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AQUIFER PERFORMANCE TEST AND GROUNDWATER MONITORING RESULTS FOR NORTHERN STATES POWER FACILITY, ASHLAND, WISCONSIN

OCTOBER 30, 1997

Dames & Moore Project No. 05644-077

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1.0 INTRODUCTION

Dames & Moore has prepared this report to present the results of groundwater sampling and an aquifer test recently completed at the Northern States Power (NSP) facility in Ashland, Wisconsin. The purpose of this work was to gather aquifer parameters necessary to complete remedial design tasks on a proposed treatment system for groundwater contaminated with free phase hydrocarbons measured in the Copper Falls aquifer. The scope of work included installation of a pumping well, performance of a 48 hour aquifer test, installation of an additional piezometer at Kreher Park, sampling and analysis of piezometers installed in the Copper Falls aquifer at the NSP and Kreher Park properties, and preparation of this report. All work was completed in accordance with our July 18, 1997 Work Plan.

2.0 SITE ACTIVITIES

Site activities included the installation of a piezometer and an extraction well in the Copper Falls Formation. Both wells were installed and developed between August 26 and 29, 1997. Drilling services were provided by Boart Longyear of Schofield, Wisconsin. Groundwater samples were collected from 13 wells screened in the Copper Falls Formation by Dames & Moore between September 2 and 5, 1997. These samples were analyzed by Northern Lakes Services, Inc. of Crandon, Wisconsin. The aquifer performance test (APT) was performed between September 16 and 18, 1997.

3.0 WELL INSTALLATION AND DEVELOPMENT

Piezometer MW-2B(NET) was installed adjacent to existing wells MW-2(NET) and MW-2A(NET). No soil samples were collected from this boring because a complete soil boring log was previously prepared for the deeper MW-2A(NET) boring. The MW-2B(NET) boring was advanced with 4 ¼-inch ID hollow stem augers, and constructed with 2-inch diameter schedule 40 PVC well casing and screen. The 5-foot screen was placed between 25 and 30 feet. A sand pack was placed around the well screen and the annular space was backfilled with granular bentonite as the augers were removed. The well was encased in a protective well casing with a locking cap. The soil boring log and well construction form has been included in Appendix A. A summary of well construction elevations is included in Table 1.

The EW-1 soil boring was advanced by mud rotary. The 10-inch diameter borehole was terminated at 56 feet, and the extraction well was installed at a depth of 55 feet. This 6-inch well was constructed with a 20-foot stainless steel screen with 0.015-inch slot size openings. Black iron pipe well casing was used. A sand pack was placed around the well screen, and the annular space was backfilled with bentonite slurry tremied in place. The soil boring log and well construction form has been included in Appendix A.

Well MW-2B(NET) was developed by surging and pumping 96 gallons. Well EW-1 was developed by pumping 700 gallons. This purge water was temporarily stored in 55 gallon drums and a 450 gallon portable tank concurrent with the APT; this water was pre-treated on site and discharged to a sanitary sewer as described below. Well development forms are included in Appendix A.

Drill cuttings were placed in 55-gallon drums and left on site. Arrangements for disposal are currently being made. All down hole drilling and well development equipment was decontaminated by steam cleaning prior to leaving the site. All drilling, well construction, and well development was completed in accordance with Wisconsin Administrative Code NR 141 requirements.

4.0 GROUNDWATER SAMPLING

Groundwater samples were collected from piezometers screened within the Copper Falls Formation. This includes samples collected from wells MW-4A, MW-4B, MW-5B, MW-5C, MW-6A, MW-7A, MW-8A, MW-9A, MW-10A, MW-13A and MW-13B located south of Kreher Park. Groundwater samples were also collected from piezometers MW-2A(NET) and MW-2B(NET) located in Kreher Park. Concurrent with that sampling, Short Elliot and Hendrickson (SEH) under contract to the Wisconsin Department of Natural Resources (WDNR) collected groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5. MW-8, MW-10, and TW-13 screened in the perched ravine aquifer, and from monitoring wells MW-1, MW-2, MW-3, TW-6, TW-9, TW-11, TW-12, and MW-7 screened in the Kreher Park perched aquifer. All samples were analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). (Analysis for only SVOCs was performed for the MW-4 sample). The NSP facility and monitoring well locations are shown on Figure 1.

Static water levels were measured in each well on September 2, 1997 prior to sample collection. Water level measurements were used to calculate purge well volumes. Four well casing volumes were removed from each well prior to sample collection. The color, odor, and turbidity were recorded on field sampling forms along with depth to water and depth to bottom measurements. All purge water was collected in 55 gallon drums, and temporarily stored on site. This water was later pre-treated on site and discharged to a sanitary sewer, as described below.

Static water levels were also used to calculate groundwater elevations which are summarized in Table 2. Wells MW-7A, MW-2A (NET), and MW-2B (NET) are flowing artesian wells. For these wells the pressure was measured at the well head, and converted to the height above the top of the PVC well casing. Free phase hydrocarbons were encountered in well TW-13, MW-13A, and MW-13B near the NSP facility, and in well MW-7 in Kreher Park. The free-phase hydrocarbons were measured in the bottom of wells TW-13, MW-13A, and MW-13B at thicknesses of 0.9 feet, 2.2 feet, and 16.7 feet respectively. The thickness of free-phase hydrocarbons could not be determined in well MW-7 because an accurate depth to water measurement could not be taken. Several feet of free-phase hydrocarbon are present in this well.

Groundwater elevations were also used to calculate vertical gradients at well nests. Vertical gradients measured between wells screened in the ravine aquifer and piezometers screened in the

underlying Copper Falls Formation indicate that the ravine aquifer is perched. Strong upward vertical gradients were measured in the deep piezometers at MW-2 (NET), MW-5, MW-7, and MW-13. These vertical gradients indicate that the Copper Falls Formation aquifer is confined. A summary of water level and vertical gradients is included in Table 3.

As shown on Figure 2, the direction of groundwater flow in the perched ravine aquifer is to the north. A groundwater mound is present in the vicinity of wells MW-3 and MW-4. As shown on Figure 3, the direction of groundwater flow in the underlying Copper Falls Aquifer is also to the north. The Copper Falls Aquifer potentiometric surface is lower than the perched ravine aquifer on the NSP property. At Kreher Park, the potentiometric surface is higher than water levels measured in the Kreher Park perched aquifer, and two flowing artesian wells (separate from any of the wells described for this investigation) are present in the vicinity of the Park. These two wells are beyond the zone of contamination, one is east of the plume and one is northwest. Past water quality analyses on samples from these wells have not yielded contaminants.

5.0 GROUNDWATER MONITORING RESULTS

Groundwater monitoring results for samples collected in September 1997 from wells screened in the perched ravine aquifer indicates that contamination is limited to the ravine. As described in previous reports prepared by Dames & Moore, the highest levels of contamination are near well TW-13. Samples collected from the Kreher Park perched aquifer also indicate that groundwater quality in the park has been impacted. Contamination in Kreher Park is the subject of an ongoing separate investigation being performed by SEH. Groundwater samples collected from piezometers screened in the Copper Falls Formation indicates that groundwater quality has been impacted in the vicinity of the former ravine. A summary of VOCs detected in groundwater samples is included in table 4, and a summary of SVOCs detected in groundwater samples is included in Table 5. Laboratory reports are included in Appendix B.

The Copper Falls aquifer contaminant plume is characterized by elevated levels of benzene, ethylbenzene, toluene, xylenes (BETX constituents), and SVOC constituents which include benzo(a) pyrene, 2,4-dimethylphenol, fluorene, 2-methylnaphthalene, 2-methylphenol, 3&4-methylphenol, and naphthalene. The highest levels of contamination were detected in samples collected from wells MW-13A and MW-13B. As described above, free phase hydrocarbons were measured at the bottom of these wells at the time of sample collection. Elevated BTEX and SVOCs were also detected in samples collected from piezometers MW-2B(NET), MW-4A, MW-5B, MW-7A, and MW-8A. Samples collected from deeper piezometers MW-2A (NET), MW-4B, MW-5C, and MW-9A indicate that the concentration of contaminants decrease with depth. Figure 4 shows the contaminant plume in cross-section, based upon the September 1997 analytical results.

6.0 AQUIFER PERFORMANCE TEST

An aquifer Performance Test (APT) was performed between September 16 and 19, 1997. Water levels were measured in the pumping well and in observation wells during the test. The APT consisted of pre-test monitoring, a constant rate test, and a recovery test. Well EW-1 was used as the pumping well. A 4-inch diameter downhole submersible pump was placed three feet off the bottom of the well. An in line value was used to adjust the flow rate, and approximately 0.75 gallons per minute was pumped during the constant rate test.

Wells MW-4B, MW-8A, MW-9A, MW-10A, MW-13A, and MW-13B screened in the Copper Falls Formation were used as observation wells. Water levels were also measured in well TW-13 screened in the perched ravine fill unit. Water levels were measured in well EW-1 with a transducer and recorded with an In-Situ Hermit 1000 C data logger. Water levels were measured in wells MW-4B, MW-8A, MW-9A, and MW-10A with a Solonist Model 101 electronic water level indicator. Because free-phase hydrocarbon was encountered in wells TW-13, MW-13A, and MW-13B, a second Solonist water level indicator was used to measure water levels in these wells. Water level readings are summarized in Appendix C. The pumping well and observation well locations are shown on Figure 1.

Water produced during the pump test and purge water from well development and sampling activities was pre-treated on site and discharged to the sanitary sewer. Pre-treatment consisted of collecting the water in a holding tank, followed by carbon filtration. The holding tank allowed for sediment and DNAPL to settle out of the water. A layer of free-phase hydrocarbons was also observed floating on the water in the holding tank. A transfer pump was used to pump the water through carbon canisters as needed. A 55 gallon drum containing clay and coal was placed before two 55 gallon carbon canisters. Water passed through all three canisters prior to being discharged to a sanitary sewer clean out located near MW-9A. The carbon canisters were de-gassed by filling them with contaminated water on September 15, 1997 and allowing them to sit overnight. Mr. Dave Wosepka of the City of Ashland Wastewater treatment plant was on-site on September 15, 1997 to oversee these activities. A dye was placed in the clean out to ensure that water would discharge to the sanitary sewer main. Three effluent samples were also collected and analyzed for VOCs to document the pre treatment of contaminated water. No VOCs were detected in effluent samples A, B, and C collected 1, 24, and 48 hours, respectively, after the constant rate test began. A sample was also collected from well EW-1 approximately 24 hours

after the constant rate test began prior to pretreating the water. EW-1 laboratory results are summarized in Table 4. Laboratory results are included in Appendix B.

7.0 AQUIFER PERFORMANCE TEST RESULTS

Water levels in the pumping well (EW-1) fluctuated between 21 and 33 feet during the constant rate test. The flow rate was continually monitored and adjusted as needed to maintain an approximate flow rate of 0.75 gallons per minute (gpm). If the flow rate declined, the valve was opened; and the valve was closed if the flow rate increased. After approximately 8 hours of pumping clear water, water produced from EW-1 turned brown in color with black droplets of free-phase hydrocarbons. It appeared as if free-phase hydrocarbons pumped from the well plugged the discharge line. Regardless, the drawdown in the pumping well is sensitive to the pumping rate. Pumping rates varied between 0.67 gpm and 1.0 gpm during the constant rate test, averaging 0.75 gpm.

A decline in static water levels was also measured in the observation wells screened in the Copper Falls Aquifer. Water level measurements for the pumping well and time versus drawdown graphs for the observation wells are included in Appendix C. Over 1.2 feet of drawdown was observed in observation wells MW-13A and MW-13B located within 15 feet of the pumping well. Water levels measured in well TW-13 screened in the perched ravine aquifer increased approximately 0.35 feet during the constant rate test. This increase is likely the result of infiltration from rainfall which occurred approximately 4 hours after the constant rate test was started, and approximately 12 hours after the constant rate test ended and the recovery test began. A decline in water levels was also observed in wells MW-4B, MW-8A, MW-9A, and MW-10A.

Drawdown at MW-4B was observed early during the constant rate test. However, water levels increased after 7 hours, followed by a decline after 11 hours. Another increase was observed between 21 and 24 hours, followed by a decline at 25 hours. This pattern was also observed in water levels measured in well MW-9A. These results indicate that regional recharge to the aquifer may have occurred during the constant rate test. In both wells, water levels recovered to near static water levels approximately 13 hours after the constant rate test ended. This was followed by a decline of approximately 0.05 feet 23 hours after the constant rate test ended.

Drawdown was also measured in wells MW-8A and MW-10A. Initially, water levels in both wells increased, and drawdown began between 11 and 12 hours after the constant rate test began. Approximately 0.23 feet of drawdown was measured at the end of the constant rate test in well MW-8A; water levels in this well continued to decline for 4 hours after the recovery test began.

Only 0.02 feet of drawdown was measured at the end of the constant rate test in MW-10A; water levels remained unchanged in this well for 4 hours after the recovery test began. Water levels in both wells then recovered. At well MW-8A the final water level was 0.1 feet below the static water level; at well MW-8A, the final measured water level was 0.1 feet above the static water level.

Drawdown data from the observation wells were used to approximate the capture zone of the extraction well. The drawdown contours were superimposed on the potentiometric surface of the Copper Falls aquifer (measured prior to the test, as shown on Figure 3). The resulting surface was contoured and the capture zone was then inferred, based upon the plotted inflections of groundwater flow gradients. Figure 5 shows the resultant capture zone plot.

Drawdown data from wells MW-13A, MW-13B, and EW-1 were also used to calculate the transmissivity of the Copper Falls Aquifer. These calculations were performed by the Theis and Cooper-Jacob methods using Aqtesolv software and yielded transmissivity values of 3.58×10^{-3} ft^2/min for EW-1. Assuming an aquifer thickness of 50 feet, the hydraulic conductivity in EW-1 is 7.16×10^{-5} ft/min (3.64×10^{-5} cm/sec). Drawdown data from well MW-13A yielded transmissivity values of 5.15×10^{-2} ft^2/min by the Cooper-Jacob method, and 4.81×10^{-2} ft^2/min by the Theis Method. Assuming the same 50 foot aquifer thickness, the hydraulic conductivity values range from 1.16×10^{-3} ft/min (5.91×10^{-4} cm/sec) to 9.62×10^{-2} ft /min (4.89×10^{-2} cm/sec). Similar values were estimated using MW-13B drawdown data. Transmissivity values ranged from 5.82×10^{-3} ft^2/min by the Cooper-Jacob method, to 5.15×10^{-3} ft^2/min by the Theis Method. Corresponding hydraulic conductivity values range from 1.16×10^{-3} ft/min (5.90×10^{-4} cm/sec) to 9.62×10^{-4} ft^2/min (5.23×10^{-4} cm/sec).

8.0 CONCLUSIONS

Results of the aquifer performance test indicate that only a low pumping rate (<1.0 gpm) can be produced from well EW-1. However, visual observation and laboratory results indicate that a significant mass of contamination was removed from this well. Free-phase hydrocarbons were observed in the holding tank prior to pretreating and discharging the water. Although the volume of free-phase hydrocarbons was not measured, an estimated 9 gallons of free-phase hydrocarbon were recovered during the last 40 hours of the constant rate test. This estimate assumes a flow rate of 0.75 gpm and a concentration of 0.5%. Elevated concentrations of BTEX and SVOCs detected in the EW-1 sample collected 24 hours after the constant rate test began indicate that the pumping well was producing from a contaminated zone.

Hydraulic conductivity values estimated from well MW-13A and MW-13B are similar to hydraulic conductivity values previously estimated for these wells, 9.4×10^{-4} for well MW-13A and 3.7×10^{-4} for well MW-13B (see Table 4, report entitled *Copper Falls Aquifer Groundwater* Investigation, February 27, 1997). The hydraulic conductivity value estimated from well EW-1 drawdown data is two orders of magnitude lower than hydraulic conductivity values estimated for wells MW-13A and MW-13B. These results indicate that free-phase hydrocarbons occupying the pore spaces in the aquifer interfere with the aquifer permeability. Consequently, the design of the extraction and treatment system should necessarily be based upon the lowest K values to prevent potential system overload.

TABLES

Table 1
Summary of Monitor Well and Piezometer Construction

Well Number	Type	Elevation PVC (Ft. MSL)	Elev. Ground (Ft. MSL)	Total Borehole Depth (Ft.)	Screened Interval (Ft. below surface)	Depth Top of Filter Pack (Ft.)	Elev. Top of Filter Pack (Ft. MSL)	Depth Bottom of Filter Pack (Ft.)	Elev. Bottom of Filter Pack (Ft. MSL)	Midpoint Filter Pack Interval
EW-1	Extraction Well	636.05	636.67	56.0	35-55	30.0	604.7	56.0	850.70	591.7
MW-1	Water Table	634.18	634.7	21.5	11 - 21	9.0	625.7	21.5	613.2	619.45
MW-2	Water Table	634.85	635.1	21.0	10 - 20	8.0	627.1	21.0	614.1	620.6
MW-3	Water Table	637.74	638.2	16.0	5 - 15	3.0	635.2	16.0	622.2	628.7
MW-4	Water Table	641.03	641.7	15.5	5 - 15	4.0	637.7	15.5	626.2	631.95
MW-4A	Piezometer	641.22	641.6	35.0	21 - 26	19.0	622.6	27.0	614.6	618.6
MW-4B	Piezometer	640.98	641.5	55.5	50 - 55	48.0	593.5	55.5	586	589.75
MW-5	Water Table	633.82	634.3	28.5	18 - 28	16.0	618.3	28.5	605.8	612.05
MW-5A	Piezometer	633.72	634.2	34.0	31.5 - 33.5	30.5	603.7	34.0	600.2	601.95
MW-5B	Piezometer	633.89	634.3	51.0	44 - 49	42.0	592.3	49.0	585.3	588.8
MW-5C	Piezometer	634.33	634.6	76.0	71 - 76	69.0	565.6	76.0	558.6	562.1
MW-6	Water Table	644.88	645.2	18.0	3 - 18	2.5	642.7	18.0	627.2	634.95
MW-6A	Piezometer	644.79	645.2	48.0	42.3 - 47.3	40.8	604.4	47.5	597.7	601.05
MW-7	Water Table	612.60	610.6	15.0	5 - 15	4.5	606.1	15.0	595.6	600.85
MW-7A	Piezometer	613.31	610.1	35.5	30 - 35	28.0	582.1	35.5	574.6	578.35
MW-8	Water Table	635.54	635.9	16.0	6 - 16	5.0	630.9	16.0	619.9	625.4
MW-8A	Piezometer	635.50	635.9	50.0	45 - 50	43.0	592.9	50.0	585.9	589.4
MW-9A	Piezometer	637.86	638.34	136.5	131 - 136	128.5	509.84	136.0	502.34	506.09
MW-10	Water Table	638.16	638.46	21.0	5 - 20	4.0	634.46	21.0	617.46	625.96
MW-10A	Piezometer	638.07	638.31	51.0	45 - 50	44.0	594.31	50.0	588.31	591.31
TW-13	Water Table	635.81	636.3	22.0	9 - 19	7.0	629.3	19.0	617.3	623.3
MW-13A	Piezometer	635.94	636.3	50.0	40 - 45	38.0	598.3	46.0	590.3	594.3
MW-13B	Piezometer	635.90	636.3	70.0	65 - 70	63.0	573.3	70.0	566.3	569.8
Kreher Park Monitor Wells										
MW-1	Water Table	608.40	605.6	16.0	4 - 14	3.0	602.6	16.0	589.6	596.1
MW-2	Water Table	608.23	605.3	16.0	3.5 - 13.5	2.5	602.8	16.0	589.3	596.05
MW-2A (NET)	Piezometer	607.99	605.3	52.0	45 - 50	43.0	562.3	50.0	555.3	557.8
MW-2B (NET)	Piezometer	608.05	605.3	31.0	25-30	22.0	583.3	31.0	574.3	577.8
MW-3	Water Table	612.10	609.5	16.0	5 - 15	4.0	605.5	16.0	593.5	599.5

Table 2
Groundwater Elevations

		June 5, 1996		November 7, 1996		September 2, 1997		September 15, 1997	
NSP Property Monitor Wells									
Well Number	TOC Elev. (ft.)	DTW (Ft.)	Elev. (Ft.)	DTW (Ft.)	Elev. (Ft.)	DTW (Ft.)	Elev. (Ft.)	DTW (Ft.)	Elev. (Ft.)
MW-1	634.18	14.95	619.23	14.69	619.49	15.10	619.08	15.08	619.10
MW-2	634.85	14.35	620.5	---	---	14.59	620.26	14.75	605.51
MW-3	637.74	2.52	635.22	2.70	635.04	2.65	635.09	2.85	634.89
MW-4	641.03	4.78	636.25	5.26	635.77	5.80	635.23	5.85	629.38
MW-4A	641.22	13.06	628.16	13.24	627.98	13.74	627.48	13.81	613.67
MW-4B	640.98	15.46	625.52	15.26	625.72	16.57	624.41	16.62	624.36
MW-5	633.82	18.69	615.13	19.06	614.76	19.36	614.46	19.66	614.16
MW-5A	633.72	19.32	614.4	19.66	614.06	19.42	614.30	19.09	614.63
MW-5B	633.89	19.08	614.81	19.48	614.41	19.26	614.63	18.91	614.98
MW-5C	634.33	8.86	625.47	8.77	625.56	9.53	624.80	10.08	623.25
MW-6	644.88	13.59	631.29	14.11	630.77	15.04	629.84	15.28	629.60
MW-6A	644.79	18.82	625.97	18.83	625.96	19.98	624.81	20.02	624.77
MW-7	612.60	7.77	604.83	7.58	605.02	7.55 [2]	---	---	---
MW-7A	613.25	-0.92	614.17	-1.14	614.39	-1.82	616.21	---	---
MW-8	635.54	14.32*	621.22	5.12	630.42	5.34	630.20	9.52*	626.02
MW-8A	635.50	15.07	620.43	15.03	620.47	15.12	620.38	15.22	620.28
MW-9A	637.86	---	---	12.36	625.50	13.90	623.96	13.92	623.94
MW-10	638.16	---	---	14.11*	624.05	5.17	632.99	5.28	632.88
MW-10A	638.07	---	---	13.41	624.66	14.35	623.72	14.50	623.57
TW-13	635.81	5.63	630.18	10.45	625.36	9.52/17.4 [2]	626.29	11.37	624.44
MW-13A	635.94	20.75	615.19	20.92	615.02	20.76/43.20 [2]	615.18	20.57	615.37
MW-13B	635.90	10.56	625.34	11.39	624.51	14.16/53.2 [2]	621.74	20.43	615.47
Kreher Park Monitor Wells									
MW-1 [1]	608.40	6.55	601.85	6.55	601.85	---	---	---	---
MW-2 [1]	608.23	6.40	601.83	6.42	601.81	6.33	601.90	---	---
MW-2A	607.86	---	---	-2.81	610.80	-4.92	612.91	---	---
MW-2B	608.05	---	---	---	---	-2.41	610.46	---	---
MW-3 [1]	612.10	10.62	601.48	10.37	601.73	---	---	---	---

* Note: Water level measurement in MW-8 on 6/5/96 and 9/15/97 still rising; water level measured in MW-10 on 11/7/96 still rising
Survey information for Kreher Park wells are from February 1995 SEH Report
1 Wells installed in 1989 by NET
2 Depth to free-phase hydrocarbons

Table 3
Summary of Water Level and Vertical Groundwater Gradients

	MW-2 MW-2A	MW-2 MW-2B	MW-2B MW-2A	MW-4 MW-4A	MW-4A MW-4B	MW-5 MW-5A	MW-5A MW-5B	MW-5B MW-5C	MW-6 MW-6A	MW-7 MW-7A	MW-8 MW-8A	MW-10 MW-10A	TW-13 MW-13A	TW-13 MW-13B	MW-13A MW-13B
June 5, 1996															
Water Level Elev. (ft.)	---	---	---	636.25	628.16	615.13	614.40	614.81	631.29	604.83	621.22	---	630.18	630.18	615.19
	---	---	---	628.16	625.52	614.40	614.81	625.47	625.97	614.23	620.43	---	615.19	625.34	625.34
Vertical Distance (ft.)	---	---	---	636.25	618.60	615.13	601.95	588.80	634.95	600.85	625.40	---	630.18	630.18	594.30
	---	---	---	618.60	589.75	601.95	588.80	562.10	601.05	578.35	589.40	---	594.30	569.80	569.80
Gradient (ft./ft.)	---	---	---	-0.46	-0.09	-0.06	+0.03	+0.40	-0.16	+0.35	-0.02	---	-0.42	-0.08	+0.41
November 7, 1996															
Water Level Elev. (ft.)	601.81	---	---	635.77	627.98	614.76	614.06	614.41	630.77	605.02	630.42	624.05	625.36	625.36	615.02
	610.80	---	---	627.98	625.72	614.06	614.41	625.56	625.96	614.39	620.47	624.66	615.02	624.51	624.51
Vertical Distance (ft.)	601.81	---	---	635.77	618.60	614.76	601.95	588.80	630.77	605.02	630.42	624.05	625.36	625.36	594.30
	557.80	---	---	618.60	589.75	601.95	588.80	562.10	601.05	578.35	589.40	591.31	594.30	569.80	569.80
Gradient (ft./ft.)	+0.20	---	---	-0.45	-0.08	-0.05	+0.03	+0.42	-0.16	+0.35	-0.24	+0.02	-0.33	-0.02	+0.39
September 2, 1997															
Water Level Elev. (ft.)	601.90	601.90	610.46	635.23	627.48	614.46	614.30	614.63	629.84	-	630.20	632.99	626.29	626.29	615.18
	612.91	610.46	612.91	627.48	624.41	614.30	614.63	624.80	624.81	-	620.38	623.72	615.18	615.18	621.74
Vertical Distance (ft.)	601.90	601.90	557.80	635.23	618.60	614.46	601.95	588.80	629.84	-	630.20	632.99	626.29	626.29	594.30
	557.80	577.80	577.80	618.60	589.75	601.95	588.80	562.10	601.05	-	589.40	591.31	594.30	569.80	569.80
Gradient (ft./ft.)	+0.25	+0.36	+0.12	-0.47	-0.11	-0.01	+0.03	+0.38	-0.17	-	-0.24	-0.22	-0.35	-0.20	+0.27

+ Upward vertical gradient
- Downward vertical gradient

Table 4
September 1997 Groundwater Monitoring Results
VOCs (µg/L) - Copper Falls Formation
Northern States Power, Ashland, Wisconsin

			September 3 & 4, 1997								
	Analyte	**Units**	**MW-2A (NET)**	**MW-2B (NET)**	**MW-4A**	**MW-4B**	**MW-5B**	**MW-5C**	**MW-6A**	**ES**	**PAL**
	Benzene	µg/L	**2**	**14,000**	**22,000**	**47**	**23,000**	<0.20	<0.20	5	0.5
	Bromodichloromethane	µg/L	<0.14	<270	<170	<1.4	<37	<0.18	**1.0**	0.6	0.06
	n-Butylbenzene	µg/L	**<0.39>**	**3,500**	**6,300**	**<3.4>**	**92**	<0.13	<0.13	--	--
	sec-Butylbenzene	µg/L	<0.11	<210	<130	<1.1	**230**	<0.15	<0.15	--	--
	tert-Butylbenzene	µg/L	<0.15	<290	<180	<1.5	**<97>**	<0.24	<0.24	--	--
	Chloroform	µg/L	<0.10	<200	<130	<1.0	*<50*	<0.25	**9.4**	6	0.6
	Ethylbenzene	µg/L	<0.14	**2,200**	**1,500**	<1.4	**190**	<0.22	*<0.22*	700	140
	Isopropylbenzene	µg/L	<0.15	<290	<180	<1.5	<44	<0.22	<0.22	--	--
	p-Isoropyltoluene	µg/L	<0.15	<290	<180	<1.5	**170**	<0.20	<0.20	--	--
	Naphthalene	µg/L	**1.2**	**3,400**	**9,800**	**99**	**280**	**0.27**	<0.16	40	8
	Trichloroethene	µg/L	<0.13	<260	<160	<1.3	<33	<0.16	1.0	5	0.5
	Toluene	µg/L	**2.4**	**8,500**	**11,000**	**<4.3>**	**12,000**	<0.20	<0.20	343	68.6
	1,2,3-Trichlorobenzene	µg/L	<0.084	<170	**<210>**	<0.84	<42	<0.21	<0.21	--	--
	Trichloroethene	µg/L	<0.13	<260	<160	<1.3	<50	<0.25	0.49	5	0.5
	1,2,4-Trimethylbenzene	µg/L	<0.13	<250	**820**	**7.3**	**260**	<0.19	<0.19	--	--
	1,3,5-Trimethylbenzene	µg/L	<0.19	<380	<240	<1.9	**<87>**	<0.20	<0.20	--	--
	o-Xylene/Styrene	µg/L	<0.15	**<780>**	**3,400**	<1.5	**3,000**	<0.22	<0.34	620	124
	m+p-Xylene	µg/L	<0.29	**<1,700>**	**2,600**	<2.9	**1,600**	<0.42	<0.42		
	Total BTEX:	µg/L	**4.4**	**27,180**	**40,500**	**51.3**	**39,790**	ND	ND		

< - Less than Limit of Detection, < > - Less than Limit of Quantitation, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

Table 4
September 1997 Groundwater Monitoring Results
VOCs (µg/L) - Copper Falls Formation
Northern States Power, Ashland, Wisconsin

		September 1997								
Analyte	**Units**	**MW-7A**	**MW-8A**	**MW-9A**	**MW-10A**	**MW-13A**	**MW-13B**	**EW-1**	**ES**	**PAL**
Benzene	µg/L	6,700	21,000	120	8.2	46,000	54,000	44,000	5	0.5
Bromodichloromethane	µg/L	<150	<92	<0.18	<0.18	<370	<920	<190	0.6	0.06
n-Butylbenzene	µg/L	<100	<66	<0.40>	<0.13	<260	<660	<170	--	--
sec-Butylbenzene	µg/L	550	<76	<0.28>	<0.15	<640>	<2,300>	<200	--	--
tert-Butylbenzene	µg/L	<190	<120	<0.24	<0.24	<480	<1,200	<140	--	--
Chloroform	µg/L	<200	<130	1.3	<0.25	<500	<1,300	<190	6	0.6
Ethylbenzene	µg/L	<420>	<110	3.7	<0.22	<490>	<1,100	<550>	700	140
Isopropylbenzene	µg/L	<180	<110	<0.22	<0.22	<440	<1,100	<180	--	--
p-Isopropyltoluene	µg/L	<160	<100	<0.44>	<0.20	<400	<1,000	<180	--	--
Naphthalene	µg/L	6,500	160	14	0.38	7,600	13,000	8,000	40	8
Tetrachloroethane	µg/L	<130	<82	<0.16	<0.16	<330	<820	<240	5	0.5
Toluene	µg/L	8,000	800	59	2.7	20,000	24,000	19,000	343	68.6
1,2,3-Trichlorobenzene	µg/L	<170	<100	<0.21	<0.21	<420	<1,000	<350	--	--
Trichloroethene	µg/L	<200	<120	<0.25	<0.25	<500	<1,200	<220	5	0.5
1,2,4-Trimethylbenzene	µg/L	580	<96	1.2	<0.19	<620>	<960	<500>	--	--
1,3,5-Trimethylbenzene	µg/L	<210>	<100	1.1	1	<400	<1,000	<190	--	--
o-Xylene/Styrene	µg/L	4,300	730	9.9	0.57	5,900	9,400	<180	620	124
m+p-Xylene	µg/L	2,400	<470>	7.9	<0.42	3,200	<4,200>	3,200		
Total BTEX:	µg/L	21,820	23,000	200.5	11.47	75,590	91,600	66,750		

