment Quality Assurance Project Plan, Implementation and Report submittal shall be performed in accordance with the referenced contract. Per Section 3.4.2., a late fee of $50.00/day (not to exceed 20% of the cost agreement total) may be levied for each day the report is submitted after the deadline established in the Notice to Proceed letter.

Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. **In accordance with the bid specification, a bi-monthly status report of the project should be provided by the 5th and 20th of each month via e-mail to my attention.** If any quality assurance problems arise, you must contact me within 24 hours via phone or e-mail. If you have any questions or need further assistance, please contact me at (803) 898-7542.

Sincerely,

Minda Hornosky, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Information Packet

cc: John Bryant, UST Management Division (w/o enc)
Minda Hornosky, UST Management Division (w/ enc)
Technical Files (w/ enc)

SC Department of Health and Environmental Control

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT
2600 Bull Street, Columbia, South Carolina 29201
Telephone: 803-898-2544

M E M O R A N D U M

TO: Bryan Shane, Midlands Environmental Consultants, Inc.

FROM: John Bryant

RE: **Site-Specific Work Plan Notice to Proceed**

Facility Name: Nickelpumper 235

Permit Number: 04877

County: Hampton

Work To Be Completed: Install 15 shallow monitoring wells screened from 2-12 ft and 5 intermediate monitoring wells screened from 15-25 ft. Perform a comprehensive survey and groundwater sampling event of the entire site. Perform a slug test on MW-5R and the shallow well paired with it. Also, perform a slug test on MW-12 and the shallow well paired with it. Provide complete data tables. Sample all wells and water supply wells for BTEXNM, 1,2 DCA, 8-Oxys and EDB.

SCDHEC UST Management Tracking

BOTH billable and unbillable tanks

Site Information for R-04877 Facility: NICKELPUMPER 235

Bus. Address	25 E RAILROAD AVE ESTILL SC 29918	**Phone** **County**	803-625-4255 Hampton	**District**	Beaufort EQC Office
Category	Retail Sales	**Last Inspection**	06/29/16	**Trans. of Ownership**	
Tank Owner Bus. Address	GOLDEN ISLES PETROLEUM INC PO BOX 15448 SAVANNAH GA 31416-5448	**Phone**	912-598-4102		
Operator Bus. Address		**Phone**			
Land Owner Bus. Address	GOLDEN ISLES PETROLEUM INC PO BOX 15448 SAVANNAH GA 31416-5448	**Phone**	912-598-4102		

Financial Responsibility

Financial Mechanism	Expiration Date
Self Insurance 280.101	01 May 2017

Tanks 4 **Billable** 4 **Aband.** 0 **Other** 0

Compliance Operator(s)	ID	Training Date
SHOWS, TIMOTHY	04705	05/19/2014
FORTIER, TIFFANY	04706	05/19/2014
PERKINS, BRENDA	04707	05/19/2014
PUCCINI, ROB	05880	08/10/2016

Significant? N **Memo Date:** 03/02/01

Site Memo: LLD function check w as performed on 02/19/01. All lines passed.

Significant? N **Memo Date:** 02/10/05

Site Memo: NOTES FROM LAURA DAYES December 2005 inspection...LD records for 12 months, or TTT and LTT on all tanks and lines. If they do not continue LD even though store is closed, they must empty tanks to less than 1" product. Failure to provide adequate LD method. Need LLD fx check. Need rectifier log. Copy of FR and registration. I spoke w / Golden Isles Petro several times regarding this site and w hat needed to be done to be in compliance. Made no effort to contact me or meet me at the site for the inspection.

Significant? N **Memo Date:** 02/24/01

Site Memo: 8-23-96 Contact is Joy Squires at 912-756-5363. RBS 11/27/96 -PER 8/16/96 INSPECTION, SITE DID NOT HAVE ANY IMMEDIATE i REFERRAL VIOLATIONS. SITE RESOLVED '95 REFERRAL VIOLATIONS. i SMY-ENFORCEMENT 11/16/98 Per inspection, I found w here an impressed current system i had been installed, but permanent pow er had not been installed. So, i I requested that they send proof of perm. pow er being installed & i the post-installation report RSM

Significant? N **Memo Date:** 03/01/01

Site Memo: 03-01-01--The 5K tank is premium. Tw o 8K tanks are regular GN, and one 8K tank is midgrade GN. The tw o regular GN tanks are manifolded. vkm

Significant? Y **Memo Date:** 06/18/02

Site Memo:

SCDHEC UST Management Tracking

BOTH billable and unbillable tanks

Site Information for R-04877 Facility: NICKELPUMPER 235

Facility within 2232 22 feet of Estill well #G25106

Rel. No. 1	**Reported**	01/08/93	**Status** Confirmed - Active	**Product**	Petroleum	**Compl Required**	N
Active Tnks	**NFA**		**Fin. Type** DHEC SUPERB	**RBCA / Score**	2BB 300100	**Compliance Met**	N
	Confirmed	07/07/94	**Emer. Resp.**	**Superb Qualified**	Y	**Compliance Met Dt**	
	CU Init.	08/06/01	**Abate. Met** 11/30/93	**Superb Determ. Dt**	06/15/94	**Fin Res Mechanism**	
	CU Compl.		**Transferred**	**Project Manager**	BRYANT JOHN C		
	CU > MCL		**Source** UST	**Responsible Party**	GOLDEN ISLES PETROLEUM INC		

Ranking **SCRBCA:** 2BB - Watersupply wells < 1000 feet downgrade **FP Thick:** < 2 Inches

Rel. No. 1

Analyticals

Contaminant	ug/L	RBSL	Score	SSTL's
Benzene	4530	5	906	
Toluene	117000	1000	117	
Ethylbenzene	3580	700	5	
Xylene	13800	10000	1	
Naphthalene	1100	25	44	
MTBE	38.8	40	1	
Total Score:			1074	

Other Contaminants	ug/L	SSTL's
EDB MW-10	1.4	
EDB MW-37	1.7	
EDB MW-9	2 6	
EDB RW-4	5.1	
FP RW-1 0.61'		
FP RW-2 0.32'	0	
GWS 11/9/2015		
TAA MW-3R	1970	

Receptor Ttype: PRIVATE **Ground_Water_Flow:** RAD

Distancd_to_Receptor: 180 **Seepage Velocity:** 5

GW Depth: 6 07

SuperB Check List

Rel. No. 1

Original Qualified Date: 15-JUN-94

Release Reported: 01/08/93

Deductible Group from Release Report Date: No deductible

Y **All tanks Registered? Tanks must be registered Before eligible.**

Y **Fees Paid to date?**

N **Contamination requiring Remediation confirmed?**

Enviro Company **Deductible** **Limit Amount**

N **Enviro Insurance?**

A written statement of No Insurance dated: 01/08/93

Abatement Met: 11/30/93 **Abatement Method:** Emptied

Approved by: EFIS **Approved date:** 06/15/94 **Qualified?** Y

Rel. No. 2	**Reported**	04/04/08	**Status** Confirmed - Closed	**Product**		**Compl Required**	Y
Active Tnks	**NFA**	04/25/08	**Fin. Type**	**RBCA / Score**		**Compliance Met**	U
	Confirmed	04/25/08	**Emer. Resp.**	**Superb Qualified**		**Compliance Met Dt**	
	CU Init.	04/25/08	**Abate. Met**	**Superb Determ. Dt**		**Fin Res Mechanism**	
	CU Compl.	04/25/08	**Transferred**	**Project Manager**	PLACE DENISE M		
	CU > MCL		**Source** UST	**Responsible Party**	GOLDEN ISLES PETROLEUM INC		

SCDHEC UST Management Tracking

BOTH billable and unbillable tanks

Site Information for R-04877 Facility: NICKELPUMPER 235

Ranking	SCRBCA:					FP Thick:		
Rel. No. 2								
Analyticals	Contaminant	ug/L	RBSL	Score	SSTL's	Other Contaminants	ug/L	SSTL's
			Total Score:	0				

Receptor Ttype:
Distancd to Receptor:
GW Depth:
~~Seepage Velocity~~ Flow:

Tank No.	1	Const.		Class	R	Tank Const. Mat.	SL			Pipe Const. Mat.	SL		
		Operate	11/16/98	T Status	CIU	Tank Protect.	IC	CP	01/20/14	Pipe Protect.	IC	CP	01/20/14
		Notify	12/11/85	Capacity	5,000	Tank Cont. Meth.	SW			Pipe Cont. Meth.	SW		
		Variance		Product	DL	Overfill Type	DTSO	Ver	11/16/98	Piping Type	PR		
		Compl.	08/15/16	C Status	IN	Age @ Notif.	5			Dist. to Well	101		
		Spill Det.	11/16/98	Left Gal.		Owner @ ABD					Last Use		
		Aband.		Method		CAS No.		Chem.					
		Under Dispenser Cont.	N	Drop Tube	N	Tank Leak Det.	SIR 01/12/07			Pipe Leak Det.	LLD 01/12/16 LTT 01/12/16		
Tank No.	2	Const.		Class	R	Tank Const. Mat.	SL			Pipe Const. Mat.	SL		
		Operate	11/16/98	T Status	CIU	Tank Protect.	IC	CP	01/20/14	Pipe Protect.	IC	CP	01/20/14
		Notify	12/11/85	Capacity	8,000	Tank Cont. Meth.	SW			Pipe Cont. Meth.	SW		
		Variance		Product	PREM	Overfill Type	DTSO	Ver	11/16/98	Piping Type	PR		
		Compl.	08/15/16	C Status	IN	Age @ Notif.	5			Dist. to Well	101		
		Spill Det.	11/16/98	Left Gal.		Owner @ ABD					Last Use		
		Aband.		Method		CAS No.		Chem.					
		Under Dispenser Cont.	N	Drop Tube	N	Tank Leak Det.	SIR 01/12/07			Pipe Leak Det.	LLD 01/12/16 LTT 01/12/16		
Tank No.	3	Const.		Class	R	Tank Const. Mat.	SL			Pipe Const. Mat.	SL		
		Operate	11/16/98	T Status	CIU	Tank Protect.	IC	CP	01/20/14	Pipe Protect.	IC	CP	01/20/14
		Notify	12/11/85	Capacity	8,000	Tank Cont. Meth.	SW			Pipe Cont. Meth.	SW		
		Variance		Product	PLUS	Overfill Type	DTSO	Ver	11/16/98	Piping Type	PR		
		Compl.	08/15/16	C Status	IN	Age @ Notif.	5			Dist. to Well	101		
		Spill Det.	11/16/98	Left Gal.		Owner @ ABD					Last Use		
		Aband.		Method		CAS No.		Chem.					
		Under Dispenser Cont.	N	Drop Tube	N	Tank Leak Det.	SIR 01/12/07			Pipe Leak Det.	LLD 01/12/16 LTT 01/12/16		
Tank No.	4	Const.		Class	R	Tank Const. Mat.	SL			Pipe Const. Mat.	SL		
		Operate	11/16/98	T Status	CIU	Tank Protect.	IC	CP	01/20/14	Pipe Protect.	IC	CP	01/20/14
		Notify	12/11/85	Capacity	8,000	Tank Cont. Meth.	SW			Pipe Cont. Meth.	SW		
		Variance		Product	RUL	Overfill Type	DTSO	Ver	11/16/98	Piping Type	PR		
		Compl.	08/15/16	C Status	IN	Age @ Notif.	5			Dist. to Well	101		
		Spill Det.	11/16/98	Left Gal.		Owner @ ABD					Last Use		
		Aband.		Method		CAS No.		Chem.					
		Under Dispenser Cont.	N	Drop Tube	N	Tank Leak Det.	SIR 01/12/07			Pipe Leak Det.	LLD 01/12/16 LTT 01/12/16		

100' from RW-6

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Potentiometric Data

Well #	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	---	6.31	---	100.49	94.18
RW-3	---	5.36	---	98.84	93.48
RW-4	---	5.32	---	98.75	93.43
RW-5	---	4.98	---	98.49	93.51
RW-6	---	5.07	---	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

Replace mw-6
Replace mw-5
Shallow
Intermediate (15-25')
Replace

West Railroad Avenue
US HWY 321
Third Street
Fourth Street
Soloman Street (Alley)
Clarke Avenue
Nickelpumper #235
SCDHEC Site ID# 04877

RW-1 RW-2 RW-3 RW-4 RW-5 RW-6
MW-1 MW-2 MW-2R MW-3R MW-4D MW-5 MW-6 MW-7 MW-8R MW-9 MW-10 MW-11 MW-12 MW-14 MW-15 MW-16 MW-17 MW-18 MW-19 MW-20 MW-21 MW-22 MW-23 MW-24 MW-25 MW-26 MW-27 MW-28 MW-29 MW-30 MW-31 MW-32 MW-33 MW-34 MW-35 MW-36 MW-37 MW-38 MW-39 MW-40 MW-41 MW-42
DW-1 DW-2
WSW-1 WSW-2 WSW-3 WSW-4 WSW-6

Commercial
Bldg.
Grocery Store
Commercial
Wiggins & Son Hardware
Estill Gas Company
Amoco
Former Town Hall
House
House
House
House
Health Clinic
Resturant
Offices
Residence
Residence
Old Offices
Residence
Peeples-Rhoden Funeral Home
Dry Cleaners
Tire Exchange Bank
Residence
Residence
House
Church
House
Funeral Home
Bldg.
Bldg.