< - Less than Limit of Detection, < > - Less than Limit of Quantitation, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

Table 4
September 1997 Groundwater Monitoring Results
VOCs (µg/L) - Perched Ravine Aquifer
Northern States Power, Ashland, Wisconsin

		September 3 & 4, 1997								
Analyte	**Units**	**MW-1**	**MW-2**	**MW-3**	**MW-5**	**MW-8**	**MW-10**	**TW-13**	**ES**	**PAL**
Benzene	µg/L	<0.14	<0.14	<5.0	<14	<0.14>	<0.14	**9,200**	5	0.5
Bromodichloromethane	µg/L	<0.14	<0.12	<4.6	<12	<0.14	<0.14	<150	0.6	0.06
n-Butylbenzene	µg/L	<0.12	<0.15	**45**	**57**	<0.12	<0.12	**<230>**	--	--
sec-Butylbenzene	µg/L	<0.11	<0.11	<3.8	<11	<0.11	<0.11	**500**	--	--
tert-Butylbenzene	µg/L	<0.15	<0.15	<6.0	<15	<0.15	<0.15	<190	--	--
Chloroform	µg/L	<0.14	<0.10	<6.3	<10	<0.14	<0.10	<200	6	0.6
Ethylbenzene	µg/L	<0.14	<0.14	**<13>**	<14	<0.14	<0.14	**2,400**	700	140
Isopropylbenzene	µg/L	<0.15	<0.15	<5.5	<15	<0.15	<0.15	<180	--	--
p-Isopropyltoluene	µg/L	<0.15	<0.15	<5.0	<15	<0.15	<0.15	<160	--	--
Naphthalene	µg/L	<0.18>	<0.13	**460**	**980**	<0.13	**1.1**	**10,000**	40	8
n-Propylbenzene	µg/L	<0.15	<0.15	<5.5	<15	<0.15	<0.15	<180	--	--
Tetrachloroethane	µg/L	<0.13	<0.13	<4.1	<13	<0.13	<0.13	<130	5	0.5
Toluene	µg/L	<0.13	<0.13	<4.9	<13	<0.13	<0.13	**5,300**	343	69
1,2,3-Trichlorobenzene	µg/L	<0.084	<0.084	<5.2	<8.4	<0.084	<0.084	<170	--	--
Trichloroethene	µg/L	<0.13	<0.13	<6.2	<13	<0.13	<0.13	<200	5	0.5
1,2,4-Trimethylbenzene	µg/L	<0.13	<0.13	**17**	<13	<0.13	<0.13	**<410>**	--	--
1,3,5-Trimethylbenzene	µg/L	<0.19	<0.19	<5.0	<19	<0.19	<0.19	<160	--	--
o-Xylene/Styrene	µg/L	<0.15	<0.15	<8.4	<15	<0.15	<0.15	**<750>**	620	124
m+p-Xylene	µg/L	<0.29	<0.29	<10	<29	<0.29	<0.29	**1,700**		
Total BTEX:	µg/L	ND	ND	**13**	ND	ND	ND	**19,350**		

< - Less than Limit of Detection, < > - Less than Limit of Quantitation, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

Table 4
September 1997 Groundwater Monitoring Results
VOCs (µg/L) - Kreher Park Perched Aquifer
Northern States Power, Ashland, Wisconsin

		September 3 & 4, 1997									
Analyte	**Units**	**MW-1**	**MW-2**	**MW-3**	**TW-6**	**TW-9**	**TW-11**	**TW-12**	**MW-7**	**ES**	**PAL**
Benzene	µg/L	**2,200**	**250**	<0.14	**1,500**	**970**	<20	**220**	**1,900**	5	0.5
Bromodichloromethane	µg/L	<37	<3.8	<0.12	<37	<92	<19	<4.6	<76	0.6	0.06
n-Butylbenzene	µg/L	<26	<2.6	**0.95**	540	960	<15	<3.3	**1,600**	--	--
sec-Butylbenzene	µg/L	<31	<3.1	**3.9**	<98>	<76	<13	<3.8	<61	--	--
tert-Butylbenzene	µg/L	<48	<4.8	**0.94**	<48	<120	<24	<6.0	<96	--	--
Chloroform	µg/L	<50	<5.0	<0.10	<50	<6.3	<25	<6.3	<100	6	0.6
Ethylbenzene	µg/L	**460**	**98**	<0.14	**780**	**66**	**290**	**66**	**1,200**	700	140
Isopropylbenzene	µg/L	<44	<4.4	**0.87**	<44	<5.5	<22	<5.5	<88	--	--
p-Isopropyltoluene	µg/L	<40	<4.0	**5.5**	<4.0	<100	<20	<5.0	<80	--	--
Naphthalene	µg/L	**1900**	**400**	**6.0**	**2,500**	**460**	**1,700**	**460**	**4,500**	40	8
n-Propylbenzene	µg/L	<44	<4.4	<0.17>	<44	<5.5	<22	<5.5	<88	--	--
Tetrachloroethane	µg/L	<30	<3.3	<0.13	<33	<4.1	<16	<4.1	<66	5	0.5
Toluene	µg/L	**<110>**	**17**	<0.13	<120>	<4.9	<28>	<4.9	**540**	343	68.6
1,2,3-Trichlorobenzene	µg/L	<42	<4.2	<0.084	<42	<5.2	<25	<5.2	<84	--	--
Trichloroethene	µg/L	<50	<5.0	<0.13	<50	<6.2	<25	<6.2	<99	5	0.5
1,2,4-Trimethylbenzene	µg/L	**<110>**	**21**	**<0.41>**	**150**	**26**	**70**	**26**	**<190>**	--	--
1,3,5-Trimethylbenzene	µg/L	<40	<4.0	**13**	<40	<5.0	<20	<5.0	<80	--	--
o-Xylene/Styrene	µg/L	**<140>**	**40**	**0.84**	**240**	**<19>**	**<78>**	**<19>**	**<290>**	620	124
m+p-Xylene	µg/L	**<240>**	**47**	<0.29	**310**	**<11>**	**160**	**<11>**	**660**		
Total BTEX:	µg/L	**3,150**	**452**	**0.84**	**2,950**	**316**	**536**	**316**	**4,590**		

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Concentrations exceeding the ES have been shaded.

Table 5
September 1997 Groundwater Analytical Results
SVOCs (µg/L) - Copper Falls Formation
Northern States Power, Ashland, Wisconsin

		September 2 - 4, 1997								
Analyte	**Units**	**MW-2A (NET)**	**MW-2B**	**MW-4A**	**MW-4B**	**MW-5B**	**MW-5C**	**MW-6A**	**ES**	**PAL**
Acenaphthene	µg/L	<1.3	<33	<16	<1.3	<94	<1.1	<1.8	--	--
Acenaphthylene	µg/L	<1.3	<33	440	5.5	<94	<1.1	<1.8	--	--
Anthracene	µg/L	<1.1	<28	<13	<1.1	<80	<0.90	<1.5	--	--
Benzo(a)anthracene	µg/L	<1.1	<26	<13	<1.0	<76	<0.86	<1.4	--	--
Benzo(a)pyrene	µg/L	<1.2	<29	57	<1.2	<85	<0.96	<1.6	0.2	0.02
Benzo(b)fluoranthene	µg/L	<3.6	<87	<13	<3.4	<250	<0.90	<4.8	--	--
Benzo(g,h,i)perylene	µg/L	<1.5	<36	<17	<1.4	<100	<1.2	<2.0	--	--
bis (2-ethylhexyl) phthalate	µg/L	<1.6	<38	<18	8.6	<110	28	<2.0	6	0.6
Chrysene	µg/L	<1.3	<31	<15	<1.2	<90	<1.0	<1.7	--	--
Dibenzofuran	µg/L	<1.3	<32	<15	<1.3	<93	<1.0	<1.8	--	--
2,4-Dimethylphenol	µg/L	<0.97	500	1,000	3.4	2,100	<0.76	<1.3	--	--
Fluoranthene	µg/L	<1.1	<28	<13	<1.1	<80	<0.90	<1.5	--	--
Fluorene	µg/L	<1.2	<28	40	<3.4>	<81	<0.92	<1.5	400	80
2-Methylnaphthalene	µg/L	<1.3	260	1,500	8.5	<150>	<1.0	<1.7	--	--
2-Methylphenol	µg/L	<1.4	310	590	<1.4	1,100	<1.1	<1.9	--	--
3 & 4-Methylphenol	µg/L	<2.5	480	1,200	<2.3	2,100	<2.0	<3.2	--	--
Naphthalene	µg/L	<1.7	3,000	5,500	<1.6	<120	<1.3	<2.2	40	8
Pentachlorophenol	µg/L	<1.2	<30	<14	<1.2	<86	<0.98	<1.6	--	--
Phenanthrene	µg/L	<1.2	<29	<14	<1.1	<83	<0.94	<1.6	--	--
Phenol	µg/L	<0.86	120	510	<0.81	770	<0.68	<1.1	6,000	1,200
Pyrene	µg/L	<1.1	<27	<20>	<1.6>	<78	<0.88	<1.5	--	--
Pyridine	µg/L	<6.4	<140	<68	<5.6	<410	<4.6	<7.8	--	--
Total PAHs:	µg/L	ND	4,670	10,857	31	6,220	28	ND		

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Concentrations exceeding the ES have been shaded.

Table 5
September 1997 Groundwater Analytical Results
SVOCs (µg/L) -Copper Falls Formation
Northern States Power, Ashland, Wisconsin

		September 2 - 4, 1997								
Analyte	**Units**	**MW-7A**	**MW-8A**	**MW-9A**	**MW-10A**	**MW-13A**	**MW-13B**	**EW-1**	**ES**	**PAL**
Acenaphthene	µg/L	<71	<1.4	<1.5	<1.3	<180	<3,600	<17	--	--
Acenaphthylene	µg/L	**<150>**	<1.4	<1.5	<1.3	**<230>**	**59,000**	**3,200**	--	--
Anthracene	µg/L	<60	<1.2	<1.2	<1.1	<160	**<8,500>**	**1,200**	--	--
Benzo(a)anthracene	µg/L	<57	<1.1	<1.2	<1.1	<150	**<5,400>**	<17	--	--
Benzo(a)pyrene	µg/L	<64	<1.3	<1.3	<1.2	<170	**14,000**	**400**	0.2	0.02
Benzo(b)fluoranthene	µg/L	<190	<3.8	<3.9	<3.6	<490	<9,500	360	--	--
Benzo(g,h,i)perylene	µg/L	<78	<1.6	<1.6	<1.5	<200	**<4,900>**	**180**	--	--
bis (2-ethylhexyl) phthalate	µg/L	<82	**12**	**97**	**12**	<210	<4,100	<16	6	0.6
Chrysene	µg/L	<68	<1.4	<1.4	<1.3	<180	**<4,300>**	**390**	--	--
Dibenzofuran	µg/L	<70	<1.4	<1.4	<1.3	<180	<3,500	<350>	--	--
2,4-Dimethylphenol	µg/L	<51	<1.0	<1.0	<0.97	**3,800**	<2,600	<2.2	--	--
Fluoranthene	µg/L	<60	<1.2	<1.2	<1.1	<160	<3,000	1,200	--	--
Fluorene	µg/L	<61	<1.2	<1.2	<1.2	<160	**18,000**	**1,200**	400	80
2-Methylnaphthalene	µg/L	**900**	<1.4	<1.4	<1.3	**1,500**	**210,000**	**12,000**	--	--
2-Methylphenol	µg/L	<76	**280**	<1.6	<1.4	**3,800**	<3,800	4,200	--	--
3 & 4-Methylphenol	µg/L	<130	**380**	**<4.3>**	<2.5	**7,400**	<6,500	6,200	--	--
Naphthalene	µg/L	**4,800**	**65**	**6.2**	<1.7	**8,500**	**290,000**	**26,000**	40	8
Pentachlorophenol	µg/L	<65	<1.3	<1.3	<1.2	<170	**<3,200**	<22	1	0.1
Phenanthrene	µg/L	<63	<1.3	<1.3	<1.2	<160	**58,000**	**2,600**	--	--
Phenol	µg/L	<45	120	<0.92	<0.86	**2,200**	<2,200	**1,200**	6,000	1,200
Pyrene	µg/L	<59	<1.2	<1.2	<1.1	<150	**22,000**	**2,000**	--	--
Pyridine	µg/L	<310	<6.2	<6.4	<5.9	<810	<16,000	<28	--	--
Total PAHs:	µg/L	**5,850**	**857**	**103.2**	**12**	**27,430**	**694,100**	**62,680**		

< - Less than Limit of Detection, <> - Less than Limit of Quantitaion, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

Table 5
September 1997 Groundwater Analytical Results
SVOCs (µg/L) - Perched Ravine Aquifer
Northern States Power, Ashland, Wisconsin

		September 2 - 4, 1997									
Analyte	**Units**	**MW-1**	**MW-2**	**MW-3**	**MW-4**	**MW-5**	**MW-8**	**MW-10**	**TW-13**	**ES**	**PAL**
Acenaphthene	µg/L	<1.3	<1.3	**54**	<2.1	**180**	<1.3	<1.3	**2,700**	--	--
Acenaphthylene	µg/L	<1.3	<1.3	**13**	<2.1	<25	<1.3	<1.3	**6,100**	--	--
Anthracene	µg/L	<1.1	<1.1	<1.1	**7.9**	<21	<1.1	<1.1	**3,900**	--	--
Benzo(a)anthracene	µg/L	<1.1	<1.1	<1.1	<1.7	<20	<1.0	<1.0	**2,200**	--	--
Benzo(a)pyrene	µg/L	<1.2	<1.2	<1.2	**7.6**	<22	<1.2	<1.2	**2,400**	0.2	0.02
Benzo(b)fluoranthene	µg/L	<3.6	<3.6	<3.6	<5.7	<66	<3.4	<3.4	**<1,000>**	--	--
Benzo(g,h,i)perylene	µg/L	<1.5	<1.5	<1.5	**<2.5>**	<27	<1.4	<1.4	**1,000**	--	--
bis (2-ethylhexyl) phthalate	µg/L	<1.6	<1.6	<1.6	<2.5	<29	<1.5	<1.5	<200	6	0.6
Chrysene	µg/L	<1.3	<1.3	<1.3	<2.0	<24	<1.3	<1.3	**2,000**	--	--
Dibenzofuran	µg/L	<1.3	<1.3	**10**	**29**	<24	<1.3	<1.3	**<450>**	--	--
2,4-Dimethylphenol	µg/L	<0.97	<0.97	<0.97	**200**	<18	<0.92	<0.92	<1,300	--	--
Fluoranthene	µg/L	<1.1	<1.1	<1.1	<1.8	<21	<1.1	<1.1	**5,200**	--	--
Fluorene	µg/L	<1.2	<1.2	7.9	**51**	<21	<1.1	<1.1	**3,800**	400	80
2-Methylnaphthalene	µg/L	<1.3	<1.3	99	**1,300**	**110**	<1.2	<1.2	**21,000**	--	--
2-Methylphenol	µg/L	<1.4	<1.4	<1.4	<2.3	<27	<1.4	<1.4	<190	--	--
3 & 4-Methylphenol	µg/L	<2.5	<2.5	<2.5	**76**	<46	<2.3	<2.3	<320	--	--
Naphthalene	µg/L	<1.7	<1.7	**560**	**3,000**	**1,300**	<1.6	<1.6	**35,000**	40	8
Pentachlorophenol	µg/L	<1.2	<1.2	<1.2	**76**	<23	<1.2	<1.2	<160	1	0.1
Phenanthrene	µg/L	<1.2	<1.2	**26**	**56**	<22	<1.1	<1.1	**13,000**	--	--
Phenol	µg/L	<0.86	<0.86	<0.86	<1.4	<16	<0.81	<0.81	<110	6,000	1,200
Pyrene	µg/L	<1.1	<1.1	<1.1	**7.7**	<21	<1.1	<1.1	**7,300**	--	--
Pyridine	µg/L	<5.9	<5.9	<5.9	<9.3	<110	<5.6	<5.6	<780	--	--
Total PAHs:	µg/L	ND	ND	**769.9**	**4,813.7**	**1,590**	ND	ND	**107,050**		

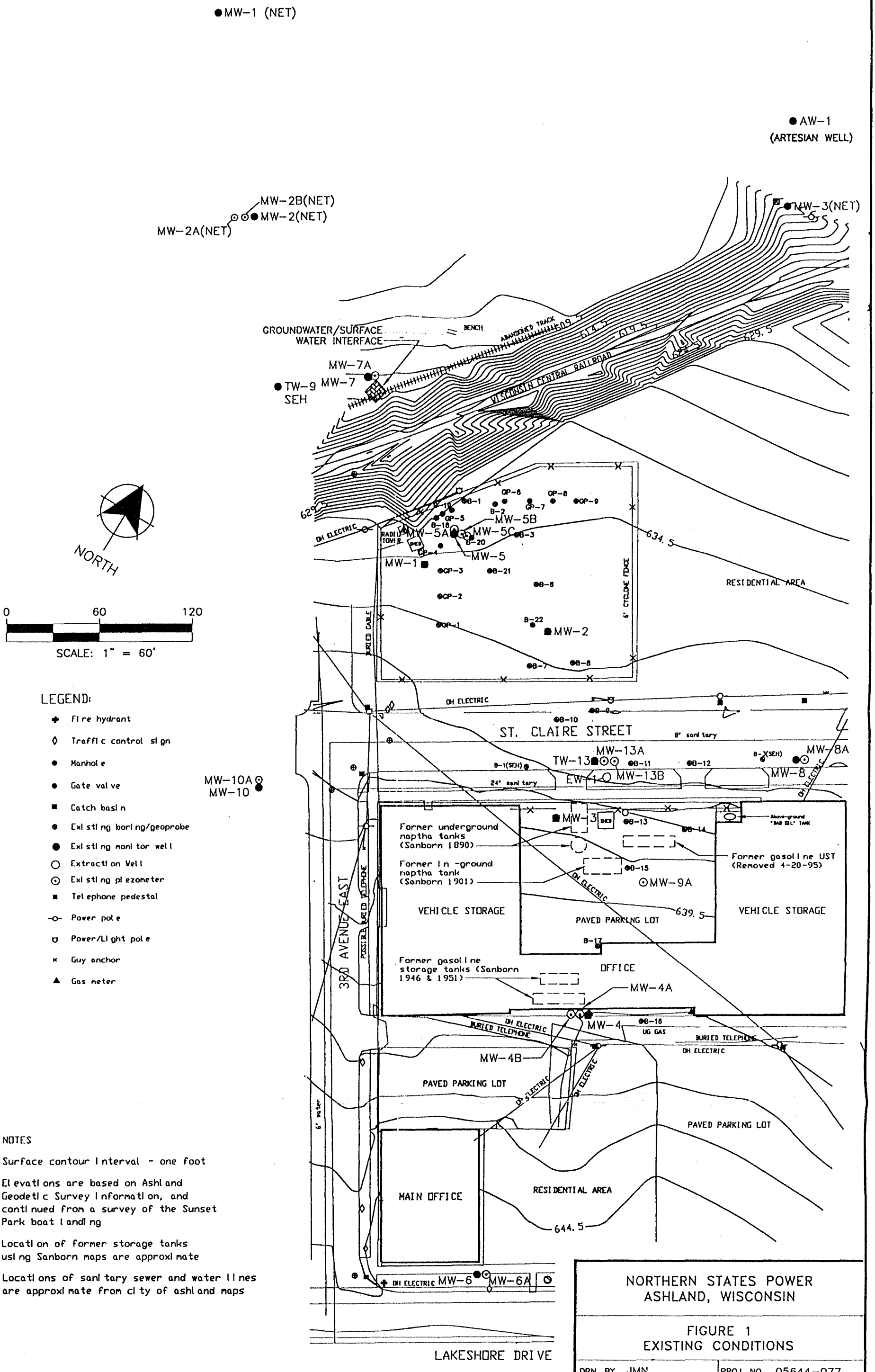
< - Less than Limit of Detection, <> - Less than Limit of Quantitaion, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

Table 5
September 1997 Groundwater Analytical Results
SVOCs (µg/L) - Kreher Park Perched Aquifer
Northern States Power, Ashland, Wisconsin

				September 2 - 4, 1997							
Analyte	**Units**	**MW-1**	**MW-2**	**MW-3**	**TW-6**	**TW-9**	**TW-11**	**TW-12**	**MW-7**	**ES**	**PAL**
Acenaphthene	µg/L	**190**	**6.8**	<1.3	**150**	**560**	**60**	<41	**11,000**	--	--
Acenaphthylene	µg/L	<1.3	<1.7	<1.3	**47**	<19	<1.6	<1.8	<180	--	--
Anthracene	µg/L	**26**	<1.4	**7.9**	**34**	**160**	<3.2>	<1.5	**4,100**	--	--
Benzo(a)anthracene	µg/L	**14**	<1.4	**51**	**13**	**71**	<1.3	<1.4	**3,000**	--	--
Benzo(a)pyrene	µg/L	**15**	<1.5	**65**	**13**	**83**	<1.8>	<1.6	**3,300**	0.2	0.02
Benzo(b)fluoranthene	µg/L	<8.5>	<4.6	**34**	<5.7	<51	<4.2	<4.8	<1,300>	--	--
Benzo(g,h,i)perylene	µg/L	<1.9>	<1.9	**16**	<2.3	<26>	<1.7	<2.0	**1,500**	--	--
bis (2-ethylhexyl) phthalate	µg/L	<1.6	<2.0	<1.6	<2.5	<22	<1.8	<2.0	<200	6	0.6
Chrysene	µg/L	**12**	<1.6	**49**	**12**	**71**	<1.5	<1.7	**2,500**	--	--
Dibenzofuran	µg/L	**33**	<1.7	<1.3	<2.1	<19	<1.9>	<1.8	<180	--	--
2,4-Dimethylphenol	µg/L	**32**	<1.2>	<1.5	<1.5	<140	<1.7	<1.3	<1,300	--	--
Fluoranthene	µg/L	**35**	<1.4	**71**	**33**	**240**	<1.3	<1.5	**7,100**	--	--
Fluorene	µg/L	**69**	<1.5	<1.2	**32**	**140**	**13**	**4.8**	**5,100**	400	80
2-Methylnaphthalene	µg/L	**510**	16	<1.3	**98**	**740**	**140**	<1.7	**12,000**	--	--
2-Methylphenol	µg/L	<1.4	<1.8	<1.4	<2.3	<21	<1.7	<1.9	<190	--	--
3 & 4-Methylphenol	µg/L	<2.5	<3.1	<2.5	<3.9	<35	<2.9	<3.2	<320	--	--
Naphthalene	µg/L	**1,400**	**210**	<1.7	**2,100**	**2,600**	**710**	**250**	**24,000**	40	8
Pentachlorophenol	µg/L	<1.2	<1.6	<1.2	<2.0	<18	<1.4	<1.6	<160	1	0.1
Phenanthrene	µg/L	**110**	<1.5	**7.5**	**120**	**680**	**20**	<1.6	**17,000**	--	--
Phenol	µg/L	<0.86	<1.1	<0.86	<1.4	<12	<0.99	<1.1	<110	6,000	1,200
Pyrene	µg/L	**54**	<1.4	**120**	**62**	**410**	<3.2>	<1.5	**10,000**	--	--
Pyridine	µg/L	<5.9	<7.4	**5.9**	<9.3	<84	<6.8	<7.8	<780	--	--
Total PAHs:	µg/L	**2,510.4**	**232.8**	**427.3**	**2,714**	**5,781**	**953.1**	**254.8**	**101,900**		

< - Less than Limit of Detection, <> - Less than Limit of Quantitaion, but greater than Limit of Detection
Concentrations exceeding the ES have been shaded.

FIGURES



LEGEND:

- Fire hydrant
- Traffic control sign
- Manhole
- Gate valve
- Catch basin
- Existing boring/geoprobe
- Existing monitor well
- Extraction Well
- Existing piezometer
- Telephone pedestal
- Power pole
- Power/Light pole
- Guy anchor
- Gas meter

NOTES

Surface contour interval - one foot

Elevations are based on Ashland Geodetic Survey Information, and continued from a survey of the Sunset Park boat landing

Location of former storage tanks using Sanborn maps are approximate

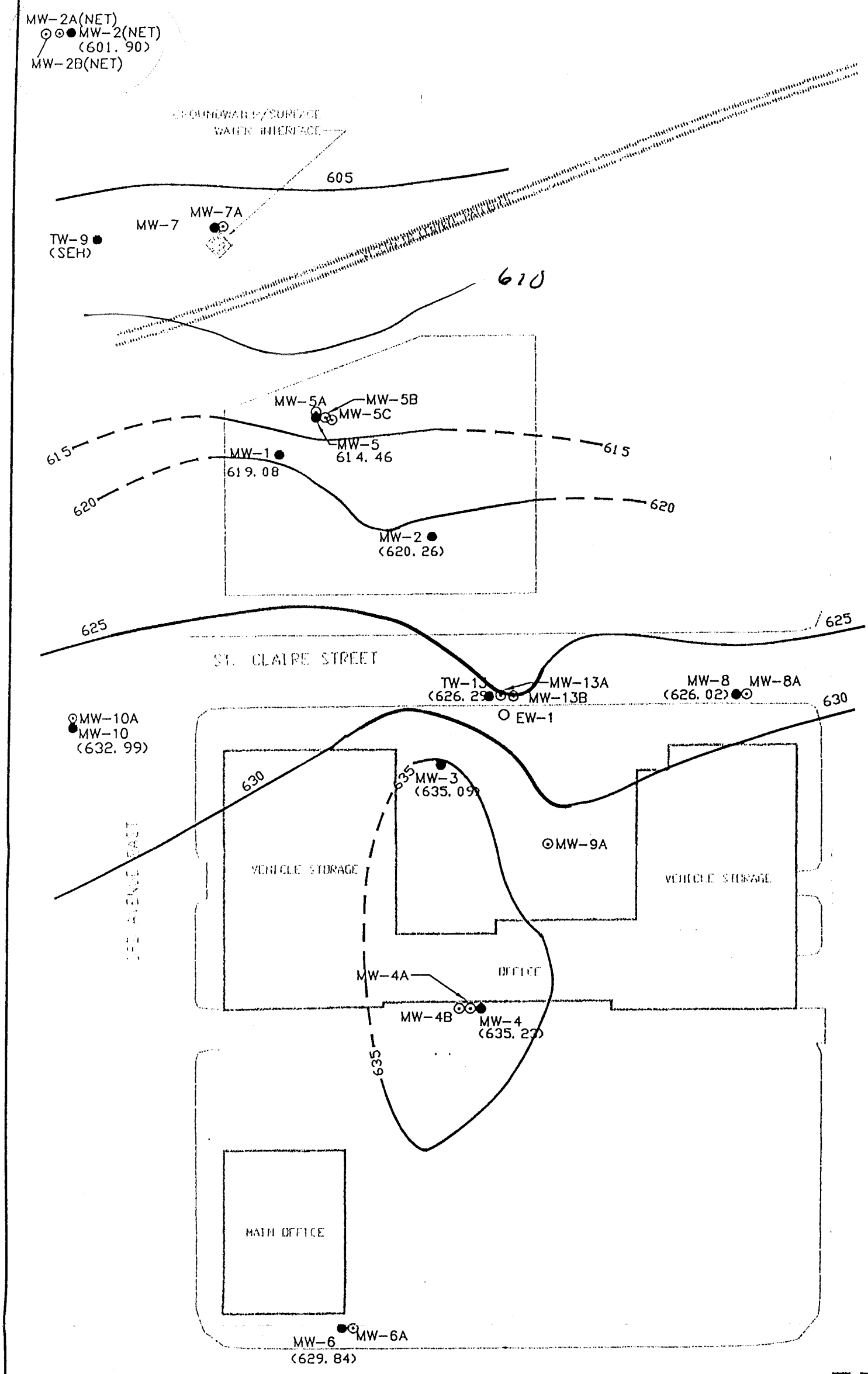
Locations of sanitary sewer and water lines are approximate from city of ashland maps

NORTHERN STATES POWER
ASHLAND, WISCONSIN

FIGURE 1
EXISTING CONDITIONS

DRN. BY JMN	PROJ. NO. 05644-077
DATE OCTOBER 1997	DAMES & MOORE

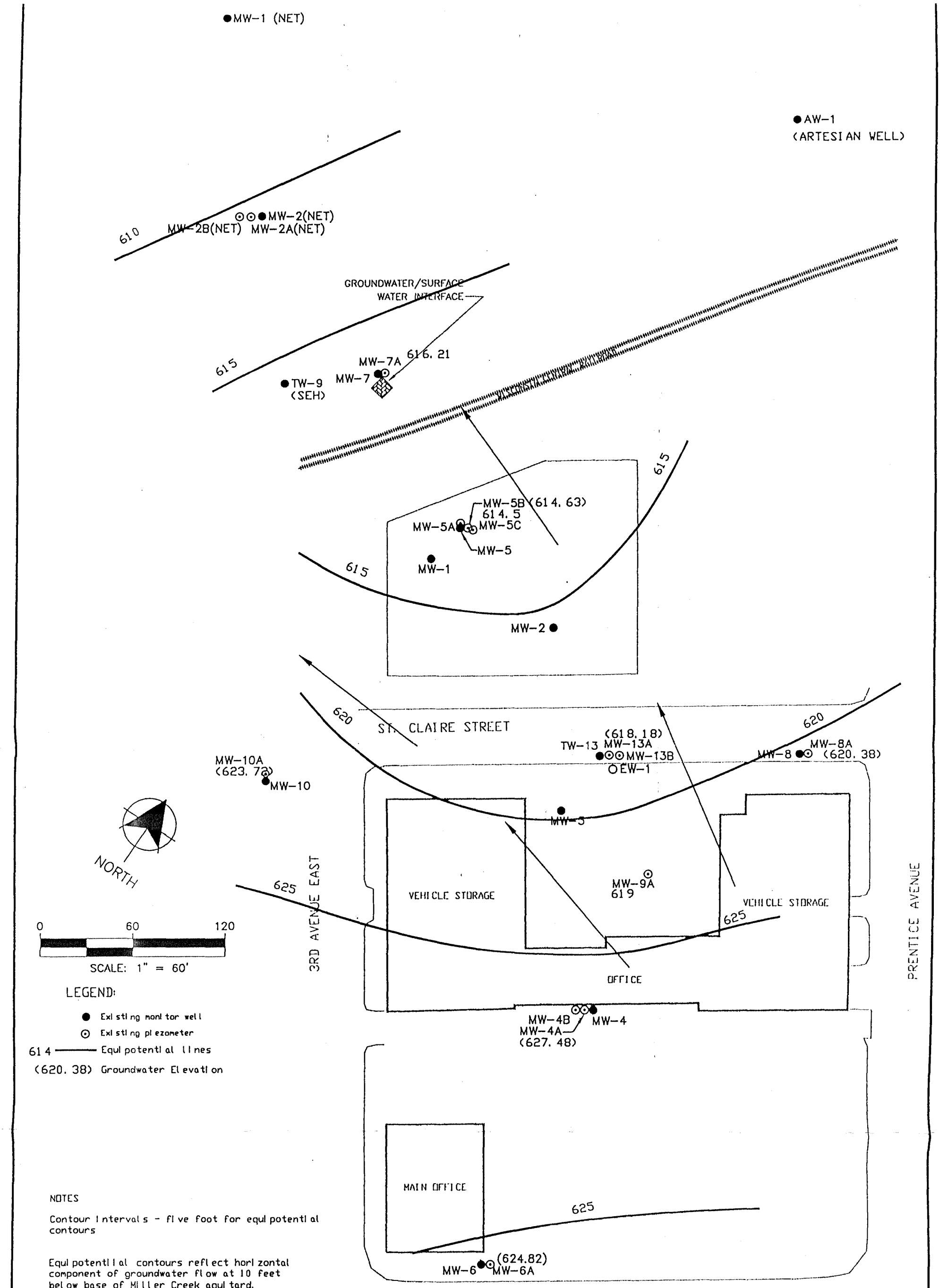
FILE: C:\DCA\NSP\05644077\1097F2



NORTHERN STATES POWER
ASHLAND, WISCONSIN

FIGURE 2-WATER TABLE CONTOURS
PERCHED RAVINE AQUIFER

DRN. BY KBR	PROJ. NO. 05644-077
DATE OCTOBER, 1997	DAMES & MOORE



NOTES

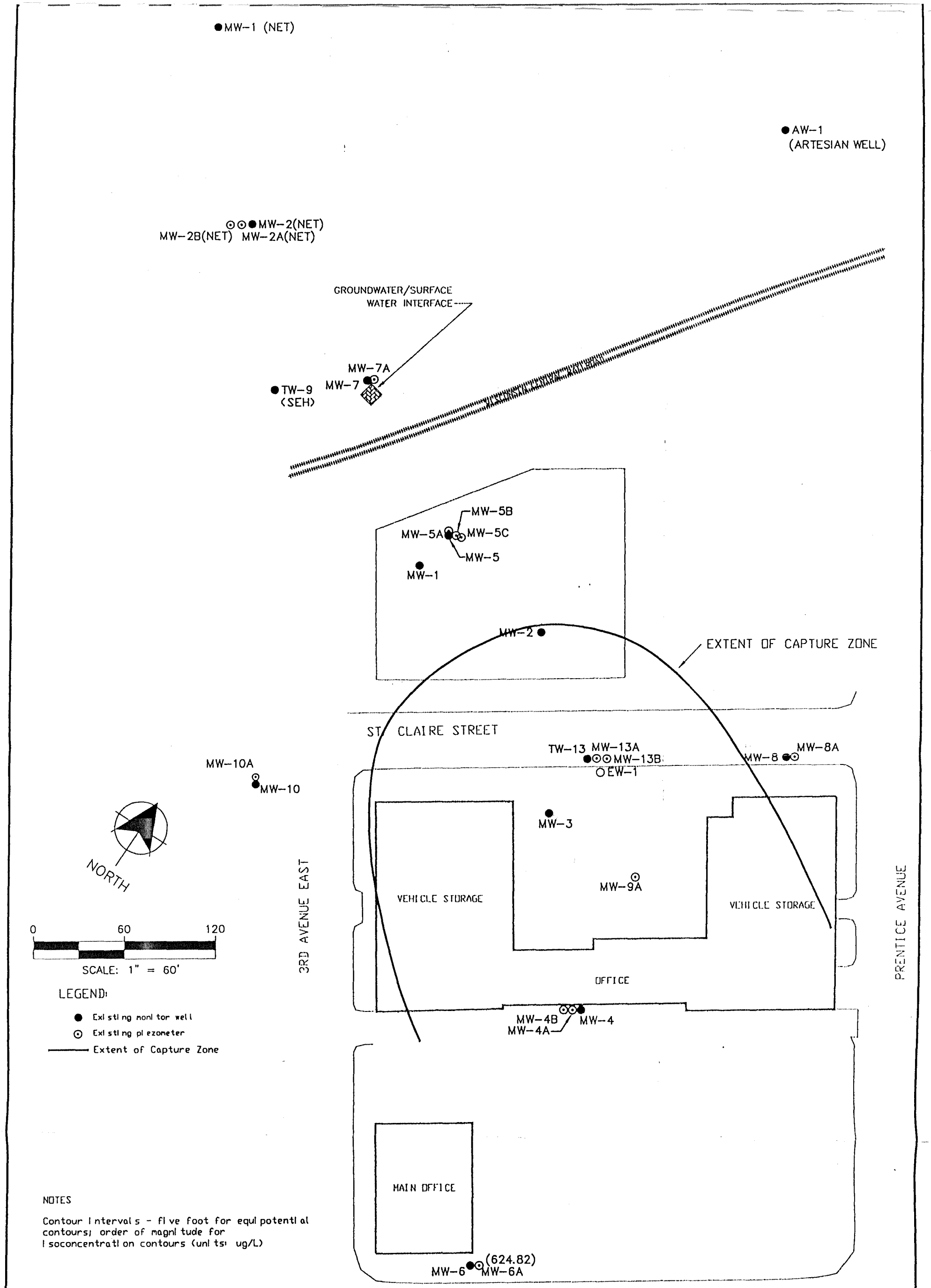
Contour intervals - five foot for equipotential contours

Equipotential contours reflect horizontal component of groundwater flow at 10 feet below base of Miller Creek aquitard.
Groundwater elevations measured September 2, 1997.

NORTHERN STATES POWER
ASHLAND, WISCONSIN

FIG.3 POTENTIOMETRIC SURFACE
SHALLOW COPPER FALLS AQUIFER

DRN. BY KBR	PROJ. NO. 05644-077
DATE OCTOBER 1997	DAMES & MOORE



NOTES

Contour intervals - five foot for equipotential contours; order of magnitude for isoconcentration contours (units: ug/L)

NORTHERN STATES POWER ASHLAND, WISCONSIN	
FIG. 5 – EXTENT OF CAPTURE ZONE SHALLOW COPPER FALLS AQUIFER	
DRN. BY KBR	PROJ. NO. 05644-077
DATE OCTOBER 1997	DAMES & MOORE

APPENDIX A

SOIL BORING LOGS, WELL CONSTRUCTION FORM AND WELL DEVELOPMENT FORMS

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: NSP ASHLAND
Facility License, Permit or Monitoring Number: _____
Type of Well: Water Table Observation Well ☐ 11; Piezometer ☐ 12
Distance Well Is From Waste/Source Boundary: _____ ft.
Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No

Local Grid Location of Well: _____ ft. ☐ N ☐ S. _____ ft. ☐ E. ☐ W
Grid Origin Location: Lat. ___ ___ ___ Long. ___ ___ ___ or
St. Plane _____ ft. N, _____ ft. E.
Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 33, T. 48 N, R. 4 ☐ E. ☒ W.
Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known

Well Name: EW-1
Wis. Unique Well Number: _____ DNR Well Number: _____
Date Well Installed: 08/26/97 (m m d d y y)
Well Installed By: (Person's Name and Firm)
Todd Schmalfeldt
Boart Longyear

A. Protective pipe, top elevation 636.67 ft. MSL
B. Well casing, top elevation 636.05 ft. MSL
C. Land surface elevation 636.7 ft. MSL
D. Surface seal, bottom 635.7 ft. MSL or 1.0 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☒ No

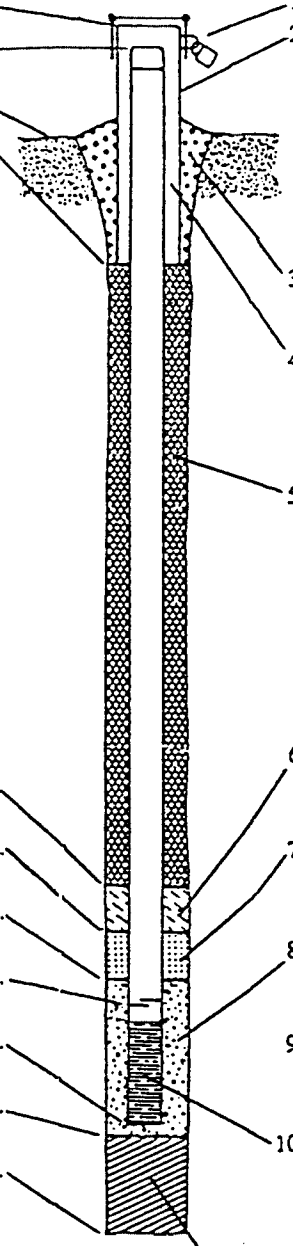
14. Drilling method used: Rotary ☒ 50; Hollow Stem Auger ☐ 41; Other ☐ __

15. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☒ 03; None ☐ 99

16. Drilling additives used? ☐ Yes ☒ No
Describe _____

17. Source of water (attach analysis):
City of Ashland

E. Bentonite seal, top 606.7 ft. MSL or 30.0 ft.
F. Fine sand, top ____ ft. MSL or ____ ft.
G. Filter pack, top 604.7 ft. MSL or 32.0 ft.
H. Screen joint, top 601.7 ft. MSL or 35.0 ft.
I. Well bottom 581.7 ft. MSL or 55.0 ft.
J. Filter pack, bottom 580.7 ft. MSL or 56.0 ft.
K. Borehole, bottom 580.7 ft. MSL or 56.0 ft.
L. Borehole, diameter 10.0 in.
M. O.D. well casing 6.50 in.
N. I.D. well casing 6.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒ 04; Flush mount; Other ☐ __
d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30; Concrete ☒ 01; Other ☐ __
4. Material between well casing and protective pipe: Bentonite ☐ 30; Annular space seal ☐ __; sand; Other ☒ __
5. Annular space seal: a. Granular Bentonite ☐ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ..... Bentonite slurry ☒ 31
d. ____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☒ 02; Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. _____ Other ☐ __
7. Fine sand material: Manufacturer, product name & mesh size
a. NA
b. Volume added NA ft^3
8. Filter pack material: Manufacturer, product name and mesh size
a. #35/45 Red Flint
b. Volume added 950 lbs ft^3
9. Well casing: Flush threaded PVC schedule 40 ☐ 23; Flush threaded PVC schedule 80 ☐ 24; Black iron pipe; Other ☒ __
10. Screen material: Stainless steel
a. Screen type: Factory cut ☐ 11; Continuous slot ☒ 01; Other ☐ __
b. Manufacturer Johnson
c. Slot size: 0.015 in.
d. Slotted length: 20.0 ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐ __

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Matt McCulloch
Firm: Domes & Moore, Madison, WI

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Northern States Power - Ashland	Ashland	EW-1

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
_____	02	_____	_____

1. Can this well be purged dry? ☒ Yes ☐ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☒ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 130 min.

4. Depth of well (from top of well casisng) 53.7 ft.

5. Inside diameter of well 6.00 in.

6. Volume of water in filter pack and well casing 74.6 gal.

7. Volume of water removed from well 700.0 gal.

8. Volume of water added (if any) 100.0 gal.

9. Source of water added City of Ashland

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 17.09 ft.	17.31 ft.
Date	b. 08/28/97 m m d d y y	08/29/97 m m d d y y
Time	c. 9:05 ☒ a.m. ☐ p.m.	5:00 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	2.0 inches	2.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15	Clear ☐ 20 Turbid ☐ 25
(Describe)	Very turbid, brown, strong odor.	Slightly turbid, brown, strong odor
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Additional comments on development:

Developed well by pumping 700 gallons after surging with a surge block. Approximately 100 gallons of potable water was added while surging. Water discharged to sanitary sewer after pre-treated on-site with carbon.

Well developed by: Person's Name and Firm

Name: Kirk Hackbarth

Firm: Domes & Moore

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Michael McCall

Print Initials: M S M

Firm: Domes & Moore, Madison, WI

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

Soil Boring Log Information
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
NSP		EWX-1

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Boart Longyear - Todd Schmalfeldt	8/26/97	8/26/97	M.Rotary

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		EWX-1	Feet MSL	Feet MSL	10.0 Inches

Boring Location
State Plane N, E
1/4 of 1/4 of Section T N.R
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
Feet ☐ N ☐ S Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
Ashland	02	Ashland

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			1	GRASS & TOPSOIL										
				EARTH DRILL										
			2											
			3	Red CLAY										
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm BOART LONGYEAR
101 Alderson Schofield, WI 54476-0109
Tel: (715) 359-7090 Fax: (715) 355-5715

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

Boring Number EWX-1 Use only as an attachment to Form 4400-122. Page 2 of 4

Sample									Soil Properties					
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			13											
			14											
			15											
			16											
			17											
			18											
			19											
			20											
			21											
			22	F-M SAND										
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31											
			32											

Boring Number EWX-1 Use only as an attachment to Form 4400-122. Page 3 of 4

Sample									Soil Properties					
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			33											
			34											
			35											
			36											
			37											
			38											
			39											
			40											
			41											
			42											
			43											
			44											
			45											
			46											
			47											
			48											
			49											
			50											
			51											
			52											

State of Wisconsin
Department of Natural Resources

Soil Boring Log Information Supplement
Form 4400-122A 7-91

Boring Number EWX-1 Use only as an attachment to Form 4400-122. Page 4 of 4

Sample									Soil Properties					
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration / Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			53										
			54										
			55										
			56	EOB 56.0 Well Set 55.0									

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: NSP	Local Grid Location of Well: ☐N. ☐S. _____ ft. ☐E. ☐W. _____ ft.	Well Name: EWX-1
Facility License, Permit or Monitoring Number:	Grid Origin Location: Lat. ° ' " Long. ° ' " or St. Plane _____ ft. N. _____ ft. E.	Wis. Unique Well Number: DNR Well Number:
Type of Well: Water Table Observation Well ☐11; Piezometer ☐12	Section Location of Waste/Source: ___1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐E. ☐W.	Date Well Installed: 8-26-97
Distance Well Is From Waste/Source Boundary: _____ ft.	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient; d ☐ Downgradient n ☐ Not Known	Well Installed By: (Person's Name and Firm): Todd Schmalfeldt; Boart Longyear
Is Well A Point of Enforcement Std. Application? ☐Yes ☐No		

A. Protective pipe, top elevation _____ ft. MSL
Well casing, top elevation Flush ft. MSL
Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

12. USC classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐Yes ☐No

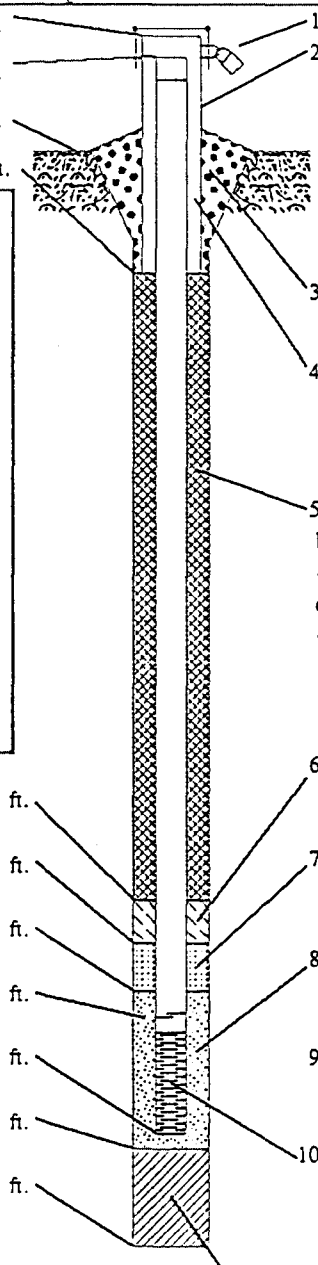
14. Drilling method used: Rotary ☒50; Hollow Stem Auger ☐41; Other ☐ _____

15. Drilling fluid used: Water ☐02 Air ☐01; Drilling Mud ☒03 None ☐99

16. Drilling additives used? ☒Yes ☐No
Describe Bentonite

17. Source of water (attach analysis):

E. Bentonite seal, top _____ ft. MSL or 29.0 ft.
Fine sand, top _____ ft. MSL or 32.0 ft.
G. Filter pack, top _____ ft. MSL or 33.0 ft.
... Screen joint, top _____ ft. MSL or 35.0 ft.
Well bottom _____ ft. MSL or 55.0 ft.
J. Filter pack, bottom _____ ft. MSL or 56.0 ft.
Borehole, bottom _____ ft. MSL or 56.0 ft.
L. Borehole, diameter 10.0 in.
. O.D. well casing 2.37 in.
I.D. well casing 2.06 in.



1. Cap and lock? ☒Yes ☐No
2. Protective cover pipe:
a. Inside diameter: 12.0 in.
b. Length: 1.0 ft.
c. Material: Steel ☒04; Morrison; Other ☐
d. Additional protection? ☐Yes ☒No
If yes, describe: _____
3. Surface seal: Bentonite ☐30; Concrete ☒01; Other ☐
4. Material between well casing and protective pipe: Bentonite ☐30; Annular space seal ☐; #45-55 Amer. Material; Other ☒
5. Annular space seal: a. Granular Bentonite ☐33
b. _____Lbs/gal mud weight . . Bentonite-sand slurry ☐35
c. _____Lbs/gal mud weight . . . Bentonite slurry ☒31
d. _____% Bentonite . . . Bentonite-cement grout ☐50
e. _____Ft³ volume added for any of the above
f. How installed: Tremie ☐01; Tremie pumped ☒02; Gravity ☐08
6. Bentonite seal: a. Bentonite granules ☒33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite pellets ☐32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name and mesh size
a. #7 Badger
b. Volume added _____ ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #45-55 American Material
b. Volume added _____ ft³
9. Well casing: Flush threaded PVC schedule 40 ☒23; Flush threaded PVC schedule 80 ☐24; Other ☐
10. Screen material: PVC
a. Screen Type: Factory cut ☐11; Continuous slot ☒01; Other ☐
b. Manufacturer Boart Longyear
c. Slot size: 0.010 in.
d. Slotted length: 20.0 ft.
11. Backfill material (below filter pack): None ☒14; Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____ Firm Boart Longyear, 101 Alderson Street, Tel: (715) 359-7090, Fax: (715) 355-5715

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch. 144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

Route To:
☐ Solid Waste ☐ Haz. Waste
☐ Emergency Response ☐ Underground Tanks
☐ Wastewater ☐ Water Resources
☐ Other

Soil Boring Log Information
Form 4400-122 7-91

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
NSP		MW-2B

Boring Drilled By (Firm name and name of crew chief)	Date Drilling Started	Date Drilling Completed	Drilling Method
Boart Longyear - Todd Schmalfeldt	8/27/97	8/27/97	HSA

DNR Facility Well No.	WI Unique Well No.	Common Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
		MW-2B	Feet MSL	Feet MSL	8.0 Inches

Boring Location
State Plane N, E
1/4 of 1/4 of Section T N,R
Lat ° ' "
Long ° ' "

Local Grid Location (If applicable)
Feet ☐ N ☐ S Feet ☐ E ☐ W

County	DNR County Code	Civil Town/City/ or Village
Ashland	02	Ashland

Sample Number	Sample Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			1	GRASS & TOPSOIL										
			2	EARTH DRILL										
			3											
			4											
			5											
			6											
			7											
			8											
			9											
			10											
			11											
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm BOART LONGYEAR
101 Alderson Schofield, WI 54476-0109
Tel: (715) 359-7090 Fax: (715) 355-5715

This form is authorized by Chapters 144, 147 and 162, Wis. Stats. Completion of this report is mandatory. Penalties: Forfeit not less than $10 nor more than $5,000 for each violation. Fined not less than $10 or more than $100 or imprisoned not less than 30 days, or both for each violation. Each day of continued violation is a separate offense, pursuant to ss 144.99 and 162.06, Wis. Stats.

State of Wisconsin
Department of Natural Resources

Soil Boring Log Information Supplement
Form 4400-122A 7-91

Boring Number MW-2B Use only as an attachment to Form 4400-122. Page 2 of 2

Sample										Soil Properties					
Number	Length (in) Recovered	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Standard Penetration	Moisture Content	Liquid Limit	Plastic Limit	P 200	RQD/ Comments
			13											
			14											
			15											
			16											
			17											
			18											
			19											
			20											
			21											
			22											
			23											
			24											
			25											
			26											
			27											
			28											
			29											
			30											
			31	EOB 31.0 Well Set 30.0										

State of Wisconsin
Department of Natural Resources

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 4-90

Facility/Project Name: NSP - ASHLAND, WI

Facility License, Permit or Monitoring Number:

Type of Well: Water Table Observation Well ☐ 11; Piezometer ☐ 12

Distance Well Is From Waste/Source Boundary: ft.

Is Well A Point of Enforcement Std. Application? ☐ Yes ☐ No

Local Grid Location of Well: ft. ☐ N. ☐ S. ft. ☐ E. ☐ W.

Grid Origin Location: Lat. Long. or St. Plane ft. N. ft. E.

Section Location of Waste/Source: SW 1/4 of NW 1/4 of Sec. 33, T. 48 N, R. 4 ☐ E. ☒ W.

Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known

Well Name: MW-2B (NET)

Wis. Unique Well Number: DNR Well Number:

Date Well Installed: 08/27/97 (m m / d d / y y)

Well Installed By: (Person's Name and Firm)
Todd Schmalfeldt
Boart Longyear

A. Protective pipe, top elevation 609.__ ft. MSL
B. Well casing, top elevation 608.05 ft. MSL
C. Land surface elevation 605.3 ft. MSL
D. Surface seal, bottom 604.8 ft. MSL or 0.5 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis attached? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ☒ 41; Other ☐ __

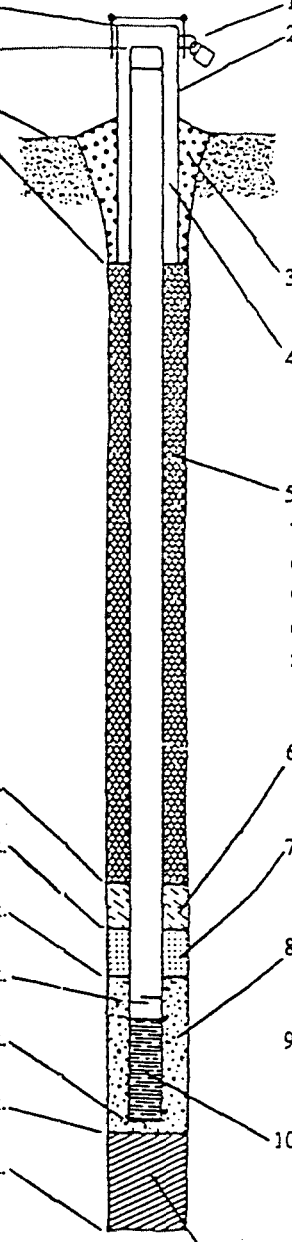
15. Drilling fluid used: Water ☐ 02; Air ☐ 01; Drilling Mud ☐ 03; None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe

17. Source of water (attach analysis):

E. Bentonite seal, top 604.8 ft. MSL or 0.5 ft.
F. Fine sand, top 584.3 ft. MSL or 21.0 ft.
G. Filter pack, top 583.3 ft. MSL or 22.0 ft.
H. Screen joint, top 580.3 ft. MSL or 25.0 ft.
I. Well bottom 575.3 ft. MSL or 30.0 ft.
J. Filter pack, bottom 574.3 ft. MSL or 31.0 ft.
K. Borehole, bottom 574.3 ft. MSL or 31.0 ft.
L. Borehole, diameter 8.0 in.
M. O.D. well casing 2.38 in.
N. I.D. well casing 2.00 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 7.0 ft.
c. Material: Steel ☒ 04; Other ☐ __
d. Additional protection? ☒ Yes ☐ No
If yes, describe: bumper posts
3. Surface seal: Bentonite ☒ 30; Concrete ☐ 01; Other ☐ __
4. Material between well casing and protective pipe: Bentonite ☒ 30; Annular space seal ☐ __; Other ☐ __
5. Annular space seal: a. Granular Bentonite ☒ 33
b. ____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. ____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. 450 lbs ft³ volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite pellets ☐ 32
c. ____ Other ☐ __
7. Fine sand material: Manufacturer, product name & mesh size
a. Badger Mining
b. Volume added 25 lbs ft³
8. Filter pack material: Manufacturer, product name and mesh size
a. #35/45 Red Flint Sand
b. Volume added 150 lbs ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ __
10. Screen material: sch. 40 PVC
a. Screen type: Factory cut ☒ 11; Continuous slot ☐ 01; Other ☐ __
b. Manufacturer Northern Air
c. Slot size: 0.010 in.
d. Slotted length: 5.0 ft.
11. Backfill material (below filter pack): None ☒ 14; Other ☐ __

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature: Michael McCulloch
Firm: Dames & Moore, Madison, WI

Please complete both sides of this form and return to the appropriate DNR office listed at the top of this form as required by chs. 144, 147 and 160, Wis. Stats., and ch. NR 141, Wis. Ad. Code. In accordance with ch.144, Wis Stats., failure to file this form may result in a forfeiture of not less than $10, nor more than $5000 for each day of violation. In accordance with ch. 147, Wis. Stats., failure to file this form may result in a forfeiture of not more than $10,000 for each day of violation. NOTE: Shaded areas are for DNR use only. See instructions for more information including where the completed form should be sent.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT
Form 4400-113B Rev. 4-90

Route to: Solid Waste ☐ Haz. Waste ☐ Wastewater ☐
Env. Response & Repair ☐ Underground Tanks ☐ Other ☐ _____

Facility/Project Name	County Name	Well Name
Northern State Power - Ashland	Ashland	MW-2B (NET)

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well Number
_____	02	_____	_____

1. Can this well be purged dry? ☐ Yes ☒ No

2. Well development method

surged with bailer and bailed	☐ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☒ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

3. Time spent developing well 120 min.

4. Depth of well (from top of well casisng) 32.3 ft.

5. Inside diameter of well 2.00 in.

6. Volume of water in filter pack and well casing 9.6 gal.

7. Volume of water removed from well 96.0 gal.

8. Volume of water added (if any) ___ gal.

9. Source of water added _____

10. Analysis performed on water added? ☐ Yes ☒ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. +2.05 ft.	+2.10 ft.
Date	b. 08/28/97 (m m d d y y)	08/28/97 (m m d d y y)
Time	c. 7:30 ☒ a.m. ☐ p.m.	9:00 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0.0 inches	0.0 inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Light brown strong odor moderate turbidity	Clear ☒ 20 Turbid ☐ 25 (Describe) Clear, strong odor

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	___ mg/l	___ mg/l
15. COD	___ mg/l	___ mg/l

16. Additional comments on development:

Well developed by: Person's Name and Firm

Name: Kirk Hackbarth

Firm: Damon & Moore, Madison, WI

I hereby certify that the above information is true and correct to the best of my knowledge.

Signature: Mark McCulloch

Print Initials: MSM

Firm: Damon & Moore, Madison

NOTE: Shaded areas are for DNR use only. See instructions for more information including a list of county codes.