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT
ALL LOCATIONS ARE APPROXIMATE

⊕ = Shallow (2-12')
⊖ Intermediate (15-25')

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID 04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 5

Midlands Environmental Consultants, Inc.

February 15, 2017



Ms. Minda Hornosky, Hydrogeologist
Assessment Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201



Subject: Site-Specific Work Plan (Small Scope Contract)
Nickelpumper 235
Estill, South Carolina
SCDHEC Site ID Number 04877
MECI Project Number 17-5892
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Hornosky,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On February 15, 2017, MECI personnel performed a site visit to the subject site to evaluate conditions, locate monitoring wells/potential receptors, and identify potential problems for future assessment activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
Midlands Environmental Consultants, Inc.

Todd D. Elder
Staff Hydrogeologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Site-Specific Work Plan for Approved ACQAP
Underground Storage Tank Management Division

To: Mr. John Bryant (SCDHEC Project Manager)
From: Jeff L. Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Nickelpumper 235 UST Permit #: 04877
Facility Address: 25 E Railroad Avenue, Estill, SC 29918
Responsible Party: Golden Isles Petroleum, Inc. Phone: 912-598-4102
RP Address: P.O. Box 15448, Savannah, GA 31416
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Active Gas Station

Scope of Work (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☑ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☑ Other Comprehensive Survey
- ☐ GAC

Analyses (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☐ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Drinking Water Supply Wells:

- ☐ BTEXNMDCA (524.2)
- ☐ Oxygenates & Ethanol (8260B)
- ☐ Mecury (200.8 245.1 or 245.2)
- ☐ RCRA Metals (200.8)
- ☐ EDB (504.1)

Soil:

- ☐ BTEXNM
- ☐ Lead
- ☐ PAH
- ☐ RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

Sample Collection (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil	7 Water Supply Wells	____ Air	2 Field Blank
66 Monitoring Wells	____ Surface Water	5 Duplicate	3 Trip Blank

Field Screening Methodology

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

of shallow points proposed: ____ Estimated Footage: ____ feet per point
of deep points proposed: ____ Estimated Footage: ____ feet per point
Field Screening Methodology: ____

Permanent Monitoring Wells

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

of shallow wells: 15 Estimated Footage: 12 feet per point
of deep wells: 5 Estimated Footage: 25 feet per point
of recovery wells: ____ Estimated Footage: ____ feet per point

Comments, if warranted: All wells will be installed as single-cased monitoring wells. The 15 shallow wells will bracket the water table, and the 5 intermediate wells will be submerged 25-foot deep wells.

UST Permit #: 04877 Facility Name: Nickelpumper 235

Implementation Schedule (Number of calendar days from approval)
Field Work Start-Up: 2/16/2017 Field Work Completion: 3/16/2017
Report Submittal: 4/16/2017 # of Copies Provided to Property Owners: 0

Aquifer Characterization
Pump Test: ☐ Slug Test: ☑ (Check one and provide explanation below for choice)
As requested, four slug tests will be performed as part of this assessment.

Investigation Derived Waste Disposal
Soil: 8.0 Tons Purge Water: 750.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

Additional Details For This Scope of Work
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
-15 single-cased monitoring wells will be installed to approximately 12 feet below ground surface, with 10' screen intervals.
-5 single-cased monitoring wells will be installed to approximately 25 feet below ground surface, with 10' screen intervals.
-A comprehensive survey will be performed at the site.
-Following the well installation, all monitoring wells will be sampled and analyzed for BTEXNM, 1,2-DCA, 8-OXYs, and EDB.
-All water supply wells at the site will be sampled and analyzed for BTEXNM via method 524.2, 8-OXYs via method 8260B, and EDB via method 504.1.
-Slug tests will be performed on MW-5R, MW-12, and the shallow well paired with each.
-Complete data tables will be included with the final report.

Compliance With Annual Contractor Quality Assurance Plan (ACQAP)
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

N/A Well Driller as indicated in ACQAP? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

None Other variations from ACQAP. Please describe below.

Attachments
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

dhec
Healthy People. Healthy Communities.