APPENDIX B

LABORATORY REPORTS

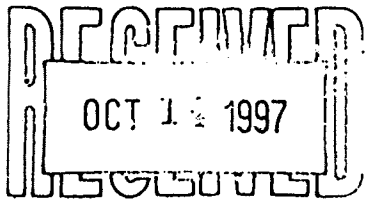
NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36631

Client: Dames & Moore
Attn: Mark McColloch
25 Kessel Court
Suite 201
Madison, WI 53711



Project Description: NSP Ashland
Project Title: 05644-077

Sample ID: EW-1 **NLS#: 148806**
Ref. Line 1 of COC 28571 Description: EW-1
Collected: 09/17/97 Received: 09/19/97 Reported: 10/09/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Alkalinity, tot. as CaCO3 (unfiltered)	450	mg/L	5.0	5.0	EPA 310.1	09/25/97	241283020
Calcium, tot. as Ca	100	mg/L	0.52	1.8	SW846 6010	09/25/97	241283020
Cyanide, amen. to chlorine as CN	0.022	mg/L	0.0021	0.0073	EPA 335.1	09/29/97	241283020
Cyanide, tot. (distilled) as CN	0.024	mg/L	0.0021	0.0073	EPA 335.3	09/29/97	241283020
Iron, tot. as Fe	0.22	mg/L	0.0054	0.018	SW846 6010	09/25/97	241283020
Nitrate, uncorrected for Nitrite	0.15	mg/L	0.039	0.13	EPA 353.2	09/26/97	241283020
Solids, tot. susp. (TSS)	16	mg/L	1.0	5.0	EPA 160.2	09/30/97	241283020
Sulfate, as SO4 (unfiltered)	93	mg/L	7.5	25	EPA 375.4	09/29/97	241283020
Total organic carbon (TOC)	250	mg/L	1.0	1.0	EPA 415.1	09/26/97	241283020
VOCs (water) by EPA 8021	see attached				SW846 8021	09/26/97	241283020
Base/Neutral/Acid Extraction	yes				SW846 3510	09/23/97	241283020
Semivolatile GC/MS by 8270B	see attached				SW846 8270	10/03/97	241283020

Sample ID: EW-1 Effluent A **NLS#: 148807**
Ref. Line 3 of COC 28571 Description: EW-1 Effluent A
Collected: 09/16/97 Received: 09/19/97 Reported: 10/09/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/29/97	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36631

Client: Dames & Moore
Attn: Mark McColloch
25 Kessel Court
Suite 201
Madison, WI 53711

Project Description: NSP Ashland
Project Title: 05644-077

Sample ID: EW-1 Effluent B **NLS#: 148808**
Ref. Line 4 of COC 28571 Description: EW-1 Effluent B
Collected: 09/17/97 Received: 09/19/97 Reported: 10/09/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/29/97	721026460

Sample ID: EW-1 Effluent C **NLS#: 148809**
Ref. Line 5 of COC 28571 Description: EW-1 Effluent C
Collected: 09/18/97 Received: 09/19/97 Reported: 10/09/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/29/97	721026460

Sample ID: Trip Blank **NLS#: 148810**
Ref. Line 6 of COC 28571 Description: Trip Blank
Collected: 09/18/97 Received: 09/19/97 Reported: 10/09/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/29/97	721026460

Values in brackets represent results greater than the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection
DWB = Dry Weight Basis
LOQ = Limit of Quantitation
NA = Not Applicable
ND = Not Detected
%DWB = (mg/kg DWB)/10000

Steven R. Cuyn

Reviewed by:

Authorized by:

R. T. Krueger
Laboratory Manager

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148806 EW-1 ug/L	LOD ug/L	LOQ ug/L
Dichlorodifluoromethane	ND	430	1400
Chloromethane	ND	170	550
Vinyl chloride	ND	320	1000
Chloroethane	ND	160	550
Trichlorofluoromethane	ND	220	700
1,1-Dichloroethene	ND	270	900
Methylene chloride	< 650 >	600	2000
MTBE	ND	140	490
trans-1,2-Dichloroethene	ND	280	900
Isopropylether	ND	120	410
1,1-Dichloroethane	ND	240	800
2,2-Dichloropropane	ND	260	850
cis-1,2-Dichloroethene	ND	200	650
Chloroform	ND	190	600
1,1,1-Trichloroethane	ND	180	600
Carbon Tetrachloride	ND	240	800
1,2-Dichloroethane	ND	220	700
Benzene	44000	160	500
Trichloroethene	ND	220	700
1,2-Dichloropropane	ND	200	650
Bromodichloromethane	ND	190	600
Toluene	19000	160	500
1,1,2-Trichloroethane	ND	160	500
1,3-Dichloropropane	ND	170	550
Tetrachloroethene	ND	240	800
Dibromochloromethane	ND	170	550
1,2-Dibromoethane	ND	290	950
Chlorobenzene	ND	220	700
Ethylbenzene	< 550 >	180	550
meta,para-Xylene	3200	360	1200
ortho-Xylene	ND	180	600
Isopropylbenzene	ND	180	600
1,1,2,2-Tetrachloroethane	ND	150	500
n-Propylbenzene	ND	200	650
Bromobenzene	ND	130	440
1,3,5-Trimethylbenzene	ND	190	600
2-Chlorotoluene	ND	160	550
4-Chlorotoluene	ND	360	1200
tert-Butylbenzene	ND	140	480
1,2,4-Trimethylbenzene	< 500 >	180	600
sec-Butylbenzene	ND	220	700
p-Isopropyltoluene	ND	180	600
1,3-Dichlorobenzene	ND	160	500
1,4-Dichlorobenzene	ND	200	650
n-Butylbenzene	ND	170	550
1,2-Dichlorobenzene	ND	160	500
1,2-Dibromo-3-Chloropropane	ND	370	1200
1,2,4-Trichlorobenzene	ND	260	850
Hexachlorobutadiene	ND	270	900
Naphthalene	8000	360	1200
1,2,3-Trichlorobenzene	ND	350	1200

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148806 EW-1 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	17	57
Acenaphthylene	3200	150	480
4-Aminobiphenyl	ND	4.0	13
Aniline	ND	6.6	22
Anthracene	1200	22	73
Benzidine	ND	25	84
Benzo[a]anthracene	ND	17	55
Benzo[a]pyrene	400	51	170
Benzo[b]fluoranthene	360	52	170
Benzo[g,h,i]perylene	180	51	170
Benzo[k]fluoranthene	< 110 >	61	200
Benzoic Acid	ND	21	70
Benzyl Alcohol	ND	2.3	7.5
Bis(2-chloroethyl)ether	ND	5.3	18
Bis(2-chloroethoxy)methane	ND	12	40
Bis(2-ethylhexyl)phthalate	ND	16	53
Bis(2-chloroisopropyl)ether	ND	11	36
4-Bromophenyl-phenyl ether	ND	18	60
Butylbenzylphthalate	ND	17	57
2-Chlorophenol	ND	2.2	7.3
4-Chloro-3-methylphenol	ND	9.8	33
1-Chloronaphthalene	ND	5.0	16
2-Chloronaphthalene	ND	14	46
4-Chloroaniline	ND	2.3	18
4-Chlorophenyl-phenyl ether	ND	13	43
Chrysene	390	17	57
Di-n-butylphthalate	ND	22	72
Di-n-octylphthalate	ND	48	160
Dibenzo[a,h]anthracene	< 110 >	51	170
Dibenzofuran	< 350 >	170	570
1,2-Dichlorobenzene	ND	2.2	7.4
1,3-Dichlorobenzene	ND	2.3	7.8
1,4-Dichlorobenzene	ND	2.2	7.5
3,3'-Dichlorobenzidine	ND	13	44
2,4-Dichlorophenol	ND	2.2	7.2
2,6-Dichlorophenol	ND	8.8	29
Diethylphthalate	ND	21	70
2,4-Dimethylphenol	4800	140	450
Dimethylphthalate	ND	20	67
p-(Dimethylamino)azobenzene	ND	3.3	11
4,6-Dinitro-2-methylphenol	ND	8.4	28
2,4-Dinitrophenol	ND	27	89
2,4-Dinitrotoluene	ND	19	62
2,6-Dinitrotoluene	ND	18	61
Diphenylamine	ND	3.8	12
1,2-Diphenylhydrazine	ND	22	74
Fluoranthene	1200	22	74
Fluorene	1200	150	500
Hexachlorobenzene	ND	18	59
Hexachlorobutadiene	ND	2.5	8.5
Hexachlorocyclopentadiene	ND	15	49
Hexachloroethane	ND	3.5	12
Indeno[1,2,3-cd]pyrene	< 160 >	15	170
Isophorone	ND	13	43
2-Methylnaphthalene	12000	26	87

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148806 EW-1 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	4200	54	180
3 & 4-Methylphenol	6200	120	400
N-nitroso-di-n-propylamine	ND	3.0	9.9
N-nitrosodi-n-butylamine	ND	3.2	10
N-nitrosodimethylamine	ND	3.6	12
N-nitrosopiperidine	ND	4.3	14
N-nitrosodiphenylamine	ND	20	67
Naphthalene	26000	88	290
1-Naphthylamine	ND	7.9	26
2-Naphthylamine	ND	4.2	14
2-Nitroaniline	ND	17	57
3-Nitroaniline	ND	16	54
Nitrobenzene	ND	8.0	27
2-Nitrophenol	ND	7.1	24
4-Nitrophenol	ND	6.2	21
4-Nitroaniline	ND	16	54
Pentachlorobenzene	ND	7.2	24
Pentachloronitrobenzene	ND	4.7	15
Pentachlorophenol	ND	22	74
Phenanthrene	2600	220	750
Phenol	1200	35	120
Pyrene	2000	210	710
Pyridine	ND	28	95
1,2,4,5-Tetrachlorobenzene	ND	6.6	22
2,3,4,6-Tetrachlorophenol	ND	11	38
1,2,4-Trichlorobenzene	ND	3.4	11
2,4,5-Trichlorophenol	ND	13	43
2,4,6-Trichlorophenol	ND	15	49

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148807 EW-1 Effluent A ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148807 EW-1 Effluent A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 99.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
Page: 3

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148808 EW-1 Effluent B ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	140808 EW-1 Effluent B ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 95.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 101 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
Page: 5

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148809 EW-1 Effluent C ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148809 EW-1 Effluent C ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 97.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148810 Trip Blank ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Ashland Project Title: 05644-077
Northern Lake Service Project Number: 36631

Analyte Name	148810 Trip Blank ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 99.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 102 %

NO. 28571

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT: Dames & Moore		PROJECT TITLE: NSP ASHLAND	
ADDRESS: 25 Kessel Court Suite 201		PROJECT NO.: 05644-077	P.O. NO.:
CITY: Madison	STATE: WI ZIP: 53711	CONTACT: Mark McGlorh	PHONE: 608/273-2886

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE P-NP	G-NP	P-S	P-oth	P-N	COLLECTION REMARKS
1.	148806	EW-1	9-17	100PM	GW	GRAB	1	2	2	4	1	STRONG ODOR
2.		EW-1	9-17	100PM	GW	GRAB						VOC vials - 3
3.	148807	EW-1 EFFLUENT A	9-16	410PM	GW	GRAB						3 VOC vials
4.	148808	EW-1 EFFLUENT B	9-17	1115AM	GW	GRAB						3 VOC vials
5.	148809	EW-1 EFFLUENT C	9-18	200PM	GW	GRAB						3 VOC vials
6.	148810	TRIP BLANK										3 VOC vials
7.												
8.												
9.												
10.												
11.												
12.												

SAMPLE TYPE:
SW = surface water; WW = wastewater; GW = groundwater; DW = drinking water; TIS = tissue; AIR = air; PROD = product; SOIL = soil; SED = sediment; describe others

CONTAINER: P = plastic; G = glass; V = glass vial; B = plastic bag; describe others

PRESERVATIVES & PREPARATION: NP = nothing added; S = sulfuric acid; N = nitric acid; Z = zinc acetate; OH = sodium hydroxide; HA = hydrochloric & ascorbic acid; H = hydrochloric acid; F = field filtered

COLLECTED BY (signatures): Mark S McGlorh	UPS	CUSTODY SEAL NO. (IF ANY) DATE/TIME
RELINQUISHED BY (signature): Mark S McGlorh	RECEIVED BY (signature): UPS	DATE/TIME: 9-18-97 400PM
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT	DATE/TIME

RECEIVED AT NLS BY (signature): Mike Chaney	DATE/TIME: 9/19/97 10:00	CONDITION: On Ice JRB	TEMP.: 2.5/1.1
SEAL INTACT? ☐ YES ☐ NO	SEAL #	REMARKS & OTHER INFORMATION: STRONG SULF ODOR / FREE PRODUCT IN EW-1	

SAMPLE EW-1 EFFLUENT A, B AND C HAVE NO ODOR

IMPORTANT: 1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED
2. PLEASE USE ONE LINE PER SAMPLE. NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY

NORTHERN LAKE SERVICE, INC.

400 NORTH LAKE AVENUE
CRANDON, WI 54520 (715)478-2777

ORDER OF ANALYSIS

RESULTS ORDERED BY:	CHAIN OF CUSTODY RECORD NUMBER:
Mark McCulloch Dames & Moore 25 Kessel Court, Madison, WI	28571
	QUOTATION NUMBER: 97518
	ANALYZE FOR DISSOLVED OR TOTAL PARAMETERS?
SEND RESULTS TO:	SEND INVOICE TO:
same	same

Note "L" for low level ICP analysis, and "F" for furnace analysis.

Samples on line #s: 1-2 to be analyzed for the parameters checked below:

☒ Alkalinity, total	☒ Cyanide, total	☐ Phenols	☐ Acid Extractables by 625/8270
☐ Alkalinity, bicarb.	☒ Amenable	☐ Phosphorus, total	☐ Base/Neutral Extractables by 625/8270
☐ Aluminum	☐ Fluoride	☐ Tot. reactive	☐ BNAs by 625/8270
☐ Antimony	☐ Hardness	☐ Dis. reactive	☐ Chlorinated Hydrocarbons by 612
☐ Arsenic	☒ Iron	☐ Potassium	☐ Haloethers by 611
☐ Barium	☐ Lead	☐ Selenium	☐ Nitrosamines by 607
☐ Beryllium	☐ Magnesium	☐ Silica	☐ Pesticides-Organochlorine by 608/8080
☐ B.O.D.-5	☐ Manganese	☐ Silver	☐ Pesticides-Organophosphate by 8141
☐ Boron	☐ Mercury	☐ Sodium	☐ PCBs by 608/8080
☐ Cadmium	☐ Molybdenum	☐ Solids, total	☐ Phenols by GC 604/8040
☒ Calcium	☐ Nickel	☐ Tot. dissolved	☐ Phenoxy Acid Herbicides by 8150
☐ C.O.D.	☐ Nitrogen, total	☒ Tot. suspended	☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-SNAs
☐ Chloride	☐ Ammonia	☒ Sulfate	☐ TCLP-pesticides/herbicides
☐ Chromium	☒ Nitrate	☐ Sulfide	☐ VOCs by EPA 601-602 or 8010-8020
☐ Chromium, hexavalent	☐ Nitrite	☐ Surfactants (MBAS)	☒ -by EPA 8021
☐ Cobalt	☐ Nitrate + Nitrite	☐ Thallium	☐ -by EPA 624/8260
☐ Coliform, fecal	☐ Total Kjeldahl	☐ Tin	☐ -by EPA 524.2 (SDWA)
☐ Coliform, total	☐ Total Organic	☒ T.O.C.	☐ BTEX by 8020
☐ Color	☐ Oil & Grease	☐ Turbidity	☐ PVOCs by 8020
☐ Conductivity	☐ pH	☐ Vanadium	☐ GRO-WI Modified ☐ GRO + PVOCs
☐ Copper	☐ _____	☐ Zinc	☐ DRO-WI Modified
☐ _____	☐ _____	☐ Munic.Sludge,WI List	☐ PAHs by 610LC/8310
			☒ SVOCs

Samples on line #s: ~~0~~ 3-6 to be analyzed for the parameters checked below:

☐ Alkalinity, total	☐ Cyanide, total	☐ Phenols	☐ Acid Extractables by 625/8270
☐ Alkalinity, bicarb.	☐ Amenable	☐ Phosphorus, total	☐ Base/Neutral Extractables by 625/8270
☐ Aluminum	☐ Fluoride	☐ Tot. reactive	☐ BNAs by 625/8270
☐ Antimony	☐ Hardness	☐ Dis. reactive	☐ Chlorinated Hydrocarbons by 612
☐ Arsenic	☐ Iron	☐ Potassium	☐ Haloethers by 611
☐ Barium	☐ Lead	☐ Selenium	☐ Nitrosamines by 607
☐ Beryllium	☐ Magnesium	☐ Silica	☐ Pesticides-Organochlorine by 608/8080
☐ B.O.D.-5	☐ Manganese	☐ Silver	☐ Pesticides-Organophosphate by 8141
☐ Boron	☐ Mercury	☐ Sodium	☐ PCBs by 608/8080
☐ Cadmium	☐ Molybdenum	☐ Solids, total	☐ Phenols by GC 604/8040
☐ Calcium	☐ Nickel	☐ Tot. dissolved	☐ Phenoxy Acid Herbicides by 8150
☐ C.O.D.	☐ Nitrogen, total	☐ Tot. suspended	☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-SNAs
☐ Chloride	☐ Ammonia	☐ Sulfate	☐ TCLP-pesticides/herbicides
☐ Chromium	☐ Nitrate	☐ Sulfide	☐ VOCs by EPA 601-602 or 8010+8020
☐ Chromium, hexavalent	☐ Nitrite	☐ Surfactants (MBAS)	☒ -by EPA 8021
☐ Cobalt	☐ Nitrate + Nitrite	☐ Thallium	☐ -by EPA 624/8260
☐ Coliform, fecal	☐ Total Kjeldahl	☐ Tin	☐ -by EPA 524.2 (SDWA)
☐ Coliform, total	☐ Total Organic	☐ T.O.C.	☐ BTEX by 8020
☐ Color	☐ Oil & Grease	☐ Turbidity	☐ PVOCs by 8020
☐ Conductivity	☐ pH	☐ Vanadium	☐ GRO-WI Modified ☐ GRO + PVOCs
☐ Copper	☐ _____	☐ Zinc	☐ DRO-WI Modified
☐ _____	☐ _____	☐ Munic.Sludge,WI List	☐ PAHs by 610LC/8310

SPECIAL INSTRUCTIONS: STRONG ODOR FREE PRODUCT IN EW-1 SIMPLE

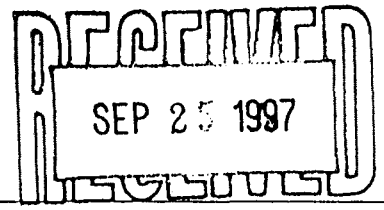
NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36321

Client: Dames & Moore
Attn: Dave Trainor
25 Kessel Court
Suite 201
Madison, WI 53711



Project Description: NSP
Project Title: 05644-077

Sample ID: MW-2A (NET) **NLS#: 147179**
Ref. Line 1 of COC 28190 Description: MW-2A (NET)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-2B (NET) **NLS#: 147180**
Ref. Line 2 of COC 28190 Description: MW-2B (NET)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-4A **NLS#: 147181**
Ref. Line 3 of COC 28190 Description: MW-4A
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36321

Client: Dames & Moore
Attn: Dave Trainor
25 Kessel Court
Suite 201
Madison, WI 53711

Project Description: NSP
Project Title: 05644-077

Sample ID: MW-4B **NLS#: 147182**
Ref. Line 4 of COC 28190 Description: MW-4B
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-5B **NLS#: 147183**
Ref. Line 5 of COC 28190 Description: MW-5B
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/11/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/18/97	721026460

Sample ID: MW-5C **NLS#: 147184**
Ref. Line 6 of COC 28190 Description: MW-5C
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/11/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

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WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36321

Client: Dames & Moore
Attn: Dave Trainor
25 Kessel Court
Suite 201
Madison, WI 53711

Project Description: NSP
Project Title: 05644-077

Sample ID: MW-6A NLS#: 147185
Ref. Line 7 of COC 28190 Description: MW-6A
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-7A NLS#: 147186
Ref. Line 8 of COC 28190 Description: MW-7A
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-8A NLS#: 147187
Ref. Line 9 of COC 28190 Description: MW-8A
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

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ANALYTICAL REPORT

 NLS PROJECT# 36321

Client: Dames & Moore
Attn: Dave Trainor
25 Kessel Court
Suite 201
Madison, WI 53711

Project Description: NSP
Project Title: 05644-077

Sample ID: MW-9A NLS#: 147188
Ref. Line 10 of COC 28190 Description: MW-9A
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/11/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-10A NLS#: 147189
Ref. Line 11 of COC 28190 Description: MW-10A
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/17/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/10/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/13/96	721026460

Sample ID: MW-13A NLS#: 147190
Ref. Line 12 of COC 28190 Description: MW-13A
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/11/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/18/97	721026460

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WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36321

Client: Dames & Moore
Attn: Dave Trainor
25 Kessel Court
Suite 201
Madison, WI 53711

Project Description: NSP
Project Title: 05644-077

Sample ID: MW-13B **NLS#: 147191**
Ref. Line 1 of COC 28191 Description: MW-13B
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/11/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/18/97	721026460

Sample ID: Trip Blank **NLS#: 147192**
Ref. Line 2 of COC 28191 Description: Trip Blank
Collected: 09/04/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460

Values in brackets represent results greater than the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection
LOQ = Limit of Quantitation
ND = Not Detected
DWB = Dry Weight Basis
NA = Not Applicable
%DWB = (mg/kg DWB)/10000

Steven R. Crispin

Reviewed by:

Authorized by:

R. T. Krueger
Laboratory Manager

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147179 MW-2A (NET) ug/L	LOD ug/L	LOQ ug/L
Benzene	2.0	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	< 0.39 >	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	1.2	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	2.4	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147179 MW-2A (NET) ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 97.0 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 105 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147180 MW-2B (NET) ug/L	LOD ug/L	LOQ ug/L
Benzene	14000	280	960
Bromobenzene	ND	250	860
Bromochloromethane	ND	240	830
Bromodichloromethane	ND	270	930
Bromoform	ND	200	700
Bromomethane	ND	420	1400
n-Butylbenzene	3500	240	820
sec-Butylbenzene	ND	210	730
tert-Butylbenzene	ND	290	1000
Carbon Tetrachloride	ND	310	1100
Chlorobenzene	ND	240	840
Chloroethane	ND	330	1100
Chloroform	ND	200	680
Chloromethane	ND	250	830
2-Chlorotoluene	ND	340	1200
4-Chlorotoluene	ND	410	1400
Dibromochloromethane	ND	210	720
1,2-Dibromo-3-Chloropropane	ND	310	1100
1,2-Dibromoethane	ND	210	720
Dibromomethane	ND	400	1400
1,2-Dichlorobenzene	ND	240	820
1,3-Dichlorobenzene	ND	210	730
1,4-Dichlorobenzene	ND	290	1000
Dichlorodifluoromethane	ND	380	1300
1,1-Dichloroethane	ND	300	1000
1,2-Dichloroethane	ND	220	770
1,1-Dichloroethene	ND	290	1000
cis-1,2-Dichloroethene	ND	220	770
trans-1,2-Dichloroethene	ND	230	790
1,2-Dichloropropane	ND	270	920
1,3-Dichloropropane	ND	210	740
2,2-Dichloropropane	ND	300	960
1,1-Dichloropropene	ND	280	950
cis-1,3-Dichloropropene	ND	280	980
trans-1,3-Dichloropropene	ND	240	840
Ethylbenzene	2200	270	940
Hexachlorobutadiene	ND	320	1100
Isopropylbenzene	ND	290	1000
p-Isopropyltoluene	ND	290	1000
Methylene chloride	ND	200	700
Naphthalene	3400	250	850
n-Propylbenzene	ND	290	1000
ortho-Xylene	< 780 >	300	1000
1,1,1,2-Tetrachloroethane	ND	280	960
1,1,2,2-Tetrachloroethane	ND	220	870
Tetrachloroethene	ND	260	910
Toluene	8500	270	910
1,2,3-Trichlorobenzene	ND	170	560
1,2,4-Trichlorobenzene	ND	220	770
1,1,1-Trichloroethane	ND	320	1100
1,1,2-Trichloroethane	ND	230	780
Trichloroethene	ND	260	890
Trichlorofluoromethane	ND	320	1100
1,2,3-Trichloropropane	ND	280	980
1,2,4-Trimethylbenzene	ND	250	880

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147180 MW-2B (NET) ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	380	1300
Vinyl chloride	ND	310	1000
meta,para-Xylene	< 1700 >	590	2300
MTBE	ND	520	1800
Isopropylether	ND	510	1700
Styrene	ND	350	1200

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 96.0 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 101 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147181 MW-4A ug/L	LOD ug/L	LOQ ug/L
Benzene	22000	170	600
Bromobenzene	ND	160	540
Bromochloromethane	ND	150	520
Bromodichloromethane	ND	170	580
Bromoform	ND	130	440
Bromomethane	ND	260	900
n-Butylbenzene	6300	150	510
sec-Butylbenzene	ND	130	460
tert-Butylbenzene	ND	180	640
Carbon Tetrachloride	ND	190	660
Chlorobenzene	ND	150	520
Chloroethane	ND	200	710
Chloroform	ND	130	420
Chloromethane	ND	160	520
2-Chlorotoluene	ND	210	730
4-Chlorotoluene	ND	260	880
Dibromochloromethane	ND	130	450
1,2-Dibromo-3-Chloropropane	ND	190	660
1,2-Dibromoethane	ND	130	450
Dibromomethane	ND	250	870
1,2-Dichlorobenzene	ND	150	520
1,3-Dichlorobenzene	ND	130	460
1,4-Dichlorobenzene	ND	180	630
Dichlorodifluoromethane	ND	240	820
1,1-Dichloroethane	ND	180	640
1,2-Dichloroethane	ND	140	480
1,1-Dichloroethene	ND	180	630
cis-1,2-Dichloroethene	ND	140	480
trans-1,2-Dichloroethene	ND	140	500
1,2-Dichloropropane	ND	170	580
1,3-Dichloropropane	ND	130	460
2,2-Dichloropropane	ND	190	600
1,1-Dichloropropene	ND	170	590
cis-1,3-Dichloropropene	ND	180	610
trans-1,3-Dichloropropene	ND	150	520
Ethylbenzene	1500	170	590
Hexachlorobutadiene	< 440 >	200	700
Isopropylbenzene	ND	180	630
p-Isopropyltoluene	ND	180	630
Methylene chloride	ND	130	440
Naphthalene	9800	160	530
n-Propylbenzene	ND	180	630
ortho-Xylene	1400	180	640
1,1,1,2-Tetrachloroethane	ND	170	600
1,1,2,2-Tetrachloroethane	ND	140	540
Tetrachloroethene	ND	160	570
Toluene	11000	170	570
1,2,3-Trichlorobenzene	< 210 >	100	350
1,2,4-Trichlorobenzene	ND	140	480
1,1,1-Trichloroethane	ND	200	690
1,1,2-Trichloroethane	ND	140	480
Trichloroethene	ND	160	560
Trichlorofluoromethane	ND	200	680
1,2,3-Trichloropropane	ND	180	610
1,2,4-Trimethylbenzene	820	160	550

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147181 MW-4A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	240	820
Vinyl chloride	ND	200	630
meta,para-Xylene	2600	370	1400
MTBE	ND	320	1100
Isopropylether	ND	320	1100
Styrene	2000	220	760

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 95.0 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 101 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147182 MW-4B ug/L	LOD ug/L	LOQ ug/L
Benzene	47	1.4	4.8
Bromobenzene	ND	1.2	4.3
Bromochloromethane	ND	1.2	4.1
Bromodichloromethane	ND	1.4	4.7
Bromoform	ND	1.0	3.5
Bromomethane	ND	2.1	7.2
n-Butylbenzene	< 3.4 >	1.2	4.1
sec-Butylbenzene	ND	1.1	3.6
tert-Butylbenzene	ND	1.5	5.1
Carbon Tetrachloride	ND	1.5	5.3
Chlorobenzene	ND	1.2	4.2
Chloroethane	ND	1.6	5.7
Chloroform	ND	1.0	3.4
Chloromethane	ND	1.2	4.1
2-Chlorotoluene	ND	1.7	5.8
4-Chlorotoluene	ND	2.0	7.0
Dibromochloromethane	ND	1.0	3.6
1,2-Dibromo-3-Chloropropane	ND	1.5	5.3
1,2-Dibromoethane	ND	1.0	3.6
Dibromomethane	ND	2.0	6.9
1,2-Dichlorobenzene	ND	1.2	4.1
1,3-Dichlorobenzene	ND	1.1	3.6
1,4-Dichlorobenzene	ND	1.4	5.0
Dichlorodifluoromethane	ND	1.9	6.5
1,1-Dichloroethane	ND	1.5	5.1
1,2-Dichloroethane	ND	1.1	3.8
1,1-Dichloroethene	ND	1.5	5.0
cis-1,2-Dichloroethene	ND	1.1	3.9
trans-1,2-Dichloroethene	ND	1.2	4.0
1,2-Dichloropropane	ND	1.3	4.6
1,3-Dichloropropane	ND	1.1	3.7
2,2-Dichloropropane	ND	1.5	4.8
1,1-Dichloropropene	ND	1.4	4.8
cis-1,3-Dichloropropene	ND	1.4	4.9
trans-1,3-Dichloropropene	ND	1.2	4.2
Ethylbenzene	ND	1.4	4.7
Hexachlorobutadiene	ND	1.6	5.6
Isopropylbenzene	ND	1.5	5.0
p-Isopropyltoluene	ND	1.5	5.1
Methylene chloride	ND	1.0	3.5
Naphthalene	99	1.3	4.2
n-Propylbenzene	ND	1.5	5.0
ortho-Xylene	ND	1.5	5.1
1,1,1,2-Tetrachloroethane	ND	1.4	4.8
1,1,2,2-Tetrachloroethane	ND	1.1	4.4
Tetrachloroethene	ND	1.3	4.6
Toluene	< 4.3 >	1.3	4.6
1,2,3-Trichlorobenzene	ND	0.84	2.8
1,2,4-Trichlorobenzene	ND	1.1	3.9
1,1,1-Trichloroethane	ND	1.6	5.5
1,1,2-Trichloroethane	ND	1.1	3.9
Trichloroethene	ND	1.3	4.5
Trichlorofluoromethane	ND	1.6	5.4
1,2,3-Trichloropropane	ND	1.4	4.9
1,2,4-Trimethylbenzene	7.3	1.3	4.4

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)
Page: 8

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147182 MW-4B ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	1.9	6.6
Vinyl chloride	ND	1.6	5.0
meta,para-Xylene	ND	2.9	11
MTBE	ND	2.6	8.9
Isopropylether	ND	2.5	8.7
Styrene	ND	1.8	6.1
Surrogate Recovery on 2-Bromochlorobenzene (PID) = 106 %			
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 101 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147183 MW-5B ug/L	LOD ug/L	LOQ ug/L
Benzene	23000	40	140
Bromobenzene	ND	31	100
Bromochloromethane	ND	38	130
Bromodichloromethane	ND	37	130
Bromoform	ND	23	78
Bromomethane	ND	68	230
n-Butylbenzene	92	26	90
sec-Butylbenzene	230	31	110
tert-Butylbenzene	< 97 >	48	170
Carbon Tetrachloride	ND	71	240
Chlorobenzene	ND	29	100
Chloroethane	ND	48	170
Chloroform	ND	50	170
Chloromethane	ND	47	160
2-Chlorotoluene	ND	35	120
4-Chlorotoluene	ND	30	110
Dibromochloromethane	ND	32	110
1,2-Dibromo-3-Chloropropane	ND	21	73
1,2-Dibromoethane	ND	25	85
Dibromomethane	ND	31	110
1,2-Dichlorobenzene	ND	48	170
1,3-Dichlorobenzene	ND	40	140
1,4-Dichlorobenzene	ND	32	110
Dichlorodifluoromethane	ND	50	170
1,1-Dichloroethane	ND	53	180
1,2-Dichloroethane	ND	50	170
1,1-Dichloroethene	ND	61	210
cis-1,2-Dichloroethene	ND	29	99
trans-1,2-Dichloroethene	ND	120	420
1,2-Dichloropropane	ND	46	160
1,3-Dichloropropane	ND	51	180
2,2-Dichloropropane	ND	52	180
1,1-Dichloropropene	ND	55	190
cis-1,3-Dichloropropene	ND	29	100
trans-1,3-Dichloropropene	ND	20	70
Ethylbenzene	190	44	150
Hexachlorobutadiene	ND	57	200
Isopropylbenzene	ND	44	150
p-Isopropyltoluene	170	40	140
Methylene chloride	ND	48	170
Naphthalene	280	33	110
n-Propylbenzene	ND	44	150
ortho-Xylene/Styrene	3000	67	230
1,1,1,2-Tetrachloroethane	ND	51	180
1,1,2,2-Tetrachloroethane	ND	35	120
Tetrachloroethene	ND	33	110
Toluene	12000	39	140
1,2,3-Trichlorobenzene	ND	42	140
1,2,4-Trichlorobenzene	ND	30	100
1,1,1-Trichloroethane	ND	68	230
1,1,2-Trichloroethane	ND	42	150
Trichloroethene	ND	50	170
Trichlorofluoromethane	ND	77	270
1,2,3-Trichloropropane	ND	36	120
1,2,4-Trimethylbenzene	260	38	130

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
Page: 2

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte	147183 MW-5B	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	< 87 >	40	140
Vinyl chloride	ND	32	100
meta,para-Xylene	1600	84	290
MTBE	ND	120	420
Isopropylether	ND	34	120
Surrogate Recovery on 2-Bromochlorobenzene-PID = 95.0 %			
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 101 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147184 MW-5C ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	< 0.27 >	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147184 MW-5C ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 102 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147185 MW-6A ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	1.0	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	9.4	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	< 0.24 >	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	1.0	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	< 0.49 >	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147185 MW-6A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
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Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147186 MW-7A ug/L	LOD ug/L	LOQ ug/L
Benzene	6700	160	550
Bromobenzene	ND	120	410
Bromochloromethane	ND	150	520
Bromodichloromethane	ND	150	510
Bromoform	ND	90	310
Bromomethane	ND	270	930
n-Butylbenzene	ND	100	360
sec-Butylbenzene	550	120	420
tert-Butylbenzene	ND	190	660
Carbon Tetrachloride	ND	280	980
Chlorobenzene	ND	120	410
Chloroethane	ND	190	660
Chloroform	ND	200	690
Chloromethane	ND	190	650
2-Chlorotoluene	ND	140	490
4-Chlorotoluene	ND	120	460
Dibromochloromethane	ND	130	440
1,2-Dibromo-3-Chloropropane	ND	85	290
1,2-Dibromoethane	ND	98	340
Dibromomethane	ND	120	430
1,2-Dichlorobenzene	ND	190	670
1,3-Dichlorobenzene	ND	160	550
1,4-Dichlorobenzene	ND	130	450
Dichlorodifluoromethane	ND	200	690
1,1-Dichloroethane	ND	210	730
1,2-Dichloroethane	ND	200	690
1,1-Dichloroethene	ND	240	840
cis-1,2-Dichloroethene	ND	120	400
trans-1,2-Dichloroethene	ND	490	1700
1,2-Dichloropropane	ND	180	630
1,3-Dichloropropane	ND	200	700
2,2-Dichloropropane	ND	210	720
1,1-Dichloropropene	ND	220	760
cis-1,3-Dichloropropene	ND	120	400
trans-1,3-Dichloropropene	ND	82	280
Ethylbenzene	< 420 >	180	610
Hexachlorobutadiene	ND	230	790
Isopropylbenzene	ND	180	610
p-Isopropyltoluene	ND	160	550
Methylene chloride	ND	190	660
Naphthalene	6500	130	460
n-Propylbenzene	ND	180	610
ortho-Xylene/Styrene	4300	270	930
1,1,1,2-Tetrachloroethane	ND	200	710
1,1,2,2-Tetrachloroethane	ND	140	480
Tetrachloroethene	ND	130	440
Toluene	8000	160	540
1,2,3-Trichlorobenzene	ND	170	580
1,2,4-Trichlorobenzene	ND	120	410
1,1,1-Trichloroethane	ND	270	940
1,1,2-Trichloroethane	ND	170	580
Trichloroethene	ND	200	690
Trichlorofluoromethane	ND	310	1100
1,2,3-Trichloropropane	ND	140	500
1,2,4-Trimethylbenzene	580	150	530

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147186 MW-7A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	< 210 >	160	560
Vinyl chloride	ND	130	410
meta,para-Xylene	2400	330	1200
MTBE	ND	490	1700
Isopropylether	ND	140	470
Surrogate Recovery on 2-Bromochlorobenzene-PID = 98.0 %			
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147187 MW-8A ug/L	LOD ug/L	LOQ ug/L
Benzene	21000	100	340
Bromobenzene	ND	78	260
Bromochloromethane	ND	94	330
Bromodichloromethane	ND	92	320
Bromoform	ND	56	190
Bromomethane	ND	170	580
n-Butylbenzene	ND	66	230
sec-Butylbenzene	ND	76	260
tert-Butylbenzene	ND	120	420
Carbon Tetrachloride	ND	180	610
Chlorobenzene	ND	74	250
Chloroethane	ND	120	420
Chloroform	ND	130	430
Chloromethane	ND	120	410
2-Chlorotoluene	ND	88	300
4-Chlorotoluene	ND	74	290
Dibromochloromethane	ND	79	270
1,2-Dibromo-3-Chloropropane	ND	53	180
1,2-Dibromoethane	ND	62	210
Dibromomethane	ND	78	270
1,2-Dichlorobenzene	ND	120	420
1,3-Dichlorobenzene	ND	100	340
1,4-Dichlorobenzene	ND	81	280
Dichlorodifluoromethane	ND	120	430
1,1-Dichloroethane	ND	130	460
1,2-Dichloroethane	ND	130	430
1,1-Dichloroethene	ND	150	520
cis-1,2-Dichloroethene	ND	72	250
trans-1,2-Dichloroethene	ND	300	1000
1,2-Dichloropropane	ND	110	400
1,3-Dichloropropane	ND	130	440
2,2-Dichloropropane	ND	130	450
1,1-Dichloropropene	ND	140	470
cis-1,3-Dichloropropene	ND	73	250
trans-1,3-Dichloropropene	ND	51	180
Ethylbenzene	ND	110	380
Hexachlorobutadiene	ND	140	490
Isopropylbenzene	ND	110	380
p-Isopropyltoluene	ND	100	340
Methylene chloride	ND	120	410
Naphthalene	< 160 >	82	280
n-Propylbenzene	ND	110	380
ortho-Xylene/Styrene	730	170	580
1,1,1,2-Tetrachloroethane	ND	130	440
1,1,2,2-Tetrachloroethane	ND	88	300
Tetrachloroethene	ND	82	270
Toluene	800	98	340
1,2,3-Trichlorobenzene	ND	100	360
1,2,4-Trichlorobenzene	ND	74	260
1,1,1-Trichloroethane	ND	170	580
1,1,2-Trichloroethane	ND	110	360
Trichloroethene	ND	120	430
Trichlorofluoromethane	ND	190	660
1,2,3-Trichloropropane	ND	90	310
1,2,4-Trimethylbenzene	ND	96	330

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147187 MW-8A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	100	350
Vinyl chloride	ND	80	260
meta,para-Xylene	< 470 >	210	720
MTBE	ND	300	1000
Isopropylether	ND	86	300

Surrogate Recovery on 2-Bromochlorobenzene-PID = 93.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 102 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147188 MW-9A ug/L	LOD ug/L	LOQ ug/L
Benzene	120	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	< 0.40 >	0.13	0.45
sec-Butylbenzene	< 0.28 >	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	1.3	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	3.7	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	< 0.44 >	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	14	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	9.9	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	59	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	1.2	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147188 MW-9A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	1.1	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	7.9	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 97.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 104 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
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Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147189 MW-10A ug/L	LOD ug/L	LOQ ug/L
Benzene	8.2	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	< 0.38 >	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	< 0.57 >	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	2.7	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147189 MW-10A ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 101 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 105 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147190 MW-13A ug/L	LOD ug/L	LOQ ug/L
Benzene	46000	400	1400
Bromobenzene	ND	310	1000
Bromochloromethane	ND	380	1300
Bromodichloromethane	ND	370	1300
Bromoform	ND	230	780
Bromomethane	ND	680	2300
n-Butylbenzene	ND	260	900
sec-Butylbenzene	< 640 >	310	1100
tert-Butylbenzene	ND	480	1700
Carbon Tetrachloride	ND	710	2400
Chlorobenzene	ND	290	1000
Chloroethane	ND	480	1700
Chloroform	ND	500	1700
Chloromethane	ND	470	1600
2-Chlorotoluene	ND	350	1200
4-Chlorotoluene	ND	300	1100
Dibromochloromethane	ND	320	1100
1,2-Dibromo-3-Chloropropane	ND	210	730
1,2-Dibromoethane	ND	250	850
Dibromomethane	ND	310	1100
1,2-Dichlorobenzene	ND	480	1700
1,3-Dichlorobenzene	ND	400	1400
1,4-Dichlorobenzene	ND	320	1100
Dichlorodifluoromethane	ND	500	1700
1,1-Dichloroethane	ND	530	1800
1,2-Dichloroethane	ND	500	1700
1,1-Dichloroethene	ND	610	2100
cis-1,2-Dichloroethene	ND	290	990
trans-1,2-Dichloroethene	ND	1200	4200
1,2-Dichloropropane	ND	460	1600
1,3-Dichloropropane	ND	510	1800
2,2-Dichloropropane	ND	520	1800
1,1-Dichloropropene	ND	550	1900
cis-1,3-Dichloropropene	ND	290	1000
trans-1,3-Dichloropropene	ND	200	700
Ethylbenzene	< 490 >	440	1500
Hexachlorobutadiene	ND	570	2000
Isopropylbenzene	ND	440	1500
p-Isopropyltoluene	ND	400	1400
Methylene chloride	ND	480	1700
Naphthalene	7600	330	1100
n-Propylbenzene	ND	440	1500
ortho-Xylene/Styrene	5900	670	2300
1,1,1,2-Tetrachloroethane	ND	510	1800
1,1,2,2-Tetrachloroethane	ND	350	1200
Tetrachloroethene	ND	330	1100
Toluene	20000	390	1400
1,2,3-Trichlorobenzene	ND	420	1400
1,2,4-Trichlorobenzene	ND	300	1000
1,1,1-Trichloroethane	ND	680	2300
1,1,2-Trichloroethane	ND	420	1500
Trichloroethene	ND	500	1700
Trichlorofluoromethane	ND	770	2700
1,2,3-Trichloropropane	ND	360	1200
1,2,4-Trimethylbenzene	< 620 >	380	1300

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte	147190 MW-13A	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	400	1400
Vinyl chloride	ND	320	1000
meta,para-Xylene	3200	840	2900
MTBE	ND	1200	4200
Isopropylether	ND	340	1200

Surrogate Recovery on 2-Bromochlorobenzene-PID = 96.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
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Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147191 MW-13B ug/L	LOD ug/L	LOQ ug/L
Benzene	54000	1000	3400
Bromobenzene	ND	780	2600
Bromochloromethane	ND	940	3300
Bromodichloromethane	ND	920	3200
Bromoform	ND	560	1900
Bromomethane	ND	1700	5800
n-Butylbenzene	ND	660	2300
sec-Butylbenzene	< 2300 >	760	2600
tert-Butylbenzene	ND	1200	4200
Carbon Tetrachloride	ND	1800	6100
Chlorobenzene	ND	740	2500
Chloroethane	ND	1200	4200
Chloroform	ND	1300	4300
Chloromethane	ND	1200	4100
2-Chlorotoluene	ND	880	3000
4-Chlorotoluene	ND	740	2900
Dibromochloromethane	ND	790	2700
1,2-Dibromo-3-Chloropropane	ND	530	1800
1,2-Dibromoethane	ND	620	2100
Dibromomethane	ND	780	2700
1,2-Dichlorobenzene	ND	1200	4200
1,3-Dichlorobenzene	ND	1000	3400
1,4-Dichlorobenzene	ND	810	2800
Dichlorodifluoromethane	ND	1200	4300
1,1-Dichloroethane	ND	1300	4600
1,2-Dichloroethane	ND	1300	4300
1,1-Dichloroethene	ND	1500	5200
cis-1,2-Dichloroethene	ND	720	2500
trans-1,2-Dichloroethene	ND	3000	10000
1,2-Dichloropropane	ND	1100	4000
1,3-Dichloropropane	ND	1300	4400
2,2-Dichloropropane	ND	1300	4500
1,1-Dichloropropene	ND	1400	4700
cis-1,3-Dichloropropene	ND	730	2500
trans-1,3-Dichloropropene	ND	510	1800
Ethylbenzene	ND	1100	3800
Hexachlorobutadiene	ND	1400	4900
Isopropylbenzene	ND	1100	3800
p-Isopropyltoluene	ND	1000	3400
Methylene chloride	ND	1200	4100
Naphthalene	13000	820	2800
n-Propylbenzene	ND	1100	3800
ortho-Xylene/Styrene	9400	1700	5800
1,1,1,2-Tetrachloroethane	ND	1300	4400
1,1,2,2-Tetrachloroethane	ND	880	3000
Tetrachloroethene	ND	820	2700
Toluene	24000	980	3400
1,2,3-Trichlorobenzene	ND	1000	3600
1,2,4-Trichlorobenzene	ND	740	2600
1,1,1-Trichloroethane	ND	1700	5800
1,1,2-Trichloroethane	ND	1100	3600
Trichloroethene	ND	1200	4300
Trichlorofluoromethane	ND	1900	6600
1,2,3-Trichloropropane	ND	900	3100
1,2,4-Trimethylbenzene	ND	960	3300

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte	147191 MW-13B	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	1000	3500
Vinyl chloride	ND	800	2600
meta,para-Xylene	< 4200 >	2100	7200
MTBE	ND	3000	10000
Isopropylether	ND	860	3000

Surrogate Recovery on 2-Bromochlorobenzene-PID = 97.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147192 Trip Blank ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.20	0.68
Bromobenzene	ND	0.16	0.52
Bromochloromethane	ND	0.19	0.65
Bromodichloromethane	ND	0.18	0.63
Bromoform	ND	0.11	0.39
Bromomethane	ND	0.34	1.2
n-Butylbenzene	ND	0.13	0.45
sec-Butylbenzene	ND	0.15	0.53
tert-Butylbenzene	ND	0.24	0.83
Carbon Tetrachloride	ND	0.36	1.2
Chlorobenzene	ND	0.15	0.51
Chloroethane	ND	0.24	0.83
Chloroform	ND	0.25	0.87
Chloromethane	ND	0.24	0.82
2-Chlorotoluene	ND	0.18	0.61
4-Chlorotoluene	ND	0.15	0.57
Dibromochloromethane	ND	0.16	0.54
1,2-Dibromo-3-Chloropropane	ND	0.11	0.37
1,2-Dibromoethane	ND	0.12	0.42
Dibromomethane	ND	0.16	0.53
1,2-Dichlorobenzene	ND	0.24	0.83
1,3-Dichlorobenzene	ND	0.20	0.69
1,4-Dichlorobenzene	ND	0.16	0.56
Dichlorodifluoromethane	ND	0.25	0.86
1,1-Dichloroethane	ND	0.26	0.92
1,2-Dichloroethane	ND	0.25	0.87
1,1-Dichloroethene	ND	0.30	1.0
cis-1,2-Dichloroethene	ND	0.14	0.50
trans-1,2-Dichloroethene	ND	0.61	2.1
1,2-Dichloropropane	ND	0.23	0.79
1,3-Dichloropropane	ND	0.25	0.88
2,2-Dichloropropane	ND	0.26	0.90
1,1-Dichloropropene	ND	0.27	0.94
cis-1,3-Dichloropropene	ND	0.15	0.50
trans-1,3-Dichloropropene	ND	0.10	0.35
Ethylbenzene	ND	0.22	0.76
Hexachlorobutadiene	ND	0.29	0.99
Isopropylbenzene	ND	0.22	0.76
p-Isopropyltoluene	ND	0.20	0.69
Methylene chloride	ND	0.24	0.83
Naphthalene	ND	0.16	0.57
n-Propylbenzene	ND	0.22	0.76
ortho-Xylene/Styrene	ND	0.34	1.2
1,1,1,2-Tetrachloroethane	ND	0.26	0.88
1,1,2,2-Tetrachloroethane	ND	0.18	0.60
Tetrachloroethene	ND	0.16	0.55
Toluene	ND	0.20	0.68
1,2,3-Trichlorobenzene	ND	0.21	0.72
1,2,4-Trichlorobenzene	ND	0.15	0.51
1,1,1-Trichloroethane	ND	0.34	1.2
1,1,2-Trichloroethane	ND	0.21	0.73
Trichloroethene	ND	0.25	0.86
Trichlorofluoromethane	ND	0.39	1.3
1,2,3-Trichloropropane	ND	0.18	0.62
1,2,4-Trimethylbenzene	ND	0.19	0.66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147192 Trip Blank ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.20	0.69
Vinyl chloride	ND	0.16	0.51
meta,para-Xylene	ND	0.42	1.4
MTBE	ND	0.61	2.1
Isopropylether	ND	0.17	0.59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 104 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147179 MW-2A (NET) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	ND	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	ND	1.1	3.4
Benzo[a]pyrene	ND	1.2	3.8
Benzo[b]fluoranthene	ND	3.6	12
Benzo[g,h,i]perylene	ND	1.5	4.8
Benzo[k]fluoranthene	ND	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	ND	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	ND	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	ND	1.1	3.6
Fluorene	ND	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	ND	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	ND	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147179 MW-2A (NET) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	ND	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitrophenol	ND	0.82	2.7
4-Nitroaniline	ND	1.3	4.4
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	ND	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	ND	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 75.3 %
Surrogate Recovery on Phenol-d5 = 59.2 %
Surrogate Recovery on Nitrobenzene-d5 = 99.5 %
Surrogate Recovery on 2-Fluorobiphenyl = 89.0 %
Surrogate Recovery on 2,4,6-Tribromophenol = 67.2 %
Surrogate Recovery on Terphenyl-d14 = 98.9 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147180 MW-2B (NET) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	33	110
Acenaphthylene	ND	33	110
4-Aminobiphenyl	ND	31	110
Aniline	ND	28	92
Anthracene	ND	28	87
Benzidine	ND	110	390
Benzo[a]anthracene	ND	26	83
Benzo[a]pyrene	ND	29	92
Benzo[b]fluoranthene	ND	87	290
Benzo[g,h,i]perylene	ND	36	120
Benzo[k]fluoranthene	ND	28	87
Benzoic Acid	ND	130	430
Benzyl Alcohol	ND	57	190
Bis(2-chloroethyl)ether	ND	31	100
Bis(2-chloroethoxy)methane	ND	37	120
Bis(2-ethylhexyl)phthalate	ND	38	120
Bis(2-chloroisopropyl)ether	ND	33	110
4-Bromophenyl-phenyl ether	ND	26	87
Butylbenzylphthalate	ND	20	64
2-Chlorophenol	ND	30	100
4-Chloro-3-methylphenol	ND	32	110
1-Chloronaphthalene	ND	27	92
2-Chloronaphthalene	ND	36	120
4-Chloroaniline	ND	34	120
4-Chlorophenyl-phenyl ether	ND	30	100
Chrysene	ND	31	100
Di-n-butylphthalate	ND	34	120
Di-n-octylphthalate	ND	20	64
Dibenzo[a,h]anthracene	ND	32	100
Dibenzofuran	ND	32	110
1,2-Dichlorobenzene	ND	21	69
1,3-Dichlorobenzene	ND	19	64
1,4-Dichlorobenzene	ND	22	74
3,3'-Dichlorobenzidine	ND	41	140
2,4-Dichlorophenol	ND	35	120
2,6-Dichlorophenol	ND	35	120
Diethylphthalate	ND	37	120
2,4-Dimethylphenol	500	23	74
Dimethylphthalate	ND	35	120
p-(Dimethylamino)azobenzene	ND	24	78
4,6-Dinitro-2-methylphenol	ND	19	59
2,4-Dinitrophenol	ND	240	810
2,4-Dinitrotoluene	ND	33	110
2,6-Dinitrotoluene	ND	34	120
Diphenylamine	ND	32	110
1,2-Diphenylhydrazine	ND	46	150
Fluoranthene	ND	28	87
Fluorene	ND	28	87
Hexachlorobenzene	ND	28	92
Hexachlorobutadiene	ND	25	83
Hexachlorocyclopentadiene	ND	55	180
Hexachloroethane	ND	20	64
Indeno[1,2,3-cd]pyrene	ND	36	120
Isophorone	ND	33	110
2-Methylnaphthalene	260	31	110

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147180 MW-2B (NET) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	310	35	120
3 & 4-Methylphenol	480	60	200
N-nitroso-di-n-propylamine	ND	31	100
N-nitrosodi-n-butylamine	ND	34	120
N-Nitrosodiethylamine	ND	130	430
N-nitrosodimethylamine	ND	22	74
N-Nitrosopyrrolidine	ND	130	430
N-nitrosopiperidine	ND	94	330
N-nitrosodiphenylamine	ND	32	110
Naphthalene	3000	40	130
1-Naphthylamine	ND	20	64
2-Naphthylamine	ND	30	100
2-Nitroaniline	ND	27	92
3-Nitroaniline	ND	34	120
Nitrobenzene	ND	33	110
2-Nitrophenol	ND	59	200
4-Nitrophenol	ND	20	64
4-Nitroaniline	ND	32	110
Pentachlorobenzene	ND	29	97
Pentachloronitrobenzene	ND	29	97
Pentachlorophenol	ND	30	100
Phenanthrene	ND	29	92
Phenol	120	21	69
Pyrene	ND	27	87
Pyridine	ND	140	460
1,2,4,5-Tetrachlorobenzene	ND	32	110
2,3,4,6-Tetrachlorophenol	ND	27	87
1,2,4-Trichlorobenzene	ND	28	92
2,4,5-Trichlorophenol	ND	34	120
2,4,6-Trichlorophenol	ND	40	130

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147181 MW-4A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	16	51
Acenaphthylene	440	16	51
4-Aminobiphenyl	ND	15	51
Aniline	ND	13	44
Anthracene	ND	13	42
Benzidine	ND	53	180
Benzo[a]anthracene	ND	13	40
Benzo[a]pyrene	57	14	44
Benzo[b]fluoranthene	ND	42	140
Benzo[g,h,i]perylene	ND	17	55
Benzo[k]fluoranthene	ND	13	42
Benzoic Acid	ND	62	200
Benzyl Alcohol	ND	27	91
Bis(2-chloroethyl)ether	ND	15	48
Bis(2-chloroethoxy)methane	ND	18	59
Bis(2-ethylhexyl)phthalate	ND	18	57
Bis(2-chloroisopropyl)ether	ND	16	53
4-Bromophenyl-phenyl ether	ND	13	42
Butylbenzylphthalate	ND	9.5	31
2-Chlorophenol	ND	14	48
4-Chloro-3-methylphenol	ND	15	51
1-Chloronaphthalene	ND	13	44
2-Chloronaphthalene	ND	17	57
4-Chloroaniline	ND	16	55
4-Chlorophenyl-phenyl ether	ND	14	48
Chrysene	ND	15	48
Di-n-butylphthalate	ND	16	55
Di-n-octylphthalate	ND	9.5	31
Dibenzo[a,h]anthracene	ND	15	48
Dibenzofuran	ND	15	51
1,2-Dichlorobenzene	ND	9.9	33
1,3-Dichlorobenzene	ND	9.0	31
1,4-Dichlorobenzene	ND	11	35
3,3'-Dichlorobenzidine	ND	20	68
2,4-Dichlorophenol	ND	17	57
2,6-Dichlorophenol	ND	17	55
Diethylphthalate	ND	18	59
2,4-Dimethylphenol	1000	11	35
Dimethylphthalate	ND	17	57
p-(Dimethylamino)azobenzene	ND	12	37
4,6-Dinitro-2-methylphenol	ND	9.0	28
2,4-Dinitrophenol	ND	110	390
2,4-Dinitrotoluene	ND	16	51
2,6-Dinitrotoluene	ND	16	55
Diphenylamine	ND	15	51
1,2-Diphenylhydrazine	ND	22	73
Fluoranthene	ND	13	42
Fluorene	< 40 >	13	42
Hexachlorobenzene	ND	13	44
Hexachlorobutadiene	ND	12	40
Hexachlorocyclopentadiene	ND	26	88
Hexachloroethane	ND	9.5	31
Indeno[1,2,3-cd]pyrene	ND	17	55
Isophorone	ND	16	53
2-Methylnaphthalene	1500	15	51

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147181 MW-4A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	590	17	55
3 & 4-Methylphenol	1200	29	95
N-nitroso-di-n-propylamine	ND	15	48
N-nitrosodi-n-butylamine	ND	16	55
N-Nitrosodiethylamine	ND	62	200
N-nitrosodimethylamine	ND	10	35
N-Nitrosopyrrolidine	ND	62	200
N-nitrosopiperidine	ND	45	160
N-nitrosodiphenylamine	ND	15	51
Naphthalene	5500	19	62
1-Naphthylamine	ND	9.5	31
2-Naphthylamine	ND	14	48
2-Nitroaniline	ND	13	44
3-Nitroaniline	ND	16	55
Nitrobenzene	ND	16	53
2-Nitrophenol	ND	28	95
4-Nitrophenol	ND	9.5	31
4-Nitroaniline	ND	15	51
Pentachlorobenzene	ND	14	46
Pentachloronitrobenzene	ND	14	46
Pentachlorophenol	ND	14	48
Phenanthrene	ND	14	44
Phenol	510	9.9	33
Pyrene	< 20 >	13	42
Pyridine	ND	68	220
1,2,4,5-Tetrachlorobenzene	ND	15	51
2,3,4,6-Tetrachlorophenol	ND	13	42
1,2,4-Trichlorobenzene	ND	13	44
2,4,5-Trichlorophenol	ND	16	55
2,4,6-Trichlorophenol	ND	19	64

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147182 MW-4B ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.1
Acenaphthylene	5.5	1.3	4.1
4-Aminobiphenyl	ND	1.2	4.1
Aniline	ND	1.1	3.6
Anthracene	ND	1.1	3.4
Benzidine	ND	4.4	15
Benzo[a]anthracene	ND	1.0	3.2
Benzo[a]pyrene	ND	1.2	3.6
Benzo[b]fluoranthene	ND	3.4	11
Benzo[g,h,i]perylene	ND	1.4	4.5
Benzo[k]fluoranthene	ND	1.1	3.4
Benzoic Acid	ND	5.0	17
Benzyl Alcohol	ND	2.2	7.4
Bis(2-chloroethyl)ether	ND	1.2	4.0
Bis(2-chloroethoxy)methane	ND	1.4	4.9
Bis(2-ethylhexyl)phthalate	8.6	1.5	4.7
Bis(2-chloroisopropyl)ether	ND	1.3	4.3
4-Bromophenyl-phenyl ether	ND	1.0	3.4
Butylbenzylphthalate	ND	0.77	2.5
2-Chlorophenol	ND	1.2	4.0
4-Chloro-3-methylphenol	ND	1.3	4.1
1-Chloronaphthalene	ND	1.1	3.6
2-Chloronaphthalene	ND	1.4	4.7
4-Chloroaniline	ND	1.4	4.5
4-Chlorophenyl-phenyl ether	ND	1.2	4.0
Chrysene	ND	1.2	4.0
Di-n-butylphthalate	ND	1.3	4.5
Di-n-octylphthalate	ND	0.77	2.5
Dibenzo[a,h]anthracene	ND	1.3	4.0
Dibenzofuran	ND	1.3	4.1
1,2-Dichlorobenzene	ND	0.81	2.7
1,3-Dichlorobenzene	ND	0.74	2.5
1,4-Dichlorobenzene	ND	0.86	2.9
3,3'-Dichlorobenzidine	ND	1.6	5.6
2,4-Dichlorophenol	ND	1.4	4.7
2,6-Dichlorophenol	ND	1.4	4.5
Diethylphthalate	ND	1.5	4.9
2,4-Dimethylphenol	3.4	0.92	2.9
Dimethylphthalate	ND	1.4	4.7
p-(Dimethylamino)azobenzene	ND	0.95	3.1
4,6-Dinitro-2-methylphenol	ND	0.73	2.3
2,4-Dinitrophenol	ND	9.2	32
2,4-Dinitrotoluene	ND	1.3	4.1
2,6-Dinitrotoluene	ND	1.3	4.5
Diphenylamine	ND	1.3	4.1
1,2-Diphenylhydrazine	ND	1.8	5.9
Fluoranthene	ND	1.1	3.4
Fluorene	< 3.4 >	1.1	3.4
Hexachlorobenzene	ND	1.1	3.6
Hexachlorobutadiene	ND	0.97	3.2
Hexachlorocyclopentadiene	ND	2.2	7.2
Hexachloroethane	ND	0.77	2.5
Indeno[1,2,3-cd]pyrene	ND	1.4	4.5
Isophorone	ND	1.3	4.3
2-Methylnaphthalene	8.5	1.2	4.1

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147182 MW-4B ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.5
3 & 4-Methylphenol	ND	2.3	7.7
N-nitroso-di-n-propylamine	ND	1.2	4.0
N-nitrosodi-n-butylamine	ND	1.4	4.5
N-Nitrosodiethylamine	ND	5.0	17
N-nitrosodimethylamine	ND	0.85	2.9
N-Nitrosopyrrolidine	ND	5.0	17
N-nitrosopiperidine	ND	3.7	13
N-nitrosodiphenylamine	ND	1.3	4.1
Naphthalene	ND	1.6	5.0
1-Naphthylamine	ND	0.77	2.5
2-Naphthylamine	ND	1.2	4.0
2-Nitroaniline	ND	1.1	3.6
3-Nitroaniline	ND	1.4	4.5
Nitrobenzene	ND	1.3	4.3
2-Nitrophenol	ND	2.3	7.8
4-Nitroaniline	ND	1.2	4.1
4-Nitrophenol	ND	0.77	2.5
Pentachlorobenzene	ND	1.1	3.8
Pentachloronitrobenzene	ND	1.1	3.8
Pentachlorophenol	ND	1.2	4.0
Phenanthrene	ND	1.1	3.6
Phenol	ND	0.81	2.7
Pyrene	< 1.6 >	1.1	3.4
Pyridine	ND	5.6	18
1,2,4,5-Tetrachlorobenzene	ND	1.2	4.1
2,3,4,6-Tetrachlorophenol	ND	1.0	3.4
1,2,4-Trichlorobenzene	ND	1.1	3.6
2,4,5-Trichlorophenol	ND	1.3	4.5
2,4,6-Trichlorophenol	ND	1.5	5.2

Surrogate Recovery on 2-Fluorophenol = 75.7 %
Surrogate Recovery on Phenol-d5 = 62.9 %
Surrogate Recovery on Nitrobenzene-d5 = 94.9 %
Surrogate Recovery on 2-Fluorobiphenyl = 82.2 %
Surrogate Recovery on 2,4,6-Tribromophenol = 73.5 %
Surrogate Recovery on Terphenyl-d14 = 89.0 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147183 MW-5B ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	94	300
Acenaphthylene	ND	94	300
4-Aminobiphenyl	ND	89	300
Aniline	ND	80	260
Anthracene	ND	80	250
Benzidine	ND	320	1100
Benzo[a]anthracene	ND	76	240
Benzo[a]pyrene	ND	85	260
Benzo[b]fluoranthene	ND	250	830
Benzo[g,h,i]perylene	ND	100	330
Benzo[k]fluoranthene	ND	80	250
Benzoic Acid	ND	370	1200
Benzyl Alcohol	ND	160	550
Bis(2-chloroethyl)ether	ND	89	290
Bis(2-chloroethoxy)methane	ND	110	360
Bis(2-ethylhexyl)phthalate	ND	110	340
Bis(2-chloroisopropyl)ether	ND	94	320
4-Bromophenyl-phenyl ether	ND	76	250
Butylbenzylphthalate	ND	57	190
2-Chlorophenol	ND	86	290
4-Chloro-3-methylphenol	ND	93	300
1-Chloronaphthalene	ND	78	260
2-Chloronaphthalene	ND	100	340
4-Chloroaniline	ND	99	330
4-Chlorophenyl-phenyl ether	ND	86	290
Chrysene	ND	90	290
Di-n-butylphthalate	ND	98	330
Di-n-octylphthalate	ND	57	190
Dibenzo[a,h]anthracene	ND	93	290
Dibenzofuran	ND	93	300
1,2-Dichlorobenzene	ND	60	200
1,3-Dichlorobenzene	ND	54	190
1,4-Dichlorobenzene	ND	64	210
3,3'-Dichlorobenzidine	ND	120	410
2,4-Dichlorophenol	ND	100	340
2,6-Dichlorophenol	ND	100	330
Diethylphthalate	ND	110	360
2,4-Dimethylphenol	2100	68	210
Dimethylphthalate	ND	100	340
p-(Dimethylamino)azobenzene	ND	70	230
4,6-Dinitro-2-methylphenol	ND	54	170
2,4-Dinitrophenol	ND	680	2300
2,4-Dinitrotoluene	ND	94	300
2,6-Dinitrotoluene	ND	98	330
Diphenylamine	ND	93	300
1,2-Diphenylhydrazine	ND	130	440
Fluoranthene	ND	80	250
Fluorene	ND	81	250
Hexachlorobenzene	ND	80	260
Hexachlorobutadiene	ND	72	240
Hexachlorocyclopentadiene	ND	160	530
Hexachloroethane	ND	57	190
Indeno[1,2,3-cd]pyrene	ND	100	330
Isophorone	ND	95	320
2-Methylnaphthalene	< 150 >	90	300