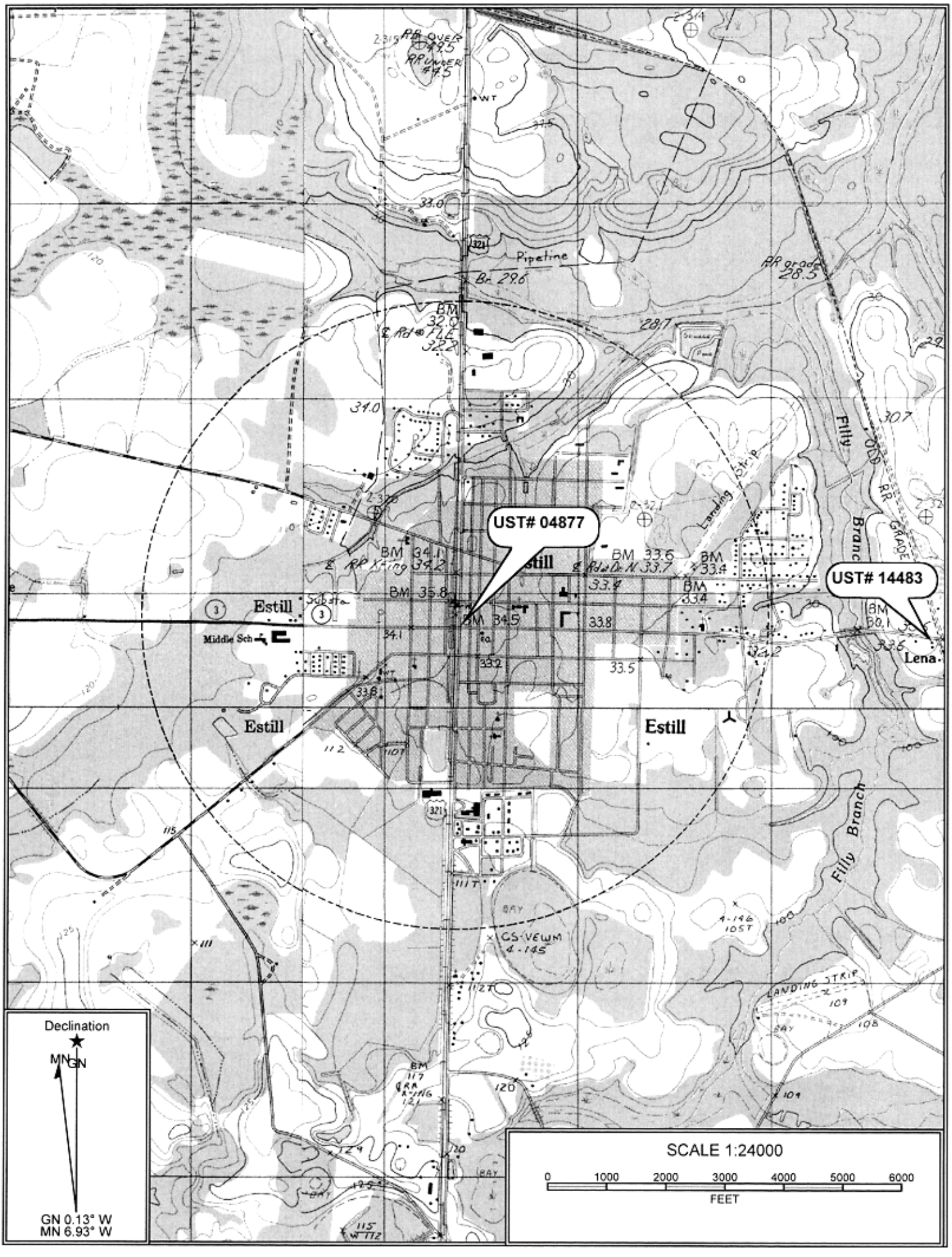
ASSESSMENT COMPONENT COST AGREEMENT
SOUTH CAROLINA
Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account
CONTRACT PO#4600450850