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147183 MW-5B ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	1100	100	330
3 & 4-Methylphenol	2100	170	570
N-nitroso-di-n-propylamine	ND	89	290
N-nitrosodi-n-butylamine	ND	99	330
N-Nitrosodiethylamine	ND	370	1200
N-nitrosodimethylamine	ND	62	210
N-Nitrosopyrrolidine	ND	370	1200
N-nitrosopiperidine	ND	270	940
N-nitrosodiphenylamine	ND	93	300
Naphthalene	ND	120	370
1-Naphthylamine	ND	57	190
2-Naphthylamine	ND	86	290
2-Nitroaniline	ND	78	260
3-Nitroaniline	ND	99	330
Nitrobenzene	ND	94	320
2-Nitrophenol	ND	170	570
4-Nitroaniline	ND	91	300
4-Nitrophenol	ND	57	190
Pentachlorobenzene	ND	83	280
Pentachloronitrobenzene	ND	82	280
Pentachlorophenol	ND	86	290
Phenanthrene	ND	83	260
Phenol	770	60	200
Pyrene	ND	78	250
Pyridine	ND	410	1300
1,2,4,5-Tetrachlorobenzene	ND	91	300
2,3,4,6-Tetrachlorophenol	ND	77	250
1,2,4-Trichlorobenzene	ND	81	260
2,4,5-Trichlorophenol	ND	98	330
2,4,6-Trichlorophenol	ND	110	380

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147184 MW-5C ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.1	3.4
Acenaphthylene	ND	1.1	3.4
4-Aminobiphenyl	ND	1.0	3.4
Aniline	ND	0.90	3.0
Anthracene	ND	0.90	2.8
Benzidine	ND	3.6	13
Benzo[a]anthracene	ND	0.86	2.7
Benzo[a]pyrene	ND	0.96	3.0
Benzo[b]fluoranthene	ND	2.8	9.4
Benzo[g,h,i]perylene	ND	1.2	3.8
Benzo[k]fluoranthene	ND	0.90	2.8
Benzoic Acid	ND	4.2	14
Benzyl Alcohol	ND	1.9	6.2
Bis(2-chloroethyl)ether	ND	1.0	3.3
Bis(2-chloroethoxy)methane	ND	1.2	4.0
Bis(2-ethylhexyl)phthalate	28	1.2	3.9
Bis(2-chloroisopropyl)ether	ND	1.1	3.6
4-Bromophenyl-phenyl ether	ND	0.86	2.8
Butylbenzylphthalate	7.8	0.64	2.1
2-Chlorophenol	ND	0.98	3.3
4-Chloro-3-methylphenol	ND	1.0	3.4
1-Chloronaphthalene	ND	0.88	3.0
2-Chloronaphthalene	ND	1.2	3.9
4-Chloroaniline	ND	1.1	3.8
4-Chlorophenyl-phenyl ether	ND	0.98	3.3
Chrysene	ND	1.0	3.3
Di-n-butylphthalate	ND	1.1	3.8
Di-n-octylphthalate	ND	0.64	2.1
Dibenzo[a,h]anthracene	ND	1.0	3.3
Dibenzofuran	ND	1.0	3.4
1,2-Dichlorobenzene	ND	0.68	2.2
1,3-Dichlorobenzene	ND	0.62	2.1
1,4-Dichlorobenzene	ND	0.72	2.4
3,3'-Dichlorobenzidine	ND	1.4	4.6
2,4-Dichlorophenol	ND	1.2	3.9
2,6-Dichlorophenol	ND	1.1	3.8
Diethylphthalate	ND	1.2	4.0
2,4-Dimethylphenol	ND	0.76	2.4
Dimethylphthalate	ND	1.2	3.9
p-(Dimethylamino)azobenzene	ND	0.80	2.6
4,6-Dinitro-2-methylphenol	ND	0.61	1.9
2,4-Dinitrophenol	ND	7.7	26
2,4-Dinitrotoluene	ND	1.1	3.4
2,6-Dinitrotoluene	ND	1.1	3.8
Diphenylamine	ND	1.0	3.4
1,2-Diphenylhydrazine	ND	1.5	5.0
Fluoranthene	ND	0.90	2.8
Fluorene	ND	0.92	2.8
Hexachlorobenzene	ND	0.90	3.0
Hexachlorobutadiene	ND	0.81	2.7
Hexachlorocyclopentadiene	ND	1.8	6.0
Hexachloroethane	ND	0.64	2.1
Indeno[1,2,3-cd]pyrene	ND	1.2	3.8
Isophorone	ND	1.1	3.6
2-Methylnaphthalene	ND	1.0	3.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147184 MW-5C ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.1	3.8
3 & 4-Methylphenol	ND	2.0	6.4
N-nitroso-di-n-propylamine	ND	1.0	3.3
N-nitrosodi-n-butylamine	ND	1.1	3.8
N-Nitrosodiethylamine	ND	4.2	14
N-nitrosodimethylamine	ND	0.70	2.4
N-Nitrosopyrrolidine	ND	4.2	14
N-nitrosopiperidine	ND	3.1	11
N-nitrosodiphenylamine	ND	1.0	3.4
Naphthalene	ND	1.3	4.2
1-Naphthylamine	ND	0.64	2.1
2-Naphthylamine	ND	0.98	3.3
2-Nitroaniline	ND	0.88	3.0
3-Nitroaniline	ND	1.1	3.8
Nitrobenzene	ND	1.1	3.6
2-Nitrophenol	ND	1.9	6.5
4-Nitrophenol	ND	0.64	2.1
4-Nitroaniline	ND	1.0	3.4
Pentachlorobenzene	ND	0.94	3.2
Pentachloronitrobenzene	ND	0.93	3.2
Pentachlorophenol	ND	0.98	3.3
Phenanthrene	ND	0.94	3.0
Phenol	ND	0.68	2.2
Pyrene	ND	0.88	2.8
Pyridine	ND	4.6	15
1,2,4,5-Tetrachlorobenzene	ND	1.0	3.4
2,3,4,6-Tetrachlorophenol	ND	0.87	2.8
1,2,4-Trichlorobenzene	ND	0.92	3.0
2,4,5-Trichlorophenol	ND	1.1	3.8
2,4,6-Trichlorophenol	ND	1.3	4.4

Surrogate Recovery on 2-Fluorophenol = 72.0 %
Surrogate Recovery on Phenol-d5 = 62.3 %
Surrogate Recovery on Nitrobenzene-d5 = 85.9 %
Surrogate Recovery on 2-Fluorobiphenyl = 76.9 %
Surrogate Recovery on 2,4,6-Tribromophenol = 83.7 %
Surrogate Recovery on Terphenyl-d14 = 83.4 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147185 MW-6A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.8	5.8
Acenaphthylene	ND	1.8	5.8
4-Aminobiphenyl	ND	1.7	5.8
Aniline	ND	1.5	5.0
Anthracene	ND	1.5	4.8
Benzidine	ND	6.1	21
Benzo[a]anthracene	ND	1.4	4.5
Benzo[a]pyrene	ND	1.6	5.0
Benzo[b]fluoranthene	ND	4.8	16
Benzo[g,h,i]perylene	ND	2.0	6.2
Benzo[k]fluoranthene	ND	1.5	4.8
Benzoic Acid	ND	7.0	23
Benzyl Alcohol	ND	3.1	10
Bis(2-chloroethyl)ether	ND	1.7	5.5
Bis(2-chloroethoxy)methane	ND	2.0	6.8
Bis(2-ethylhexyl)phthalate	ND	2.0	6.5
Bis(2-chloroisopropyl)ether	ND	1.8	6.0
4-Bromophenyl-phenyl ether	ND	1.4	4.8
Butylbenzylphthalate	ND	1.1	3.5
2-Chlorophenol	ND	1.6	5.5
4-Chloro-3-methylphenol	ND	1.8	5.8
1-Chloronaphthalene	ND	1.5	5.0
2-Chloronaphthalene	ND	2.0	6.5
4-Chloroaniline	ND	1.9	6.2
4-Chlorophenyl-phenyl ether	ND	1.6	5.5
Chrysene	ND	1.7	5.5
Di-n-butylphthalate	ND	1.8	6.2
Di-n-octylphthalate	ND	1.1	3.5
Dibenzo[a,h]anthracene	ND	1.8	5.5
Dibenzofuran	ND	1.8	5.8
1,2-Dichlorobenzene	ND	1.1	3.8
1,3-Dichlorobenzene	ND	1.0	3.5
1,4-Dichlorobenzene	ND	1.2	4.0
3,3'-Dichlorobenzidine	ND	2.2	7.8
2,4-Dichlorophenol	ND	1.9	6.5
2,6-Dichlorophenol	ND	1.9	6.2
Diethylphthalate	ND	2.0	6.8
2,4-Dimethylphenol	ND	1.3	4.0
Dimethylphthalate	ND	1.9	6.5
p-(Dimethylamino)azobenzene	ND	1.3	4.2
4,6-Dinitro-2-methylphenol	ND	1.0	3.2
2,4-Dinitrophenol	ND	13	44
2,4-Dinitrotoluene	ND	1.8	5.8
2,6-Dinitrotoluene	ND	1.8	6.2
Diphenylamine	ND	1.8	5.8
1,2-Diphenylhydrazine	ND	2.5	8.2
Fluoranthene	ND	1.5	4.8
Fluorene	ND	1.5	4.8
Hexachlorobenzene	ND	1.5	5.0
Hexachlorobutadiene	ND	1.4	4.5
Hexachlorocyclopentadiene	ND	3.0	10
Hexachloroethane	ND	1.1	3.5
Indeno[1,2,3-cd]pyrene	ND	2.0	6.2
Isophorone	ND	1.8	6.0
2-Methylnaphthalene	ND	1.7	5.8

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147185 MW-6A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.9	6.2
3 & 4-Methylphenol	ND	3.2	11
N-nitroso-di-n-propylamine	ND	1.7	5.5
N-nitrosodi-n-butylamine	ND	1.9	6.2
N-Nitrosodiethylamine	ND	7.0	23
N-nitrosodimethylamine	ND	1.2	4.0
N-Nitrosopyrrolidine	ND	7.0	23
N-nitrosopiperidine	ND	5.1	18
N-nitrosodiphenylamine	ND	1.8	5.8
Naphthalene	ND	2.2	7.0
1-Naphthylamine	ND	1.1	3.5
2-Naphthylamine	ND	1.6	5.5
2-Nitroaniline	ND	1.5	5.0
3-Nitroaniline	ND	1.9	6.2
Nitrobenzene	ND	1.8	6.0
2-Nitrophenol	ND	3.2	11
4-Nitroaniline	ND	1.7	5.8
4-Nitrophenol	ND	1.1	3.5
Pentachlorobenzene	ND	1.6	5.2
Pentachloronitrobenzene	ND	1.6	5.2
Pentachlorophenol	ND	1.6	5.5
Phenanthrene	ND	1.6	5.0
Phenol	ND	1.1	3.8
Pyrene	ND	1.5	4.8
Pyridine	ND	7.8	25
1,2,4,5-Tetrachlorobenzene	ND	1.7	5.8
2,3,4,6-Tetrachlorophenol	ND	1.4	4.8
1,2,4-Trichlorobenzene	ND	1.5	5.0
2,4,5-Trichlorophenol	ND	1.8	6.2
2,4,6-Trichlorophenol	ND	2.2	7.2

Surrogate Recovery on 2-Fluorophenol = 76.6 %
Surrogate Recovery on Phenol-d5 = 60.2 %
Surrogate Recovery on Nitrobenzene-d5 = 99.2 %
Surrogate Recovery on 2-Fluorobiphenyl = 87.5 %
Surrogate Recovery on 2,4,6-Tribromophenol = 60.7 %
Surrogate Recovery on Terphenyl-d14 = 93.2 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147186 MW-7A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	71	230
Acenaphthylene	< 150 >	71	230
4-Aminobiphenyl	ND	67	230
Aniline	ND	60	200
Anthracene	ND	60	190
Benzidine	ND	240	840
Benzo[a]anthracene	ND	57	180
Benzo[a]pyrene	ND	64	200
Benzo[b]fluoranthene	ND	190	630
Benzo[g,h,i]perylene	ND	78	250
Benzo[k]fluoranthene	ND	60	190
Benzoic Acid	ND	280	930
Benzyl Alcohol	ND	120	410
Bis(2-chloroethyl)ether	ND	67	220
Bis(2-chloroethoxy)methane	ND	80	270
Bis(2-ethylhexyl)phthalate	ND	82	260
Bis(2-chloroisopropyl)ether	ND	71	240
4-Bromophenyl-phenyl ether	ND	57	190
Butylbenzylphthalate	ND	43	140
2-Chlorophenol	ND	65	220
4-Chloro-3-methylphenol	ND	70	230
1-Chloronaphthalene	ND	59	200
2-Chloronaphthalene	ND	78	260
4-Chloroaniline	ND	75	250
4-Chlorophenyl-phenyl ether	ND	65	220
Chrysene	ND	68	220
Di-n-butylphthalate	ND	74	250
Di-n-octylphthalate	ND	43	140
Dibenzo[a,h]anthracene	ND	70	220
Dibenzofuran	ND	70	230
1,2-Dichlorobenzene	ND	45	150
1,3-Dichlorobenzene	ND	41	140
1,4-Dichlorobenzene	ND	48	160
3,3'-Dichlorobenzidine	ND	90	310
2,4-Dichlorophenol	ND	77	260
2,6-Dichlorophenol	ND	76	250
Diethylphthalate	ND	81	270
2,4-Dimethylphenol	ND	51	160
Dimethylphthalate	ND	77	260
p-(Dimethylamino)azobenzene	ND	53	170
4,6-Dinitro-2-methylphenol	ND	41	130
2,4-Dinitrophenol	ND	510	1800
2,4-Dinitrotoluene	ND	71	230
2,6-Dinitrotoluene	ND	74	250
Diphenylamine	ND	70	230
1,2-Diphenylhydrazine	ND	100	330
Fluoranthene	ND	60	190
Fluorene	ND	61	190
Hexachlorobenzene	ND	60	200
Hexachlorobutadiene	ND	54	180
Hexachlorocyclopentadiene	ND	120	400
Hexachloroethane	ND	43	140
Indeno[1,2,3-cd]pyrene	ND	78	250
Isophorone	ND	72	240
2-Methylnaphthalene	900	68	230

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147186 MW-7A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	76	250
3 & 4-Methylphenol	ND	130	430
N-nitroso-di-n-propylamine	ND	67	220
N-nitrosodi-n-butylamine	ND	75	250
N-Nitrosodiethylamine	ND	280	930
N-nitrosodimethylamine	ND	47	160
N-Nitrosopyrrolidine	ND	280	930
N-nitrosopiperidine	ND	200	710
N-nitrosodiphenylamine	ND	70	230
Naphthalene	4800	88	280
1-Naphthylamine	ND	43	140
2-Naphthylamine	ND	65	220
2-Nitroaniline	ND	59	200
3-Nitroaniline	ND	75	250
Nitrobenzene	ND	71	240
2-Nitrophenol	ND	130	430
4-Nitrophenol	ND	43	140
4-Nitroaniline	ND	69	230
Pentachlorobenzene	ND	63	210
Pentachloronitrobenzene	ND	62	210
Pentachlorophenol	ND	65	220
Phenanthrene	ND	63	200
Phenol	ND	45	150
Pyrene	ND	59	190
Pyridine	ND	310	1000
1,2,4,5-Tetrachlorobenzene	ND	69	230
2,3,4,6-Tetrachlorophenol	ND	58	190
1,2,4-Trichlorobenzene	ND	61	200
2,4,5-Trichlorophenol	ND	74	250
2,4,6-Trichlorophenol	ND	86	290

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147187 MW-8A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.4	4.6
Acenaphthylene	ND	1.4	4.6
4-Aminobiphenyl	ND	1.3	4.6
Aniline	ND	1.2	4.0
Anthracene	ND	1.2	3.8
Benzidine	ND	4.9	17
Benzo[a]anthracene	ND	1.1	3.6
Benzo[a]pyrene	ND	1.3	4.0
Benzo[b]fluoranthene	ND	3.8	13
Benzo[g,h,i]perylene	ND	1.6	5.0
Benzo[k]fluoranthene	ND	1.2	3.8
Benzoic Acid	ND	5.6	19
Benzyl Alcohol	ND	2.5	8.2
Bis(2-chloroethyl)ether	ND	1.3	4.4
Bis(2-chloroethoxy)methane	ND	1.6	5.4
Bis(2-ethylhexyl)phthalate	12	1.6	5.2
Bis(2-chloroisopropyl)ether	ND	1.4	4.8
4-Bromophenyl-phenyl ether	ND	1.1	3.8
Butylbenzylphthalate	ND	0.86	2.8
2-Chlorophenol	ND	1.3	4.4
4-Chloro-3-methylphenol	ND	1.4	4.6
1-Chloronaphthalene	ND	1.2	4.0
2-Chloronaphthalene	ND	1.6	5.2
4-Chloroaniline	ND	1.5	5.0
4-Chlorophenyl-phenyl ether	ND	1.3	4.4
Chrysene	ND	1.4	4.4
Di-n-butylphthalate	ND	1.5	5.0
Di-n-octylphthalate	ND	0.86	2.8
Dibenzo[a,h]anthracene	ND	1.4	4.4
Dibenzofuran	ND	1.4	4.6
1,2-Dichlorobenzene	ND	0.90	3.0
1,3-Dichlorobenzene	ND	0.82	2.8
1,4-Dichlorobenzene	ND	0.96	3.2
3,3'-Dichlorobenzidine	ND	1.8	6.2
2,4-Dichlorophenol	ND	1.5	5.2
2,6-Dichlorophenol	ND	1.5	5.0
Diethylphthalate	ND	1.6	5.4
2,4-Dimethylphenol	ND	1.0	3.2
Dimethylphthalate	ND	1.5	5.2
p-(Dimethylamino)azobenzene	ND	1.1	3.4
4,6-Dinitro-2-methylphenol	ND	0.82	2.6
2,4-Dinitrophenol	ND	10	35
2,4-Dinitrotoluene	ND	1.4	4.6
2,6-Dinitrotoluene	ND	1.5	5.0
Diphenylamine	ND	1.4	4.6
1,2-Diphenylhydrazine	ND	2.0	6.6
Fluoranthene	ND	1.2	3.8
Fluorene	ND	1.2	3.8
Hexachlorobenzene	ND	1.2	4.0
Hexachlorobutadiene	ND	1.1	3.6
Hexachlorocyclopentadiene	ND	2.4	8.0
Hexachloroethane	ND	0.86	2.8
Indeno[1,2,3-cd]pyrene	ND	1.6	5.0
Isophorone	ND	1.4	4.8
2-Methylnaphthalene	ND	1.4	4.6

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147187 MW-8A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	280	1.5	5.0
3 & 4-Methylphenol	380	2.6	8.6
N-nitroso-di-n-propylamine	ND	1.3	4.4
N-nitrosodi-n-butylamine	ND	1.5	5.0
N-Nitrosodiethylamine	ND	5.6	19
N-nitrosodimethylamine	ND	0.94	3.2
N-Nitrosopyrrolidine	ND	5.6	19
N-nitrosopiperidine	ND	4.1	14
N-nitrosodiphenylamine	ND	1.4	4.6
Naphthalene	65	1.8	5.6
1-Naphthylamine	ND	0.86	2.8
2-Naphthylamine	ND	1.3	4.4
2-Nitroaniline	ND	1.2	4.0
3-Nitroaniline	ND	1.5	5.0
Nitrobenzene	ND	1.4	4.8
2-Nitrophenol	ND	2.6	8.6
4-Nitrophenol	ND	0.86	2.8
4-Nitroaniline	ND	1.4	4.6
Pentachlorobenzene	ND	1.3	4.2
Pentachloronitrobenzene	ND	1.2	4.2
Pentachlorophenol	ND	1.3	4.4
Phenanthrene	ND	1.3	4.0
Phenol	120	0.90	3.0
Pyrene	ND	1.2	3.8
Pyridine	ND	6.2	20
1,2,4,5-Tetrachlorobenzene	ND	1.4	4.6
2,3,4,6-Tetrachlorophenol	ND	1.2	3.8
1,2,4-Trichlorobenzene	ND	1.2	4.0
2,4,5-Trichlorophenol	ND	1.5	5.0
2,4,6-Trichlorophenol	ND	1.7	5.8

Surrogate Recovery on 2-Fluorophenol = 74.9 %
Surrogate Recovery on Phenol-d5 = 53.8 %
Surrogate Recovery on Nitrobenzene-d5 = 89.7 %
Surrogate Recovery on 2-Fluorobiphenyl = 85.2 %
Surrogate Recovery on 2,4,6-Tribromophenol = 93.3 %
Surrogate Recovery on Terphenyl-d14 = 92.5 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147188 MW-9A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.5	4.7
Acenaphthylene	ND	1.5	4.7
4-Aminobiphenyl	ND	1.4	4.7
Aniline	ND	1.2	4.1
Anthracene	ND	1.2	3.9
Benzidine	ND	5.0	17
Benzo[a]anthracene	ND	1.2	3.7
Benzo[a]pyrene	ND	1.3	4.1
Benzo[b]fluoranthene	ND	3.9	13
Benzo[g,h,i]perylene	ND	1.6	5.1
Benzo[k]fluoranthene	ND	1.2	3.9
Benzoic Acid	ND	5.7	19
Benzyl Alcohol	32	2.5	8.4
Bis(2-chloroethyl)ether	ND	1.4	4.5
Bis(2-chloroethoxy)methane	ND	1.6	5.5
Bis(2-ethylhexyl)phthalate	97	1.7	5.3
Bis(2-chloroisopropyl)ether	ND	1.5	4.9
4-Bromophenyl-phenyl ether	ND	1.2	3.9
Butylbenzylphthalate	12	0.88	2.9
2-Chlorophenol	ND	1.3	4.5
4-Chloro-3-methylphenol	ND	1.4	4.7
1-Chloronaphthalene	ND	1.2	4.1
2-Chloronaphthalene	ND	1.6	5.3
4-Chloroaniline	ND	1.5	5.1
4-Chlorophenyl-phenyl ether	ND	1.3	4.5
Chrysene	ND	1.4	4.5
Di-n-butylphthalate	ND	1.5	5.1
Di-n-octylphthalate	ND	0.88	2.9
Dibenzo[a,h]anthracene	ND	1.4	4.5
Dibenzofuran	ND	1.4	4.7
1,2-Dichlorobenzene	ND	0.92	3.1
1,3-Dichlorobenzene	ND	0.84	2.9
1,4-Dichlorobenzene	ND	0.98	3.3
3,3'-Dichlorobenzidine	ND	1.8	6.4
2,4-Dichlorophenol	ND	1.6	5.3
2,6-Dichlorophenol	ND	1.6	5.1
Diethylphthalate	ND	1.7	5.5
2,4-Dimethylphenol	ND	1.0	3.3
Dimethylphthalate	ND	1.6	5.3
p-(Dimethylamino)azobenzene	ND	1.1	3.5
4,6-Dinitro-2-methylphenol	ND	0.84	2.6
2,4-Dinitrophenol	ND	10	36
2,4-Dinitrotoluene	ND	1.5	4.7
2,6-Dinitrotoluene	ND	1.5	5.1
Diphenylamine	ND	1.4	4.7
1,2-Diphenylhydrazine	ND	2.0	6.8
Fluoranthene	ND	1.2	3.9
Fluorene	ND	1.2	3.9
Hexachlorobenzene	ND	1.2	4.1
Hexachlorobutadiene	ND	1.1	3.7
Hexachlorocyclopentadiene	ND	2.5	8.2
Hexachloroethane	ND	0.88	2.9
Indeno[1,2,3-cd]pyrene	ND	1.6	5.1
Isophorone	ND	1.5	4.9
2-Methylnaphthalene	ND	1.4	4.7

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147188 MW-9A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.6	5.1
3 & 4-Methylphenol	< 4.3 >	2.7	8.8
N-nitroso-di-n-propylamine	ND	1.4	4.5
N-nitrosodi-n-butylamine	ND	1.5	5.1
N-Nitrosodiethylamine	ND	5.7	19
N-nitrosodimethylamine	ND	0.96	3.3
N-Nitrosopyrrolidine	ND	5.7	19
N-nitrosopiperidine	ND	4.2	15
N-nitrosodiphenylamine	ND	1.4	4.7
Naphthalene	6.2	1.8	5.7
1-Naphthylamine	ND	0.88	2.9
2-Naphthylamine	ND	1.3	4.5
2-Nitroaniline	ND	1.2	4.1
3-Nitroaniline	ND	1.5	5.1
Nitrobenzene	ND	1.5	4.9
2-Nitrophenol	ND	2.6	8.9
4-Nitroaniline	ND	1.4	4.7
4-Nitrophenol	ND	0.88	2.9
Pentachlorobenzene	ND	1.3	4.3
Pentachloronitrobenzene	ND	1.3	4.3
Pentachlorophenol	ND	1.3	4.5
Phenanthrene	ND	1.3	4.1
Phenol	ND	0.92	3.1
Pyrene	ND	1.2	3.9
Pyridine	ND	6.4	20
1,2,4,5-Tetrachlorobenzene	ND	1.4	4.7
2,3,4,6-Tetrachlorophenol	ND	1.2	3.9
1,2,4-Trichlorobenzene	ND	1.2	4.1
2,4,5-Trichlorophenol	ND	1.5	5.1
2,4,6-Trichlorophenol	ND	1.8	5.9

Surrogate Recovery on 2-Fluorophenol = 77.1 %
Surrogate Recovery on Phenol-d5 = 69.4 %
Surrogate Recovery on Nitrobenzene-d5 = 94.1 %
Surrogate Recovery on 2-Fluorobiphenyl = 84.1 %
Surrogate Recovery on 2,4,6-Tribromophenol = 92.9 %
Surrogate Recovery on Terphenyl-d14 = 87.5 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147189 MW-10A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	ND	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	ND	1.1	3.4
Benzo[a]pyrene	ND	1.2	3.8
Benzo[b]fluoranthene	ND	3.6	12
Benzo[g,h,i]perylene	ND	1.5	4.8
Benzo[k]fluoranthene	ND	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	12	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	ND	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	ND	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	ND	1.1	3.6
Fluorene	ND	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	ND	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	ND	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147189 MW-10A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	ND	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitroaniline	ND	1.3	4.4
4-Nitrophenol	ND	0.82	2.7
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	ND	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	ND	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 71.9 %
Surrogate Recovery on Phenol-d5 = 56.1 %
Surrogate Recovery on Nitrobenzene-d5 = 93.3 %
Surrogate Recovery on 2-Fluorobiphenyl = 85.5 %
Surrogate Recovery on 2,4,6-Tribromophenol = 82.7 %
Surrogate Recovery on Terphenyl-d14 = 92.1 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147190 MW-13A ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	180	600
Acenaphthylene	< 230 >	180	600
4-Aminobiphenyl	ND	170	600
Aniline	ND	160	520
Anthracene	ND	160	490
Benzidine	ND	630	2200
Benzo[a]anthracene	ND	150	470
Benzo[a]pyrene	ND	170	520
Benzo[b]fluoranthene	ND	490	1600
Benzo[g,h,i]perylene	ND	200	650
Benzo[k]fluoranthene	ND	160	490
Benzoic Acid	ND	730	2400
Benzyl Alcohol	ND	320	1100
Bis(2-chloroethyl)ether	ND	170	570
Bis(2-chloroethoxy)methane	ND	210	700
Bis(2-ethylhexyl)phthalate	ND	210	680
Bis(2-chloroisopropyl)ether	ND	180	620
4-Bromophenyl-phenyl ether	ND	150	490
Butylbenzylphthalate	ND	110	360
2-Chlorophenol	ND	170	570
4-Chloro-3-methylphenol	ND	180	600
1-Chloronaphthalene	ND	150	520
2-Chloronaphthalene	ND	200	680
4-Chloroaniline	ND	200	650
4-Chlorophenyl-phenyl ether	ND	170	570
Chrysene	ND	180	570
Di-n-butylphthalate	ND	190	650
Di-n-octylphthalate	ND	110	360
Dibenzo[a,h]anthracene	ND	180	570
Dibenzofuran	ND	180	600
1,2-Dichlorobenzene	ND	120	390
1,3-Dichlorobenzene	ND	110	360
1,4-Dichlorobenzene	ND	120	420
3,3'-Dichlorobenzidine	ND	230	810
2,4-Dichlorophenol	ND	200	680
2,6-Dichlorophenol	ND	200	650
Diethylphthalate	ND	210	700
2,4-Dimethylphenol	3800	130	420
Dimethylphthalate	ND	200	680
p-(Dimethylamino)azobenzene	ND	140	440
4,6-Dinitro-2-methylphenol	ND	110	340
2,4-Dinitrophenol	ND	1300	4600
2,4-Dinitrotoluene	ND	180	600
2,6-Dinitrotoluene	ND	190	650
Diphenylamine	ND	180	600
1,2-Diphenylhydrazine	ND	260	860
Fluoranthene	ND	160	490
Fluorene	ND	160	490
Hexachlorobenzene	ND	160	520
Hexachlorobutadiene	ND	140	470
Hexachlorocyclopentadiene	ND	310	1000
Hexachloroethane	ND	110	360
Indeno[1,2,3-cd]pyrene	ND	200	650
Isophorone	ND	190	620
2-Methylnaphthalene	1500	180	600

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147190 MW-13A ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	3800	200	650
3 & 4-Methylphenol	7400	340	1100
N-nitroso-di-n-propylamine	ND	170	570
N-nitrosodi-n-butylamine	ND	200	650
N-Nitrosodiethylamine	ND	730	2400
N-nitrosodimethylamine	ND	120	420
N-Nitrosopyrrolidine	ND	730	2400
N-nitrosopiperidine	ND	530	1800
N-nitrosodiphenylamine	ND	180	600
Naphthalene	8500	230	730
1-Naphthylamine	ND	110	360
2-Naphthylamine	ND	170	570
2-Nitroaniline	ND	150	520
3-Nitroaniline	ND	200	650
Nitrobenzene	ND	180	620
2-Nitrophenol	ND	340	1100
4-Nitrophenol	ND	110	360
4-Nitroaniline	ND	180	600
Pentachlorobenzene	ND	160	550
Pentachloronitrobenzene	ND	160	550
Pentachlorophenol	ND	170	570
Phenanthrene	ND	160	520
Phenol	2200	120	390
Pyrene	ND	150	490
Pyridine	ND	810	2600
1,2,4,5-Tetrachlorobenzene	ND	180	600
2,3,4,6-Tetrachlorophenol	ND	150	490
1,2,4-Trichlorobenzene	ND	160	520
2,4,5-Trichlorophenol	ND	190	650
2,4,6-Trichlorophenol	ND	220	750

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147191 MW-13B ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	3600	12000
Acenaphthylene	59000	3600	12000
4-Aminobiphenyl	ND	3400	12000
Aniline	ND	3000	10000
Anthracene	< 8500 >	3000	9500
Benzidine	ND	12000	42000
Benzo[a]anthracene	< 5400 >	2800	9000
Benzo[a]pyrene	14000	3200	10000
Benzo[b]fluoranthene	ND	9500	32000
Benzo[g,h,i]perylene	< 4900 >	3900	12000
Benzo[k]fluoranthene	ND	3000	9500
Benzoic Acid	ND	14000	46000
Benzyl Alcohol	ND	6200	21000
Bis(2-chloroethyl)ether	ND	3400	11000
Bis(2-chloroethoxy)methane	ND	4000	14000
Bis(2-ethylhexyl)phthalate	ND	4100	13000
Bis(2-chloroisopropyl)ether	ND	3600	12000
4-Bromophenyl-phenyl ether	ND	2800	9500
Butylbenzylphthalate	ND	2200	7000
2-Chlorophenol	ND	3200	11000
4-Chloro-3-methylphenol	ND	3500	12000
1-Chloronaphthalene	ND	3000	10000
2-Chloronaphthalene	ND	3900	13000
4-Chloroaniline	ND	3800	12000
4-Chlorophenyl-phenyl ether	ND	3200	11000
Chrysene	< 4300 >	3400	11000
Di-n-butylphthalate	ND	3700	12000
Di-n-octylphthalate	ND	2200	7000
Dibenzo[a,h]anthracene	ND	3500	11000
Dibenzofuran	ND	3500	12000
1,2-Dichlorobenzene	ND	2200	7500
1,3-Dichlorobenzene	ND	2000	7000
1,4-Dichlorobenzene	ND	2400	8000
3,3'-Dichlorobenzidine	ND	4500	16000
2,4-Dichlorophenol	ND	3800	13000
2,6-Dichlorophenol	ND	3800	12000
Diethylphthalate	ND	4000	14000
2,4-Dimethylphenol	ND	2600	8000
Dimethylphthalate	ND	3800	13000
p-(Dimethylamino)azobenzene	ND	2600	8500
4,6-Dinitro-2-methylphenol	ND	2000	6400
2,4-Dinitrophenol	ND	26000	88000
2,4-Dinitrotoluene	ND	3600	12000
2,6-Dinitrotoluene	ND	3700	12000
Diphenylamine	ND	3500	12000
1,2-Diphenylhydrazine	ND	5000	16000
Fluoranthene	ND	3000	9500
Fluorene	18000	3000	9500
Hexachlorobenzene	ND	3000	10000
Hexachlorobutadiene	ND	2700	9000
Hexachlorocyclopentadiene	ND	6000	20000
Hexachloroethane	ND	2200	7000
Indeno[1,2,3-cd]pyrene	ND	3900	12000
Isophorone	ND	3600	12000
2-Methylnaphthalene	210000	3400	12000

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Dames & Moore
Project Description: NSP Project Title: 05644-077
Northern Lake Service Project Number: 36321

Analyte Name	147191 MW-13B ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	3800	12000
3 & 4-Methylphenol	ND	6500	22000
N-nitroso-di-n-propylamine	ND	3400	11000
N-nitrosodi-n-butylamine	ND	3800	12000
N-Nitrosodiethylamine	ND	14000	46000
N-nitrosodimethylamine	ND	2400	8000
N-Nitrosopyrrolidine	ND	14000	46000
N-nitrosopiperidine	ND	10000	35000
N-nitrosodiphenylamine	ND	3500	12000
Naphthalene	290000	4400	14000
1-Naphthylamine	ND	2200	7000
2-Naphthylamine	ND	3200	11000
2-Nitroaniline	ND	3000	10000
3-Nitroaniline	ND	3800	12000
Nitrobenzene	ND	3600	12000
2-Nitrophenol	ND	6400	22000
4-Nitrophenol	ND	2200	7000
4-Nitroaniline	ND	3400	12000
Pentachlorobenzene	ND	3200	10000
Pentachloronitrobenzene	ND	3100	10000
Pentachlorophenol	ND	3200	11000
Phenanthrene	58000	3200	10000
Phenol	ND	2200	7500
Pyrene	22000	3000	9500
Pyridine	ND	16000	50000
1,2,4,5-Tetrachlorobenzene	ND	3400	12000
2,3,4,6-Tetrachlorophenol	ND	2900	9500
1,2,4-Trichlorobenzene	ND	3000	10000
2,4,5-Trichlorophenol	ND	3700	12000
2,4,6-Trichlorophenol	ND	4300	14000

NO. 28190

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT: Dames & Moore		PROJECT TITLE: NSP	
ADDRESS: ~~2707 Interstate~~ 25 Kessel Ct. Suite 201		PROJECT NO.: 05644-077	P.O. NO.:
CITY: Madison	STATE: WI ZIP: 53711	CONTACT: Dave Trainor	PHONE: (608) 273-2886

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE V/H	G/NP				COLLECTION REMARKS
1.	147179	MW-2A (NET)	9/3/97	1600	GW	Grab	3	2				
2.	147180	MW-2B (NET)	9/3/97	1630								
3.	147181	MW-4A	9/3/97	1420								
4.	147182	MW-4B	9/3/97	1400								
5.	147183	MW-5B	9/4/97	1215								
6.	147184	MW-5C	9/4/97	1130								
7.	147185	MW-6A	9/3/97	1130								
8.	147186	MW-7A	9/3/97	1715								
9.	147187	MW-8A	9/3/97	1745								
10.	147188	MW-9A	9/4/97	0930			2	2				
11.	147189	MW-10A	9/3/97	1830								
12.	147190	MW-13A	9/4/97	1545	↓	↓	↓	↓				

SAMPLE TYPE:
SW = surface water; WW = wastewater; GW = groundwater; DW = drinking water; TIS = tissue; AIR = air; PROD = product; SOIL = soil; SED = sediment; describe others

CONTAINER: P = plastic; G = glass; V = glass vial; B = plastic bag; describe others

PRESERVATIVES & PREPARATION: NP = nothing added; S = sulfuric acid; N = nitric acid; Z = zinc acetate; OH = sodium hydroxide; HA = hydrochloric & ascorbic acid; H = hydrochloric acid; F = field filtered

COLLECTED BY (signatures): [signature] [signature] — CUSTODY SEAL NO. (IF ANY): — DATE/TIME: 9/5/97 0800

RELINQUISHED BY (signature): [signature] — RECEIVED BY (signature): [signature] — DATE/TIME: 9/5/97 1210

RELINQUISHED BY (signature): — RECEIVED BY (signature): — DATE/TIME:

DISPATCHED BY (signature): — METHOD OF TRANSPORT: — DATE/TIME:

RECEIVED AT NLS BY (signature)	DATE/TIME	CONDITION	TEMP.
[signature]	9.05.97 12:10	on ice	

SEAL INTACT?	SEAL #	REMARKS & OTHER INFORMATION
☐ YES ☐ NA ☐ NO		

IMPORTANT: 1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY

NO. 28191

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT	PROJECT TITLE	
Dames & Moore	NSP	
ADDRESS 25 Kessel Ct. #201	PROJECT NO. 05644-077	P.O. NO.
CITY Madison STATE WI ZIP 53711	CONTACT Dave Trainor	PHONE (608) 273-28[illegible]6

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE VH	G/NP	P/N/Z			COLLECTION REMARKS
1.	147191	MW-13B	9/4/97	1445	GW	Grab	3	2				
2.	147192	Trip Blank					1					
3.		Rue Temp Blank							1			
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												

SAMPLE TYPE:
SW = surface water; WW = wastewater; GW = groundwater; DW = drinking water; TIS = tissue; AIR = air; PROD = product; SOIL = soil; SED = sediment; describe others

CONTAINER: P = plastic; G = glass; V = glass vial; B = plastic bag; describe others

PRESERVATIVES & PREPARATION: NP = nothing added; S = sulfuric acid; N = nitric acid; Z = zinc acetate; OH = sodium hydroxide; HA = hydrochloric & ascorbic acid; H = hydrochloric acid; F = field filtered

COLLECTED BY (signatures) Rick Hazlett / Douglas Jennings		CUSTODY SEAL NO. (IF ANY)	DATE/TIME 9/5/97 0800
RELINQUISHED BY (signature) Rick Hazlett	RECEIVED BY (signature)		DATE/TIME 9/5/97 [illegible]1C
RELINQUISHED BY (signature)	RECEIVED BY (signature)		DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT		DATE/TIME

RECEIVED AT NLS BY (signature)	DATE/TIME	CONDITION	TEMP.
Debbie Wilson	9-05-97 12:10	Onice	

SEAL INTACT? ☐ YES ☐ NO	SEAL #	REMARKS & OTHER INFORMATION

Hand

IMPORTANT:
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY

NORTHERN LAKE SERVICE, INC.

400 NORTH LAKE AVENUE
CRANDON, WI 54520 (715)478-2777

ORDER OF ANALYSIS

RESULTS ORDERED BY:	CHAIN OF CUSTODY RECORD NUMBER:
Dave Trainer Dames & Moore 25 Kessel Ct. #201 Madison, WI 53711 (608) 273-2886	28190 & 28191
	QUOTATION NUMBER:
	ANALYZE FOR DISSOLVED OR TOTAL PARAMETERS?
SEND RESULTS TO:	SEND INVOICE TO:
Same	Same

Note "L" for low level ICP analysis, and "F" for furnace analysis.

Samples on line #s: (28190) (28191) 1-13 1-2 to be analyzed for the parameters checked below:

- ☐ Alkalinity, total
- ☐ Alkalinity, bicarb.
- ☐ Aluminum
- ☐ Antimony
- ☐ Arsenic
- ☐ Barium
- ☐ Beryllium
- ☐ B.O.D.-5
- ☐ Boron
- ☐ Cadmium
- ☐ Calcium
- ☐ C.O.D.
- ☐ Chloride
- ☐ Chromium
- ☐ Chromium, hexavalent
- ☐ Cobalt
- ☐ Coliform, fecal
- ☐ Coliform, total
- ☐ Color
- ☐ Conductivity
- ☐ Copper
- ☐ _____

- ☐ Cyanide, total
- ☐ Amenable
- ☐ Fluoride
- ☐ Hardness
- ☐ Iron
- ☐ Lead
- ☐ Magnesium
- ☐ Manganese
- ☐ Mercury
- ☐ Molybdenum
- ☐ Nickel
- ☐ Nitrogen, total
- ☐ Ammonia
- ☐ Nitrate
- ☐ Nitrite
- ☐ Nitrate + Nitrite
- ☐ Total Kjeldahl
- ☐ Total Organic
- ☐ Oil & Grease
- ☐ pH
- ☐ _____
- ☐ _____

- ☐ Phenols
- ☐ Phosphorus, total
- ☐ Tot. reactive
- ☐ Dis. reactive
- ☐ Potassium
- ☐ Selenium
- ☐ Silica
- ☐ Silver
- ☐ Sodium
- ☐ Solids, total
- ☐ Tot. dissolved
- ☐ Tot. suspended
- ☐ Sulfate
- ☐ Sulfide
- ☐ Surfactants (MBAS)
- ☐ Thallium
- ☐ Tin
- ☐ T.O.C.
- ☐ Turbidity
- ☐ Vanadium
- ☐ Zinc
- ☐ Munic.Sludge,WI List

- ☐ Acid Extractables by 625/8270
- ☐ Base/Neutral Extractables by 625/8270
- ☐ BNAs by 625/8270
- ☐ Chlorinated Hydrocarbons by 612
- ☐ Haloethers by 611
- ☐ Nitrosamines by 607
- ☐ Pesticides-Organochlorine by 608/8080
- ☐ Pesticides-Organophosphate by 8141
- ☐ PCBs by 608/8080
- ☐ Phenols by GC 604/8040
- ☐ Phenoxy Acid Herbicides by 8150
- ☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-BNAs
- ☐ TCLP-pesticides/herbicides
- ☐ VOCs by EPA 601+602 or 8010+8020
- ☒ -by EPA 8021
- ☐ -by EPA 624/8260
- ☐ -by EPA 524.2 (SDWA)
- ☐ BTEX by 8020
- ☐ PVOCs by 8020
- ☐ GRO-WI Modified ☐ GRO + PVOCs
- ☐ DRO-WI Modified
- ☐ PAHs by 610LC/8310

☒ SVOC - EPA 8270

Samples on line #s: _____ to be analyzed for the parameters checked below:

- ☐ Alkalinity, total
- ☐ Alkalinity, bicarb.
- ☐ Aluminum
- ☐ Antimony
- ☐ Arsenic
- ☐ Barium
- ☐ Beryllium
- ☐ B.O.D.-5
- ☐ Boron
- ☐ Cadmium
- ☐ Calcium
- ☐ C.O.D.
- ☐ Chloride
- ☐ Chromium
- ☐ Chromium, hexavalent
- ☐ Cobalt
- ☐ Coliform, fecal
- ☐ Coliform, total
- ☐ Color
- ☐ Conductivity
- ☐ Copper
- ☐ _____

- ☐ Cyanide, total
- ☐ Amenable
- ☐ Fluoride
- ☐ Hardness
- ☐ Iron
- ☐ Lead
- ☐ Magnesium
- ☐ Manganese
- ☐ Mercury
- ☐ Molybdenum
- ☐ Nickel
- ☐ Nitrogen, total
- ☐ Ammonia
- ☐ Nitrate
- ☐ Nitrite
- ☐ Nitrate + Nitrite
- ☐ Total Kjeldahl
- ☐ Total Organic
- ☐ Oil & Grease
- ☐ pH
- ☐ _____
- ☐ _____

- ☐ Phenols
- ☐ Phosphorus, total
- ☐ Tot. reactive
- ☐ Dis. reactive
- ☐ Potassium
- ☐ Selenium
- ☐ Silica
- ☐ Silver
- ☐ Sodium
- ☐ Solids, total
- ☐ Tot. dissolved
- ☐ Tot. suspended
- ☐ Sulfate
- ☐ Sulfide
- ☐ Surfactants (MBAS)
- ☐ Thallium
- ☐ Tin
- ☐ T.O.C.
- ☐ Turbidity
- ☐ Vanadium
- ☐ Zinc
- ☐ Munic.Sludge,WI List

- ☐ Acid Extractables by 625/8270
- ☐ Base/Neutral Extractables by 625/8270
- ☐ BNAs by 625/8270
- ☐ Chlorinated Hydrocarbons by 612
- ☐ Haloethers by 611
- ☐ Nitrosamines by 607
- ☐ Pesticides-Organochlorine by 608/8080
- ☐ Pesticides-Organophosphate by 8141
- ☐ PCBs by 608/8080
- ☐ Phenols by GC 604/8040
- ☐ Phenoxy Acid Herbicides by 8150
- ☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-BNAs
- ☐ TCLP-pesticides/herbicides
- ☐ VOCs by EPA 601+602 or 8010+8020
- ☐ -by EPA 8021
- ☐ -by EPA 624/8260
- ☐ -by EPA 524.2 (SDWA)
- ☐ BTEX by 8020
- ☐ PVOCs by 8020
- ☐ GRO-WI Modified ☐ GRO + PVOCs
- ☐ DRO-WI Modified
- ☐ PAHs by 610LC/8310

SPECIAL INSTRUCTIONS: _____

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: TW-11 NLS#: 147158
Ref. Line 1 of COC 22149 Description: TW-11
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

Sample ID: MW-1 NLS#: 147159
Ref. Line 2 of COC 22149 Description: MW-1
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: MW-3 NLS#: 147160
Ref. Line 3 of COC 22149 Description: MW-3
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: High surrogate value is due to sample matrix. Unidentified hydrocarbons present.				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

Sample ID: MW-2 NLS#: 147161
Ref. Line 4 of COC 22149 Description: MW-2
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
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WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: TW-6 **NLS#: 147162**
Ref. Line 5 of COC 22149 Description: TW-6
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

Sample ID: TW-12 **NLS#: 147163**
Ref. Line 6 of COC 22149 Description: TW-12
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: TW-9 NLS#: 147164
Ref. Line 7 of COC 22149 Description: TW-9
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached Additional Comments: Due to high sample values the surrogates were too dilute to recover.				SW846 8270	09/11/97	721026460

Sample ID: MW-7 (D&M) NLS#: 147165
Ref. Line 8 of COC 22149 Description: MW-7 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached Additional Comments: Due to high sample values the surrogates were too dilute to recover.				SW846 8270	09/13/96	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: TW-13 NLS#: 147166
Ref. Line 9 of COC 22149 Description: TW-13
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached Additional Comments: Due to high sample values the surrogates were too dilute to recover.				SW846 8270	09/13/96	721026460

Sample ID: MW-3 (D&M) NLS#: 147167
Ref. Line 10 of COC 22149 Description: MW-3 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached Additional Comments: Check Standard recovery on Bromomethane was outside QC limits at 80%.				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/06/97	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Tel:(715)478-2777 Fax:(715)478-3060

WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: MW-2 (D&M) NLS#: 147168
Ref. Line 11 of COC 22149 Description: MW-2 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/16/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/11/97	721026460

Sample ID: MW-5 (D&M) NLS#: 147169
Ref. Line 12 of COC 22149 Description: MW-5 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/11/97	721026460

Additional Comments: Due to high sample values the surrogates were too dilute to recover.

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WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: MW-1 (D&M) **NLS#: 147170**
Ref. Line 1 of COC 22150 Description: MW-1 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/15/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/11/97	721026460

Sample ID: MW-10 (D&M) **NLS#: 147171**
Ref. Line 2 of COC 22150 Description: MW-10 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/12/97	721026460

Sample ID: MW-8 (D&M) **NLS#: 147172**
Ref. Line 3 of COC 22150 Description: MW-8 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/12/97	721026460

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WIS. LAB CERT. NO. 721026460

ANALYTICAL REPORT

 NLS PROJECT# 36318

Client: Short-Elliott-Hendrickson, Inc.
Attn: John Guhl
421 Frenette Drive
Chippewa Falls, WI 54729

Project Description: Ashland Lakefront Property
Project Title: WIDNR 9401.00

Sample ID: MW-4 (D&M) NLS#: 147173
Ref. Line 4 of COC 22150 Description: MW-4 (D&M)
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
Base/Neutral/Acid Extraction	yes				SW846 3510	09/05/97	721026460
Semivolatile GC/MS by 8270B	see attached				SW846 8270	09/12/96	721026460

Sample ID: Trip Blank NLS#: 147174
Ref. Line 5 of COC 22150 Description: Trip Blank
Collected: 09/03/97 Received: 09/05/97 Reported: 09/22/97

Parameter	Result	Units	LOD	LOQ	Method	Analyzed	Lab
VOCs (water) by EPA 8021	see attached				SW846 8021	09/12/97	721026460

Values in brackets represent results greater than the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than the LOQ are considered to be in the region of "Certain Quantitation".

LOD = Limit of Detection
DWB = Dry Weight Basis
LOQ = Limit of Quantitation
NA = Not Applicable
ND = Not Detected
%DWB = (mg/kg DWB)/10000

Reviewed by: Jerry R Bach

Authorized by:
R. T. Krueger
Laboratory Manager

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147158 TW-11 ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	20	68
Bromobenzene	ND	16	52
Bromochloromethane	ND	19	65
Bromodichloromethane	ND	18	63
Bromoform	ND	11	39
Bromomethane	ND	34	120
n-Butylbenzene	ND	13	45
sec-Butylbenzene	ND	15	53
tert-Butylbenzene	ND	24	83
Carbon Tetrachloride	ND	36	120
Chlorobenzene	ND	15	51
Chloroethane	ND	24	83
Chloroform	ND	25	87
Chloromethane	ND	24	82
2-Chlorotoluene	ND	18	61
4-Chlorotoluene	ND	15	57
Dibromochloromethane	ND	16	54
1,2-Dibromo-3-Chloropropane	ND	11	37
1,2-Dibromoethane	ND	12	42
Dibromomethane	ND	16	53
1,2-Dichlorobenzene	ND	24	83
1,3-Dichlorobenzene	ND	20	69
1,4-Dichlorobenzene	ND	16	56
Dichlorodifluoromethane	ND	25	86
1,1-Dichloroethane	ND	26	92
1,2-Dichloroethane	ND	25	87
1,1-Dichloroethene	ND	30	100
cis-1,2-Dichloroethene	ND	14	50
trans-1,2-Dichloroethene	ND	61	210
1,2-Dichloropropane	ND	23	79
1,3-Dichloropropane	ND	25	88
2,2-Dichloropropane	ND	26	90
1,1-Dichloropropene	ND	27	94
cis-1,3-Dichloropropene	ND	15	50
trans-1,3-Dichloropropene	ND	10	35
Ethylbenzene	290	22	76
Hexachlorobutadiene	ND	29	99
Isopropylbenzene	ND	22	76
p-Isopropyltoluene	ND	20	69
Methylene chloride	ND	24	83
Naphthalene	1700	16	57
n-Propylbenzene	ND	22	76
ortho-Xylene/Styrene	< 78 >	34	120
1,1,1,2-Tetrachloroethane	ND	26	88
1,1,2,2-Tetrachloroethane	ND	18	60
Tetrachloroethene	ND	16	55
Toluene	< 28 >	20	68
1,2,3-Trichlorobenzene	ND	21	72
1,2,4-Trichlorobenzene	ND	15	51
1,1,1-Trichloroethane	ND	34	120
1,1,2-Trichloroethane	ND	21	73
Trichloroethene	ND	25	86
Trichlorofluoromethane	ND	39	130
1,2,3-Trichloropropane	ND	18	62
1,2,4-Trimethylbenzene	70	19	66

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147158 TW-11 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	20	69
Vinyl chloride	ND	16	51
meta,para-Xylene	160	42	140
MTBE	ND	61	210
Isopropylether	ND	17	59

Surrogate Recovery on 2-Bromochlorobenzene-PID = 101 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 100 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147159 MW-1 ug/L	LOD ug/L	LOQ ug/L
Benzene	2200	40	140
Bromobenzene	ND	31	100
Bromochloromethane	ND	38	130
Bromodichloromethane	ND	37	130
Bromoform	ND	23	78
Bromomethane	ND	68	230
n-Butylbenzene	ND	26	90
sec-Butylbenzene	ND	31	110
tert-Butylbenzene	ND	48	170
Carbon Tetrachloride	ND	71	240
Chlorobenzene	ND	29	100
Chloroethane	ND	48	170
Chloroform	ND	50	170
Chloromethane	ND	47	160
2-Chlorotoluene	ND	35	120
4-Chlorotoluene	ND	30	110
Dibromochloromethane	ND	32	110
1,2-Dibromo-3-Chloropropane	ND	21	73
1,2-Dibromoethane	ND	25	85
Dibromomethane	ND	31	110
1,2-Dichlorobenzene	ND	48	170
1,3-Dichlorobenzene	ND	40	140
1,4-Dichlorobenzene	ND	32	110
Dichlorodifluoromethane	ND	50	170
1,1-Dichloroethane	ND	53	180
1,2-Dichloroethane	ND	50	170
1,1-Dichloroethene	ND	61	210
cis-1,2-Dichloroethene	ND	29	99
trans-1,2-Dichloroethene	ND	120	420
1,2-Dichloropropane	ND	46	160
1,3-Dichloropropane	ND	51	180
2,2-Dichloropropane	ND	52	180
1,1-Dichloropropene	ND	55	190
cis-1,3-Dichloropropene	ND	29	100
trans-1,3-Dichloropropene	ND	20	70
Ethylbenzene	460	44	150
Hexachlorobutadiene	ND	57	200
Isopropylbenzene	ND	44	150
p-Isopropyltoluene	ND	40	140
Methylene chloride	ND	48	170
Naphthalene	1900	33	110
n-Propylbenzene	ND	44	150
ortho-Xylene/Styrene	< 140 >	67	230
1,1,1,2-Tetrachloroethane	ND	51	180
1,1,2,2-Tetrachloroethane	ND	35	120
Tetrachloroethene	ND	33	110
Toluene	< 110 >	39	140
1,2,3-Trichlorobenzene	ND	42	140
1,2,4-Trichlorobenzene	ND	30	100
1,1,1-Trichloroethane	ND	68	230
1,1,2-Trichloroethane	ND	42	150
Trichloroethene	ND	50	170
Trichlorofluoromethane	ND	77	270
1,2,3-Trichloropropane	ND	36	120
1,2,4-Trimethylbenzene	< 110 >	38	130

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147159 MW-1 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	40	140
Vinyl chloride	ND	32	100
meta,para-Xylene	< 240 >	84	290
MTBE	ND	120	420
Isopropylether	ND	34	120

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 98.0 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147160 MW-3 ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	0.95	0.12	0.41
sec-Butylbenzene	3.9	0.11	0.36
tert-Butylbenzene	0.94	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	0.87	0.15	0.50
p-Isopropyltoluene	5.5	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	6.0	0.13	0.42
n-Propylbenzene	< 0.17 >	0.15	0.50
ortho-Xylene	0.84	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	< 0.41 >	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147160 MW-3	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	13	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 190 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 109 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXD)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147161 MW-2 ug/L	LOD ug/L	LOQ ug/L
Benzene	250	4.0	14
Bromobenzene	ND	3.1	10
Bromochloromethane	ND	3.8	13
Bromodichloromethane	ND	3.7	13
Bromoform	ND	2.3	7.8
Bromomethane	ND	6.8	23
n-Butylbenzene	ND	2.6	9.0
sec-Butylbenzene	ND	3.1	11
tert-Butylbenzene	ND	4.8	17
Carbon Tetrachloride	ND	7.1	24
Chlorobenzene	ND	2.9	10
Chloroethane	ND	4.8	17
Chloroform	ND	5.0	17
Chloromethane	ND	4.7	16
2-Chlorotoluene	ND	3.5	12
4-Chlorotoluene	ND	3.0	11
Dibromochloromethane	ND	3.2	11
1,2-Dibromo-3-Chloropropane	ND	2.1	7.3
1,2-Dibromoethane	ND	2.5	8.5
Dibromomethane	ND	3.1	11
1,2-Dichlorobenzene	ND	4.8	17
1,3-Dichlorobenzene	ND	4.0	14
1,4-Dichlorobenzene	ND	3.2	11
Dichlorodifluoromethane	ND	5.0	17
1,1-Dichloroethane	ND	5.3	18
1,2-Dichloroethane	ND	5.0	17
1,1-Dichloroethene	ND	6.1	21
cis-1,2-Dichloroethene	ND	2.9	9.9
trans-1,2-Dichloroethene	ND	12	42
1,2-Dichloropropane	ND	4.6	16
1,3-Dichloropropane	ND	5.1	18
2,2-Dichloropropane	ND	5.2	18
1,1-Dichloropropene	ND	5.5	19
cis-1,3-Dichloropropene	ND	2.9	10
trans-1,3-Dichloropropene	ND	2.0	7.0
Ethylbenzene	98	4.4	15
Hexachlorobutadiene	ND	5.7	20
Isopropylbenzene	ND	4.4	15
p-Isopropyltoluene	ND	4.0	14
Methylene chloride	ND	4.8	17
Naphthalene	400	3.3	11
n-Propylbenzene	ND	4.4	15
ortho-Xylene/Styrene	40	6.7	23
1,1,1,2-Tetrachloroethane	ND	5.1	18
1,1,2,2-Tetrachloroethane	ND	3.5	12
Tetrachloroethene	ND	3.3	11
Toluene	17	3.9	14
1,2,3-Trichlorobenzene	ND	4.2	14
1,2,4-Trichlorobenzene	ND	3.0	10
1,1,1-Trichloroethane	ND	6.8	23
1,1,2-Trichloroethane	ND	4.2	15
Trichloroethene	ND	5.0	17
Trichlorofluoromethane	ND	7.7	27
1,2,3-Trichloropropane	ND	3.6	12
1,2,4-Trimethylbenzene	21	3.8	13

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147161 MW-2 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	4.0	14
Vinyl chloride	ND	3.2	10
meta,para-Xylene	47	8.4	29
MTBE	ND	12	42
Isopropylether	ND	3.4	12

Surrogate Recovery on 2-Bromochlorobenzene-PID = 105 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 101 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147162 TW-6 ug/L	LOD ug/L	LOQ ug/L
Benzene	1500	40	140
Bromobenzene	ND	31	100
Bromochloromethane	ND	38	130
Bromodichloromethane	ND	37	130
Bromoform	ND	23	78
Bromomethane	ND	68	230
n-Butylbenzene	540	26	90
sec-Butylbenzene	< 98 >	31	110
tert-Butylbenzene	ND	48	170
Carbon Tetrachloride	ND	71	240
Chlorobenzene	ND	29	100
Chloroethane	ND	48	170
Chloroform	ND	50	170
Chloromethane	ND	47	160
2-Chlorotoluene	ND	35	120
4-Chlorotoluene	ND	30	110
Dibromochloromethane	ND	32	110
1,2-Dibromo-3-Chloropropane	ND	21	73
1,2-Dibromoethane	ND	25	85
Dibromomethane	ND	31	110
1,2-Dichlorobenzene	ND	48	170
1,3-Dichlorobenzene	ND	40	140
1,4-Dichlorobenzene	ND	32	110
Dichlorodifluoromethane	ND	50	170
1,1-Dichloroethane	ND	53	180
1,2-Dichloroethane	ND	50	170
1,1-Dichloroethene	ND	61	210
cis-1,2-Dichloroethene	ND	29	99
trans-1,2-Dichloroethene	ND	120	420
1,2-Dichloropropane	ND	46	160
1,3-Dichloropropane	ND	51	180
2,2-Dichloropropane	ND	52	180
1,1-Dichloropropene	ND	55	190
cis-1,3-Dichloropropene	ND	29	100
trans-1,3-Dichloropropene	ND	20	70
Ethylbenzene	780	44	150
Hexachlorobutadiene	ND	57	200
Isopropylbenzene	ND	44	150
p-Isopropyltoluene	ND	40	140
Methylene chloride	ND	48	170
Naphthalene	2500	33	110
n-Propylbenzene	ND	44	150
ortho-Xylene/Styrene	240	67	230
1,1,1,2-Tetrachloroethane	ND	51	180
1,1,2,2-Tetrachloroethane	ND	35	120
Tetrachloroethene	ND	33	110
Toluene	< 120 >	39	140
1,2,3-Trichlorobenzene	ND	42	140
1,2,4-Trichlorobenzene	ND	30	100
1,1,1-Trichloroethane	ND	68	230
1,1,2-Trichloroethane	ND	42	150
Trichloroethene	ND	50	170
Trichlorofluoromethane	ND	77	270
1,2,3-Trichloropropane	ND	36	120
1,2,4-Trimethylbenzene	150	38	130

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147162 TW-6	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	40	140
Vinyl chloride	ND	32	100
meta,para-Xylene	310	84	290
MTBE	ND	120	420
Isopropylether	ND	34	120