Facility Name: Nickelpumper 235

UST Permit #: 04877 **Cost Agreement #:**

ITEM	QUANTITY	UNIT	UNIT PRICE	TOTAL
1. **Plan Preparation**				
A1. Site-specific Work Plan	1	each	$150.00	$150.00
B1. Tax Map		each	$70.00	$0.00
2. A1. **Receptor Survey**		each	$0.00	$0.00
3. **Survey**				
A1. Comprehensive Survey	3	each	$1,000.00	$3,000.00
4. **Mob/Demob**				
A1. Equipment	1	each	$1,000.00	$1,000.00
B1. Personnel	7	each	$325.00	$2,275.00
5. A1. **Soil Borings (hand auger)**		foot	$0.00	$0.00
6. **Soil Borings (Not for Screening)**				
AA. Standard		per foot	$6.00	$0.00
9. **Well Installation (per foot)**				
A1. Water Table (hand augered)		per foot	$0.00	$0.00
B1. Water Table (drill rig)	305	per foot	$20.87	$6,365.35
CC. Telescoping		per foot	$34.87	$0.00
DD. Rock Drilling		per foot	$10.00	$0.00
HH. Recovery Well (4" diameter)		per foot	$32.87	$0.00
K. Re-develop Existing Well		per foot	$4.00	$0.00
10. **Groundwater Sample Collection / Gauge Depth to Water or Prod**				
includes gauge depth to water and product, ph, turbidity specific conductivity, and dissolved oxygen if sample is collected				
A1. Groundwater Purge	66	each	$25.00	$1,650.00
E1. Gauge Well only		each	$0.00	$0.00
F1. Sample Below Product		each	$0.00	$0.00
G1. Passive Diffusion Bag		each	$20.00	$0.00
11. Laboratory Analyses-Groundwater				
A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B)	73	per sample	$48.00	$3,504.00
AA1. Lead, Filtered		per sample	$15.00	$0.00
D1. PAH's		per sample	$0.00	$0.00
E1. Lead		per sample	$15.00	$0.00
F1. EDB by EPA 8011	71	per sample	$24.00	$1,704.00
G1. 8 RCRA Metals		per sample	$0.00	$0.00
H1. TPH (9070)		per sample	$0.00	$0.00
11. **Analyses-Soil**				
R1. PAH's		per sample	$0.00	$0.00
S1. 8 RCRA Metals		per sample	$0.00	$0.00
U1. TPH-DRO (3550C/8015C)		per sample	$0.00	$0.00
W1. Grain size/hydrometer		per sample	$150.00	$0.00
X1. Total Organic Carbon		per sample	$0.00	$0.00
12. **Aquifer Characterization**				
B1. Slug Test	4	per test	$100.00	$400.00

16. A1. **Subsequent Survey**		each	$300.00		$0.00
17. **Disposal (gallons or tons)***					
AA. Wastewater	750	gallon	$1.25		$937.50
BB. Free Product		gallon	$0.00		$0.00
C1. Soil Treatment/Disposal	8	ton	$50.00		$400.00
D1. Drilling fluids		gallon	$0.00		$0.00
Rate includes costs or rental of suitable container(s)					
18. **Miscellaneous**					
Soil Analysis Lead		each	$12.00		$0.00
Soil Analysis BTEXNM+Oxyg's+1,2 DCA+Eth(8260B)		each	$32.00		$0.00
Replace lock		each	$10.00		$0.00
High Strength Well Pad Replacement		each	$60.00		$0.00
Groundwater No-Purge or Duplicate or Field Blank	5	per well	$15.00		$75.00
Replace 2x2 MW Pad		each	$0.00		$0.00
Replace 4x4 MW Pad		each	$0.00		$0.00
Replace well vault & MW pad up to 4x4		each	$400.00		$0.00
Water Supply/Well Surface Water		per well	$5.00		$0.00
Abandonment (per foot) Not Part of Screening					
Existing monitoring well 4" diam or smaller		per foot	$3.00		$0.00
Existing monitoring well larger than 4" dia		per foot	$0.00		$0.00
Drinking Water					
BTEXNM+1,2 DCA (524.2)	9	per sample	$58.00		$522.00
7-Oxygenates & Ethanol (8260B)	9	per sample	$25.00		$225.00
EDB (504.1)	7	per sample	$38.00		$266.00
RCRA Metals (200.8)		per sample	$65.00		$0.00
Low Flow Sample Collection		per well	$65.00		$0.00
20. **Tier I Assessment (Use DHEC 3665 form)**		standard	$5,468.00		$0.00
21. **IGWA (Use DHEC 3666 form)**		standard	$1,237.00		$0.00
25. **Well Repair**					
A1. Additional Copies of the Report Delivered		each	$0.00		$0.00
F1. Replace well cover bolts		each	$0.00		$0.00
G. Replace locking well cap & lock		each	$0.00		$0.00
H1. Replace/Repair stick-up & MW pad up to 4x4		each	$0.00		$0.00
I1. Convert Flush-mount to Stick-up		each	$0.00		$0.00
J1. Convert Stick-up to Flush-mount*		each	$10.00		$0.00
K1. Replace missing/illegible well ID plate		each	$0.00		$0.00
TOTAL					$22,473.85


UST# 04877
UST# 14483
Estill
Middle Sch
Lena
Filly Branch
Pipeline
Landing Strip
Declination
MN
GN
GN 0.13° W
MN 6.93° W
SCALE 1:24000
0 1000 2000 3000 4000 5000 6000
FEET

Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased Monitoring Well
- Location of Intermediate Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Location of 4-Inch Recovery Well

Potentiometric Data

Well #	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Well Head Elevation	Groundwater Elevation
RW-1	6.28	6.35	0.07	100.57	94.28
RW-2	---	6.31	---	100.49	94.18
RW-3	---	5.36	---	98.84	93.48
RW-4	---	5.32	---	98.75	93.43
RW-5	---	4.98	---	98.49	93.51
RW-6	---	5.07	---	98.85	93.78

Notes: Depth to groundwater measured on May 6, 2014.
Site Datum Based on Assumed Spot Elevation

⊕ = Shallow (2-12')
⊖ Intermediate (15-25')

100' from RW-6

West Railroad Avenue
US HWY 321
Third Street
Fourth Street
Soloman Street (Alley)
Clarke Avenue
Nickelpumper #235
SCDHEC Site ID# 04877
Replace mw-5
Replace mw-6
Shallow
Intermediate (15-25')
Warehouse
Commercial
Bldg.
Grocery Store
Wiggins & Son Hardware
Estill Gas Company
Amoco
Former Town Hall
Health Clinic
Restaurant
Residence
Old Offices
Peeples-Rhoden Funeral Home
House
Funeral Home
The Exchange Bank
Dry Cleaners
Church
MW-1 MW-2 MW-3R MW-4D MW-5 MW-6 MW-7 MW-8R MW-9 MW-10 MW-11 MW-12 MW-13 MW-14 MW-15 MW-16 MW-17 MW-18 MW-19 MW-20 MW-21 MW-22 MW-23 MW-24 MW-25 MW-26 MW-27 MW-28 MW-30 MW-31 MW-32 MW-33 MW-34 MW-35 MW-36 MW-37 MW-38 MW-39 MW-40 MW-41 MW-42
RW-1 RW-2 RW-3 RW-4 RW-5 RW-6
DW-1 DW-2
WSW-1 WSW-2 WSW-3 WSW-4 WSW-6

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated April 10, 2002.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT
ALL LOCATIONS ARE APPROXIMATE

Potentiometric Data Site Map

Nickelpumper #235
25 East Railroad Avenue
Estill, South Carolina
SCDHEC Site ID 04877

Midlands Environmental Consultants, Inc.

JOB NO. 14-4774
DATE June 3, 2014
SHEET 5

dhec
Healthy People Healthy Communities

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS
PO BOX 854
LEXINGTON SC 29071-0854

UST 34 DOCKETING

MAR 0 3 2017

Re: Notice to Proceed for Small Scope Site-Specific Work Plan
Solicitation # 5400006561, PO# 4600450850
Nickelpumper 235, 25 East Railroad Avenue, Estill, SC
UST Permit #04877; CA #54294; MWA # UMW-26522
Site-Specific Work Plan received February 21, 2017
Hampton County

Dear Mr. Shane:

In accordance with the bid solicitation # IFB-5400006561 and the UST Management Division Quality Assurance Program Plan (QAPP) Revision 3.0, the Site-Specific Work Plan has been approved. If quality assurance problems occur, you must contact me within 24 hours by phone or e-mail and the final report must document the event(s), including quality assurance problems, and the action(s) taken.

A report meeting the contract specifications of Section 3.10, 3.11, or 3.12; contractor verification checklist; and invoice are due sixty (60) days from the date of this letter. A monitoring well approval is enclosed. The solicitation requires adherence to all applicable South Carolina certification requirements for laboratory analyses, well installation, and report preparation.

MECI will perform services at the site on behalf of the responsible party (RP); however, payment will be made from the SUPERB Account. The RP has no obligation for payment of this scope of work. Please coordinate access to the facility with the property owner. The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. There can be no spillage or leakage in transport. All investigation-derived waste (IDW) must be properly contained and labeled prior to disposal. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below Risk Based Screening Levels.

On all correspondence, please reference permit # 04877. If you have any site-specific questions, please contact me at (803) 898-0606 or e-mail bryantjc@dhec.sc.gov. If you have any contract specific questions, please contact Minda Hornosky at (803) 898-7542 or via e-mail at hornosms@dhec.sc.gov.

Sincerely,

John Bryant, Hydrogeologist
Corrective Action Section
UST Management Division, Bureau of Land & Waste Management

enc: Approved Cost Agreement (CA)
Monitoring Well Approval (MWA)

cc: Minda Hornosky, Assessment Section, UST Management Division (w/CA copy)

Technical File (w/enc)

S.C. Department of Health and Environmental Control

Monitoring Well Approval Form

Approval is hereby granted to: Midlands Environmental Consultants, Inc.
(on behalf of): Golden Isles Petroleum Inc
Facility: Nickelpumper 235, 25 East Railroad Avenue, Estill, SC
UST Permit Number: 04877
County: **Hampton**

This approval is for the installation of 20 type II monitoring wells. The monitoring wells are to be installed in the approved locations. The monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

Please note that R.61-71 requires the following:

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Agency shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency as required by R.61-71.H.1.d.
5. If any of the information provided to the Agency changes, notification to John Bryant (tel: (803) 898-0606 or e-mail: bryantjc@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
7. Agency approval is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Date of Issuance: February 27, 2017 **Approval #: UMW-26522**

John C. Bryant, Hydrogeologist
Corrective Action Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management

Approved Cost Agreement 54294

Facility: 04877 NICKELPUMPER 235
BRYANTJC
PO Number:

Task / Description	Categories	Item	Description	Qty / Pct	Unit Price	Amount
01 PLAN						
		A1	SITE SPECIFIC WORK PLAN	1.0000	$150.000	150.00
03 COMPREHENSIVE SURVEY						
		A1	COMPREHENSIVE SURVEY	3.0000	$1,000.000	3,000.00
04 MOB/DEMOB						
		A1	EQUIPMENT	1.0000	$1,000.000	1,000.00
		B1	PERSONNEL	7.0000	$325.000	2,275.00
09 WELL INSTALLATION						
		B1	WATER TABLE (DRILL RIG)	305.0000	$20.870	6,365.35
10 SAMPLE COLLECTION						
		A1	GROUNDWATER (PURGE)	66.0000	$25.000	1,650.00
11 ANALYSES						
	GW GROUNDWATER	A2	BTEXNM+OXYGS+1,2-DCA+ETH-8260B	73.0000	$48.000	3,504.00
		F1	EDB BY 8011	71.0000	$24.000	1,704.00
12 AQUIFER CHARACTERIZATION						
		B1	SLUG TEST	4.0000	$100.000	400.00
17 DISPOSAL						
		AA	WASTEWATER	750.0000	$1.250	937.50
		C	SOIL (TREATMENT/DISPOSAL)	8.0000	$50.000	400.00
18 MISCELLANEOUS						
			7-OXYGENATES & ETHANOL (8260B)	9.0000	$25.000	225.00
			BTEXNM_1,2 DCA (524.2)	9.0000	$58.000	522.00
			EDB (504.1)	7.0000	$38.000	266.00
			GROUNDWATER NO-PURGE OR DUPLICATE OR FIELI	5.0000	$15.000	75.00
					Total Amount	22,473.85



UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR LEAD INFORMATION SHEET

1. CONTRACTOR OF CHOICE

As the UST Owner/Operator of UST Permit # 04877 (Nickelpumper 235), I would like to use the contractor or person(s)* listed below and request that they represent me for: (check one)

( ) Initial Groundwater Assessment
( ) Other (please specify)_____
(X) all future assessments and remedial scopes.**





Name of Contractor/Person(s): Midlands Environmental Consultants, Inc.

Address: 231 Dooley Road, Lexington, SC 29073

Telephone Number: (803) 808-2043

Note: Site rehabilitation activities must be performed by a SCDHEC Certified Site Rehabilitation Contractor in accordance with R.61-98.

*indicate if the person listed is your own employee

** if you would like the contractor to perform all future assessment activities at this and/or other facilities that have confirmed releases, please provide a list of all sites on your letterhead and provide the information requested in items 2 and 3 below within the context of the letter.

2. FINANCIAL OR FAMILIAL RELATIONSHIP

Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? _____ Yes _X_ No (please initial)

Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income from a business entity.

Familial Relationship: A connection or association by family or relatives, in which a family member or relatives has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, or fiancee.

3. PAYMENT

You can pay the contractor and, upon the submittal of the canceled check (or a notarized statement from the contractor), be compensated from the SUPERB Account, or have payment issued directly from us to the contractor.

I request that payment be made to me after I have paid the contractor. _____ Yes _____ No (please initial)
I request that payment be made directly to the contractor. _X_ Yes _____ No (please initial)

Note: All costs must receive prior financial approval from the Department regardless of payment option.

Underground Storage Tank Owner/Operator Signature _____

Date 7/03/2017