Surrogate Recovery on 2-Bromochlorobenzene-PID = 99.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 99.0 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147163 TW-12 ug/L	LOD ug/L	LOQ ug/L
Benzene	220	5.0	17
Bromobenzene	ND	3.9	13
Bromochloromethane	ND	4.7	16
Bromodichloromethane	ND	4.6	16
Bromoform	ND	2.8	9.7
Bromomethane	ND	8.4	29
n-Butylbenzene	ND	3.3	11
sec-Butylbenzene	ND	3.8	13
tert-Butylbenzene	ND	6.0	21
Carbon Tetrachloride	ND	8.9	30
Chlorobenzene	ND	3.7	13
Chloroethane	ND	6.0	21
Chloroform	ND	6.3	22
Chloromethane	ND	5.9	20
2-Chlorotoluene	ND	4.4	15
4-Chlorotoluene	ND	3.7	14
Dibromochloromethane	ND	4.0	14
1,2-Dibromo-3-Chloropropane	ND	2.6	9.2
1,2-Dibromoethane	ND	3.1	11
Dibromomethane	ND	3.9	13
1,2-Dichlorobenzene	ND	6.0	21
1,3-Dichlorobenzene	ND	5.0	17
1,4-Dichlorobenzene	ND	4.0	14
Dichlorodifluoromethane	ND	6.2	21
1,1-Dichloroethane	ND	6.6	23
1,2-Dichloroethane	ND	6.3	22
1,1-Dichloroethene	ND	7.6	26
cis-1,2-Dichloroethene	ND	3.6	12
trans-1,2-Dichloroethene	ND	15	52
1,2-Dichloropropane	ND	5.7	20
1,3-Dichloropropane	ND	6.4	22
2,2-Dichloropropane	ND	6.5	22
1,1-Dichloropropene	ND	6.8	24
cis-1,3-Dichloropropene	ND	3.6	13
trans-1,3-Dichloropropene	ND	2.6	8.8
Ethylbenzene	66	5.5	19
Hexachlorobutadiene	ND	7.2	25
Isopropylbenzene	ND	5.5	19
p-Isopropyltoluene	ND	5.0	17
Methylene chloride	ND	6.0	21
Naphthalene	460	4.1	14
n-Propylbenzene	ND	5.5	19
ortho-Xylene/Styrene	< 19 >	8.4	29
1,1,1,2-Tetrachloroethane	ND	6.4	22
1,1,2,2-Tetrachloroethane	ND	4.4	15
Tetrachloroethene	ND	4.1	14
Toluene	ND	4.9	17
1,2,3-Trichlorobenzene	ND	5.2	18
1,2,4-Trichlorobenzene	ND	3.7	13
1,1,1-Trichloroethane	ND	8.5	29
1,1,2-Trichloroethane	ND	5.3	18
Trichloroethene	ND	6.2	21
Trichlorofluoromethane	ND	9.7	33
1,2,3-Trichloropropane	ND	4.5	16
1,2,4-Trimethylbenzene	26	4.8	17

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXD)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147163 TW-12 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	5.0	17
Vinyl chloride	ND	4.0	13
meta,para-Xylene	< 11 >	10	36
MTBE	ND	15	52
Isopropylether	ND	4.3	15

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 102 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
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Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147164 TW-9 ug/L	LOD ug/L	LOQ ug/L
Benzene	970	100	340
Bromobenzene	ND	78	260
Bromochloromethane	ND	94	330
Bromodichloromethane	ND	92	320
Bromoform	ND	56	190
Bromomethane	ND	170	580
n-Butylbenzene	960	66	230
sec-Butylbenzene	ND	76	260
tert-Butylbenzene	ND	120	420
Carbon Tetrachloride	ND	180	610
Chlorobenzene	ND	74	250
Chloroethane	ND	120	420
Chloroform	ND	130	430
Chloromethane	ND	120	410
2-Chlorotoluene	ND	88	300
4-Chlorotoluene	ND	74	290
Dibromochloromethane	ND	79	270
1,2-Dibromo-3-Chloropropane	ND	53	180
1,2-Dibromoethane	ND	62	210
Dibromomethane	ND	78	270
1,2-Dichlorobenzene	ND	120	420
1,3-Dichlorobenzene	ND	100	340
1,4-Dichlorobenzene	ND	81	280
Dichlorodifluoromethane	ND	120	430
1,1-Dichloroethane	ND	130	460
1,2-Dichloroethane	ND	130	430
1,1-Dichloroethene	ND	150	520
cis-1,2-Dichloroethene	ND	72	250
trans-1,2-Dichloroethene	ND	300	1000
1,2-Dichloropropane	ND	110	400
1,3-Dichloropropane	ND	130	440
2,2-Dichloropropane	ND	130	450
1,1-Dichloropropene	ND	140	470
cis-1,3-Dichloropropene	ND	73	250
trans-1,3-Dichloropropene	ND	51	180
Ethylbenzene	1300	110	380
Hexachlorobutadiene	ND	140	490
Isopropylbenzene	ND	110	380
p-Isopropyltoluene	ND	100	340
Methylene chloride	ND	120	410
Naphthalene	6600	82	280
n-Propylbenzene	ND	110	380
ortho-Xylene/Styrene	< 200 >	170	580
1,1,1,2-Tetrachloroethane	ND	130	440
1,1,2,2-Tetrachloroethane	ND	88	300
Tetrachloroethene	ND	82	270
Toluene	ND	98	340
1,2,3-Trichlorobenzene	ND	100	360
1,2,4-Trichlorobenzene	ND	74	260
1,1,1-Trichloroethane	ND	170	580
1,1,2-Trichloroethane	ND	110	360
Trichloroethene	ND	120	430
Trichlorofluoromethane	ND	190	660
1,2,3-Trichloropropane	ND	90	310
1,2,4-Trimethylbenzene	< 210 >	96	330

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147164 TW-9 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	100	350
Vinyl chloride	ND	80	260
meta,para-Xylene	760	210	720
MTBE	ND	300	1000
Isopropylether	ND	86	300
Surrogate Recovery on 2-Bromochlorobenzene-PID = 97.0 %			
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 101 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147165 MW-7 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	1900	80	270
Bromobenzene	ND	62	210
Bromochloromethane	ND	76	260
Bromodichloromethane	ND	73	250
Bromoform	ND	45	160
Bromomethane	ND	140	460
n-Butylbenzene	1600	52	180
sec-Butylbenzene	ND	61	210
tert-Butylbenzene	ND	96	330
Carbon Tetrachloride	ND	140	490
Chlorobenzene	ND	59	200
Chloroethane	ND	96	330
Chloroform	ND	100	350
Chloromethane	ND	94	330
2-Chlorotoluene	ND	70	240
4-Chlorotoluene	ND	59	230
Dibromochloromethane	ND	63	220
1,2-Dibromo-3-Chloropropane	ND	42	150
1,2-Dibromoethane	ND	49	170
Dibromomethane	ND	62	210
1,2-Dichlorobenzene	ND	96	330
1,3-Dichlorobenzene	ND	80	280
1,4-Dichlorobenzene	ND	65	220
Dichlorodifluoromethane	ND	100	340
1,1-Dichloroethane	ND	110	370
1,2-Dichloroethane	ND	100	350
1,1-Dichloroethene	ND	120	420
cis-1,2-Dichloroethene	ND	58	200
trans-1,2-Dichloroethene	ND	240	840
1,2-Dichloropropane	ND	92	320
1,3-Dichloropropane	ND	100	350
2,2-Dichloropropane	ND	100	360
1,1-Dichloropropene	ND	110	380
cis-1,3-Dichloropropene	ND	58	200
trans-1,3-Dichloropropene	ND	41	140
Ethylbenzene	1200	88	300
Hexachlorobutadiene	ND	110	400
Isopropylbenzene	ND	88	310
p-Isopropyltoluene	ND	80	280
Methylene chloride	ND	96	330
Naphthalene	4500	66	230
n-Propylbenzene	ND	88	310
ortho-Xylene/Styrene	< 290 >	130	460
1,1,1,2-Tetrachloroethane	ND	100	350
1,1,2,2-Tetrachloroethane	ND	70	240
Tetrachloroethene	ND	66	220
Toluene	540	78	270
1,2,3-Trichlorobenzene	ND	84	290
1,2,4-Trichlorobenzene	ND	60	210
1,1,1-Trichloroethane	ND	140	470
1,1,2-Trichloroethane	ND	84	290
Trichloroethene	ND	99	340
Trichlorofluoromethane	ND	150	530
1,2,3-Trichloropropane	ND	72	250
1,2,4-Trimethylbenzene	< 190 >	77	260

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147165 MW-7 (D&M)	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	80	280
Vinyl chloride	ND	64	200
meta,para-Xylene	660	170	580
MTBE	ND	240	840
Isopropylether	ND	69	240

Surrogate Recovery on 2-Bromochlorobenzene-PID = 97.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 99.0 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147166 TW-13 ug/L	LOD ug/L	LOQ ug/L
Benzene	9200	160	550
Bromobenzene	ND	120	410
Bromochloromethane	ND	150	520
Bromodichloromethane	ND	150	510
Bromoform	ND	90	310
Bromomethane	ND	270	930
n-Butylbenzene	< 230 >	100	360
sec-Butylbenzene	500	120	420
tert-Butylbenzene	ND	190	660
Carbon Tetrachloride	ND	280	980
Chlorobenzene	ND	120	410
Chloroethane	ND	190	660
Chloroform	ND	200	690
Chloromethane	ND	190	650
2-Chlorotoluene	ND	140	490
4-Chlorotoluene	ND	120	460
Dibromochloromethane	ND	130	440
1,2-Dibromo-3-Chloropropane	ND	85	290
1,2-Dibromoethane	ND	98	340
Dibromomethane	ND	120	430
1,2-Dichlorobenzene	ND	190	670
1,3-Dichlorobenzene	ND	160	550
1,4-Dichlorobenzene	ND	130	450
Dichlorodifluoromethane	ND	200	690
1,1-Dichloroethane	ND	210	730
1,2-Dichloroethane	ND	200	690
1,1-Dichloroethene	ND	240	840
cis-1,2-Dichloroethene	ND	120	400
trans-1,2-Dichloroethene	ND	490	1700
1,2-Dichloropropane	ND	180	630
1,3-Dichloropropane	ND	200	700
2,2-Dichloropropane	ND	210	720
1,1-Dichloropropene	ND	220	760
cis-1,3-Dichloropropene	ND	120	400
trans-1,3-Dichloropropene	ND	82	280
Ethylbenzene	2400	180	610
Hexachlorobutadiene	ND	230	790
Isopropylbenzene	ND	180	610
p-Isopropyltoluene	ND	160	550
Methylene chloride	ND	190	660
Naphthalene	10000	130	460
n-Propylbenzene	ND	180	610
ortho-Xylene/Styrene	< 750 >	270	930
1,1,1,2-Tetrachloroethane	ND	200	710
1,1,2,2-Tetrachloroethane	ND	140	480
Tetrachloroethene	ND	130	440
Toluene	5300	160	540
1,2,3-Trichlorobenzene	ND	170	580
1,2,4-Trichlorobenzene	ND	120	410
1,1,1-Trichloroethane	ND	270	940
1,1,2-Trichloroethane	ND	170	580
Trichloroethene	ND	200	690
Trichlorofluoromethane	ND	310	1100
1,2,3-Trichloropropane	ND	140	500
1,2,4-Trimethylbenzene	< 410 >	150	530

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147166 TW-13 ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	160	560
Vinyl chloride	ND	130	410
meta,para-Xylene	1700	330	1200
MTBE	ND	490	1700
Isopropylether	ND	140	470

Surrogate Recovery on 2-Bromochlorobenzene-PID = 96.0 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)
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Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147167 MW-3 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	5.0	17
Bromobenzene	ND	3.9	13
Bromochloromethane	ND	4.7	16
Bromodichloromethane	ND	4.6	16
Bromoform	ND	2.8	9.7
Bromomethane	ND	8.4	29
n-Butylbenzene	45	3.3	11
sec-Butylbenzene	ND	3.8	13
tert-Butylbenzene	ND	6.0	21
Carbon Tetrachloride	ND	8.9	30
Chlorobenzene	ND	3.7	13
Chloroethane	ND	6.0	21
Chloroform	ND	6.3	22
Chloromethane	ND	5.9	20
2-Chlorotoluene	ND	4.4	15
4-Chlorotoluene	ND	3.7	14
Dibromochloromethane	ND	4.0	14
1,2-Dibromo-3-Chloropropane	ND	2.6	9.2
1,2-Dibromoethane	ND	3.1	11
Dibromomethane	ND	3.9	13
1,2-Dichlorobenzene	ND	6.0	21
1,3-Dichlorobenzene	ND	5.0	17
1,4-Dichlorobenzene	ND	4.0	14
Dichlorodifluoromethane	ND	6.2	21
1,1-Dichloroethane	ND	6.6	23
1,2-Dichloroethane	ND	6.3	22
1,1-Dichloroethene	ND	7.6	26
cis-1,2-Dichloroethene	ND	3.6	12
trans-1,2-Dichloroethene	ND	15	52
1,2-Dichloropropane	ND	5.7	20
1,3-Dichloropropane	ND	6.4	22
2,2-Dichloropropane	ND	6.5	22
1,1-Dichloropropene	ND	6.8	24
cis-1,3-Dichloropropene	ND	3.6	13
trans-1,3-Dichloropropene	ND	2.6	8.8
Ethylbenzene	< 13 >	5.5	19
Hexachlorobutadiene	ND	7.2	25
Isopropylbenzene	ND	5.5	19
p-Isopropyltoluene	ND	5.0	17
Methylene chloride	ND	6.0	21
Naphthalene	460	4.1	14
n-Propylbenzene	ND	5.5	19
ortho-Xylene/Styrene	ND	8.4	29
1,1,1,2-Tetrachloroethane	ND	6.4	22
1,1,2,2-Tetrachloroethane	ND	4.4	15
Tetrachloroethene	ND	4.1	14
Toluene	ND	4.9	17
1,2,3-Trichlorobenzene	ND	5.2	18
1,2,4-Trichlorobenzene	ND	3.7	13
1,1,1-Trichloroethane	ND	8.5	29
1,1,2-Trichloroethane	ND	5.3	18
Trichloroethene	ND	6.2	21
Trichlorofluoromethane	ND	9.7	33
1,2,3-Trichloropropane	ND	4.5	16
1,2,4-Trimethylbenzene	17	4.8	17

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXB)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147167 MW-3 (D&M)	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	5.0	17
Vinyl chloride	ND	4.0	13
meta,para-Xylene	ND	10	36
MTBE	ND	15	52
Isopropylether	ND	4.3	15

Surrogate Recovery on 2-Bromochlorobenzene-PID = 100 %
Surrogate Recovery on 2-Bromochlorobenzene-HECD = 103 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147168 MW-2 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	ND	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	ND	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147168 MW-2 (D&M) ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61
Surrogate Recovery on 2-Bromochlorobenzene (PID) = 100 %			
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 104 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147169 MW-5 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	14	48
Bromobenzene	ND	12	43
Bromochloromethane	ND	12	41
Bromodichloromethane	ND	14	47
Bromoform	ND	10	35
Bromomethane	ND	21	72
n-Butylbenzene	57	12	41
sec-Butylbenzene	ND	11	36
tert-Butylbenzene	ND	15	51
Carbon Tetrachloride	ND	15	53
Chlorobenzene	ND	12	42
Chloroethane	ND	16	57
Chloroform	ND	10	34
Chloromethane	ND	12	41
2-Chlorotoluene	ND	17	58
4-Chlorotoluene	ND	20	70
Dibromochloromethane	ND	10	36
1,2-Dibromo-3-Chloropropane	ND	15	53
1,2-Dibromoethane	ND	10	36
Dibromomethane	ND	20	69
1,2-Dichlorobenzene	ND	12	41
1,3-Dichlorobenzene	ND	11	36
1,4-Dichlorobenzene	ND	14	50
Dichlorodifluoromethane	ND	19	65
1,1-Dichloroethane	ND	15	51
1,2-Dichloroethane	ND	11	38
1,1-Dichloroethene	ND	15	50
cis-1,2-Dichloroethene	ND	11	39
trans-1,2-Dichloroethene	ND	12	40
1,2-Dichloropropane	ND	13	46
1,3-Dichloropropane	ND	11	37
2,2-Dichloropropane	ND	15	48
1,1-Dichloropropene	ND	14	48
cis-1,3-Dichloropropene	ND	14	49
trans-1,3-Dichloropropene	ND	12	42
Ethylbenzene	ND	14	47
Hexachlorobutadiene	ND	16	56
Isopropylbenzene	ND	15	50
p-Isopropyltoluene	ND	15	51
Methylene chloride	ND	10	35
Naphthalene	980	13	42
n-Propylbenzene	ND	15	50
ortho-Xylene	ND	15	51
1,1,1,2-Tetrachloroethane	ND	14	48
1,1,2,2-Tetrachloroethane	ND	11	44
Tetrachloroethene	ND	13	46
Toluene	ND	13	46
1,2,3-Trichlorobenzene	ND	8.4	28
1,2,4-Trichlorobenzene	ND	11	39
1,1,1-Trichloroethane	ND	16	55
1,1,2-Trichloroethane	ND	11	39
Trichloroethene	ND	13	45
Trichlorofluoromethane	ND	16	54
1,2,3-Trichloropropane	ND	14	49
1,2,4-Trimethylbenzene	ND	13	44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147169 MW-5 (D&M)	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	19	66
Vinyl chloride	ND	16	50
meta,para-Xylene	ND	29	110
MTBE	ND	26	89
Isopropylether	ND	25	87
Styrene	ND	18	61

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 101 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 105 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147170 MW-1 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	ND	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	< 0.18 >	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147170 MW-1 (D&M) ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61
Surrogate Recovery on 2-Bromochlorobenzene (PID) = 98.0 %			
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 101 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147171 MW-10 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	ND	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	1.1	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147171 MW-10 (D&M)	LOD	LOQ
Name	ug/L	ug/L	ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61
Surrogate Recovery on 2-Bromochlorobenzene (PID) = 107 %			
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 108 %			

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147172 MW-8 (D&M) ug/L	LOD ug/L	LOQ ug/L
Benzene	< 0.14 >	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	ND	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	ND	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147172 MW-8 (D&M) ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61

Surrogate Recovery on 2-Bromochlorobenzene (PID) = 106 %
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 105 %

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147174 Trip Blank ug/L	LOD ug/L	LOQ ug/L
Benzene	ND	0.14	0.48
Bromobenzene	ND	0.12	0.43
Bromochloromethane	ND	0.12	0.41
Bromodichloromethane	ND	0.14	0.47
Bromoform	ND	0.10	0.35
Bromomethane	ND	0.21	0.72
n-Butylbenzene	ND	0.12	0.41
sec-Butylbenzene	ND	0.11	0.36
tert-Butylbenzene	ND	0.15	0.51
Carbon Tetrachloride	ND	0.15	0.53
Chlorobenzene	ND	0.12	0.42
Chloroethane	ND	0.16	0.57
Chloroform	ND	0.10	0.34
Chloromethane	ND	0.12	0.41
2-Chlorotoluene	ND	0.17	0.58
4-Chlorotoluene	ND	0.20	0.70
Dibromochloromethane	ND	0.10	0.36
1,2-Dibromo-3-Chloropropane	ND	0.15	0.53
1,2-Dibromoethane	ND	0.10	0.36
Dibromomethane	ND	0.20	0.69
1,2-Dichlorobenzene	ND	0.12	0.41
1,3-Dichlorobenzene	ND	0.11	0.36
1,4-Dichlorobenzene	ND	0.14	0.50
Dichlorodifluoromethane	ND	0.19	0.65
1,1-Dichloroethane	ND	0.15	0.51
1,2-Dichloroethane	ND	0.11	0.38
1,1-Dichloroethene	ND	0.15	0.50
cis-1,2-Dichloroethene	ND	0.11	0.39
trans-1,2-Dichloroethene	ND	0.12	0.40
1,2-Dichloropropane	ND	0.13	0.46
1,3-Dichloropropane	ND	0.11	0.37
2,2-Dichloropropane	ND	0.15	0.48
1,1-Dichloropropene	ND	0.14	0.48
cis-1,3-Dichloropropene	ND	0.14	0.49
trans-1,3-Dichloropropene	ND	0.12	0.42
Ethylbenzene	ND	0.14	0.47
Hexachlorobutadiene	ND	0.16	0.56
Isopropylbenzene	ND	0.15	0.50
p-Isopropyltoluene	ND	0.15	0.51
Methylene chloride	ND	0.10	0.35
Naphthalene	ND	0.13	0.42
n-Propylbenzene	ND	0.15	0.50
ortho-Xylene	ND	0.15	0.51
1,1,1,2-Tetrachloroethane	ND	0.14	0.48
1,1,2,2-Tetrachloroethane	ND	0.11	0.44
Tetrachloroethene	ND	0.13	0.46
Toluene	ND	0.13	0.46
1,2,3-Trichlorobenzene	ND	0.084	0.28
1,2,4-Trichlorobenzene	ND	0.11	0.39
1,1,1-Trichloroethane	ND	0.16	0.55
1,1,2-Trichloroethane	ND	0.11	0.39
Trichloroethene	ND	0.13	0.45
Trichlorofluoromethane	ND	0.16	0.54
1,2,3-Trichloropropane	ND	0.14	0.49
1,2,4-Trimethylbenzene	ND	0.13	0.44

ANALYTICAL RESULTS: VOC's by EPA 8021 - Water (CXA)

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147174 Trip Blank ug/L	LOD ug/L	LOQ ug/L
1,3,5-Trimethylbenzene	ND	0.19	0.66
Vinyl chloride	ND	0.16	0.50
meta,para-Xylene	ND	0.29	1.1
MTBE	ND	0.26	0.89
Isopropylether	ND	0.25	0.87
Styrene	ND	0.18	0.61
Surrogate Recovery on 2-Bromochlorobenzene (PID) = 98.0 %			
Surrogate Recovery on 2-Bromochlorobenzene (HECD) = 104 %			

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147158 TW-11 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	60	1.6	5.1
Acenaphthylene	ND	1.6	5.1
4-Aminobiphenyl	ND	1.5	5.1
Aniline	ND	1.3	4.4
Anthracene	< 3.2 >	1.3	4.2
Benzidine	ND	5.3	18
Benzo[a]anthracene	ND	1.3	4.0
Benzo[a]pyrene	< 1.8 >	1.4	4.4
Benzo[b]fluoranthene	ND	4.2	14
Benzo[g,h,i]perylene	ND	1.7	5.5
Benzo[k]fluoranthene	ND	1.3	4.2
Benzoic Acid	ND	6.2	20
Benzyl Alcohol	ND	2.7	9.1
Bis(2-chloroethyl)ether	ND	1.5	4.8
Bis(2-chloroethoxy)methane	ND	1.8	5.9
Bis(2-ethylhexyl)phthalate	ND	1.8	5.7
Bis(2-chloroisopropyl)ether	ND	1.6	5.3
4-Bromophenyl-phenyl ether	ND	1.3	4.2
Butylbenzylphthalate	ND	0.95	3.1
2-Chlorophenol	ND	1.4	4.8
4-Chloro-3-methylphenol	ND	1.5	5.1
1-Chloronaphthalene	ND	1.3	4.4
2-Chloronaphthalene	ND	1.7	5.7
4-Chloroaniline	ND	1.6	5.5
4-Chlorophenyl-phenyl ether	ND	1.4	4.8
Chrysene	ND	1.5	4.8
Di-n-butylphthalate	ND	1.6	5.5
Di-n-octylphthalate	ND	0.95	3.1
Dibenzo[a,h]anthracene	ND	1.5	4.8
Dibenzofuran	< 1.9 >	1.5	5.1
1,2-Dichlorobenzene	ND	0.99	3.3
1,3-Dichlorobenzene	ND	0.90	3.1
1,4-Dichlorobenzene	ND	1.1	3.5
3,3'-Dichlorobenzidine	ND	2.0	6.8
2,4-Dichlorophenol	ND	1.7	5.7
2,6-Dichlorophenol	ND	1.7	5.5
Diethylphthalate	ND	1.8	5.9
2,4-Dimethylphenol	ND	1.1	3.5
Dimethylphthalate	ND	1.7	5.7
p-(Dimethylamino)azobenzene	ND	1.2	3.7
4,6-Dinitro-2-methylphenol	ND	0.90	2.8
2,4-Dinitrophenol	ND	11	39
2,4-Dinitrotoluene	ND	1.6	5.1
2,6-Dinitrotoluene	ND	1.6	5.5
Diphenylamine	ND	1.5	5.1
1,2-Diphenylhydrazine	ND	2.2	7.3
Fluoranthene	ND	1.3	4.2
Fluorene	13	1.3	4.2
Hexachlorobenzene	ND	1.3	4.4
Hexachlorobutadiene	ND	1.2	4.0
Hexachlorocyclopentadiene	ND	2.6	8.8
Hexachloroethane	ND	0.95	3.1
Indeno[1,2,3-cd]pyrene	ND	1.7	5.5
Isophorone	ND	1.6	5.3
2-Methylnaphthalene	140	1.5	5.1

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147158 TW-11 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.7	5.5
3 & 4-Methylphenol	ND	2.9	9.5
N-nitroso-di-n-propylamine	ND	1.5	4.8
N-nitrosodi-n-butylamine	ND	1.6	5.5
N-Nitrosodiethylamine	ND	6.2	20
N-nitrosodimethylamine	ND	1.0	3.5
N-Nitrosopyrrolidine	ND	6.2	20
N-nitrosopiperidine	ND	4.5	16
N-nitrosodiphenylamine	ND	1.5	5.1
Naphthalene	710	1.9	6.2
1-Naphthylamine	ND	0.95	3.1
2-Naphthylamine	ND	1.4	4.8
2-Nitroaniline	ND	1.3	4.4
3-Nitroaniline	ND	1.6	5.5
Nitrobenzene	ND	1.6	5.3
2-Nitrophenol	ND	2.8	9.5
4-Nitroaniline	ND	1.5	5.1
4-Nitrophenol	ND	0.95	3.1
Pentachlorobenzene	ND	1.4	4.6
Pentachloronitrobenzene	ND	1.4	4.6
Pentachlorophenol	ND	1.4	4.8
Phenanthrene	20	1.4	4.4
Phenol	ND	0.99	3.3
Pyrene	< 3.2 >	1.3	4.2
Pyridine	ND	6.8	22
1,2,4,5-Tetrachlorobenzene	ND	1.5	5.1
2,3,4,6-Tetrachlorophenol	ND	1.3	4.2
1,2,4-Trichlorobenzene	ND	1.3	4.4
2,4,5-Trichlorophenol	ND	1.6	5.5
2,4,6-Trichlorophenol	ND	1.9	6.4

Surrogate Recovery on 2-Fluorophenol = 51.7 %
Surrogate Recovery on Phenol-d5 = 33.4 %
Surrogate Recovery on Nitrobenzene-d5 = 96.6 %
Surrogate Recovery on 2-Fluorobiphenyl = 92.0 %
Surrogate Recovery on 2,4,6-Tribromophenol = 84.8 %
Surrogate Recovery on Terphenyl-d14 = 100 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147159 MW-1 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	190	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	26	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	14	1.1	3.4
Benzo[a]pyrene	15	1.2	3.8
Benzo[b]fluoranthene	< 8.5 >	3.6	12
Benzo[g,h,i]perylene	< 1.9 >	1.5	4.8
Benzo[k]fluoranthene	7.5	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	12	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	33	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	32	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	35	1.1	3.6
Fluorene	69	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	< 2.0 >	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	510	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147159 MW-1 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	1400	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitrophenol	ND	0.82	2.7
4-Nitroaniline	ND	1.3	4.4
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	110	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	54	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 57.9 %
Surrogate Recovery on Phenol-d5 = 43.7 %
Surrogate Recovery on Nitrobenzene-d5 = 94.6 %
Surrogate Recovery on 2-Fluorobiphenyl = 82.1 %
Surrogate Recovery on 2,4,6-Tribromophenol = 83.6 %
Surrogate Recovery on Terphenyl-d14 = 88.1 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147160 MW-3 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	7.9	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	51	1.1	3.4
Benzo[a]pyrene	65	1.2	3.8
Benzo[b]fluoranthene	34	3.6	12
Benzo[g,h,i]perylene	16	1.5	4.8
Benzo[k]fluoranthene	39	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	49	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	ND	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	71	1.1	3.6
Fluorene	ND	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	14	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	ND	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147160 MW-3 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	ND	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitroaniline	ND	1.3	4.4
4-Nitrophenol	ND	0.82	2.7
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	7.5	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	120	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 54.7 %
Surrogate Recovery on Phenol-d5 = 41.8 %
Surrogate Recovery on Nitrobenzene-d5 = 89.9 %
Surrogate Recovery on 2-Fluorobiphenyl = 73.4 %
Surrogate Recovery on 2,4,6-Tribromophenol = 78.7 %
Surrogate Recovery on Terphenyl-d14 = 79.1 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147161 MW-2 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	6.8	1.7	5.5
Acenaphthylene	ND	1.7	5.5
4-Aminobiphenyl	ND	1.6	5.5
Aniline	ND	1.4	4.8
Anthracene	ND	1.4	4.6
Benzidine	ND	5.8	20
Benzo[a]anthracene	ND	1.4	4.3
Benzo[a]pyrene	ND	1.5	4.8
Benzo[b]fluoranthene	ND	4.6	15
Benzo[g,h,i]perylene	ND	1.9	6.0
Benzo[k]fluoranthene	ND	1.4	4.6
Benzoic Acid	ND	6.7	22
Benzyl Alcohol	ND	3.0	9.9
Bis(2-chloroethyl)ether	ND	1.6	5.3
Bis(2-chloroethoxy)methane	ND	1.9	6.5
Bis(2-ethylhexyl)phthalate	ND	2.0	6.2
Bis(2-chloroisopropyl)ether	ND	1.7	5.8
4-Bromophenyl-phenyl ether	ND	1.4	4.6
Butylbenzylphthalate	ND	1.0	3.4
2-Chlorophenol	ND	1.6	5.3
4-Chloro-3-methylphenol	ND	1.7	5.5
1-Chloronaphthalene	ND	1.4	4.8
2-Chloronaphthalene	ND	1.9	6.2
4-Chloroaniline	ND	1.8	6.0
4-Chlorophenyl-phenyl ether	ND	1.6	5.3
Chrysene	ND	1.6	5.3
Di-n-butylphthalate	ND	1.8	6.0
Di-n-octylphthalate	ND	1.0	3.4
Dibenzo[a,h]anthracene	ND	1.7	5.3
Dibenzofuran	ND	1.7	5.5
1,2-Dichlorobenzene	ND	1.1	3.6
1,3-Dichlorobenzene	ND	0.98	3.4
1,4-Dichlorobenzene	ND	1.2	3.8
3,3'-Dichlorobenzidine	ND	2.2	7.4
2,4-Dichlorophenol	ND	1.8	6.2
2,6-Dichlorophenol	ND	1.8	6.0
Diethylphthalate	ND	1.9	6.5
2,4-Dimethylphenol	< 1.2 >	1.2	3.8
Dimethylphthalate	ND	1.8	6.2
p-(Dimethylamino)azobenzene	ND	1.3	4.1
4,6-Dinitro-2-methylphenol	ND	0.98	3.1
2,4-Dinitrophenol	ND	12	42
2,4-Dinitrotoluene	ND	1.7	5.5
2,6-Dinitrotoluene	ND	1.8	6.0
Diphenylamine	ND	1.7	5.5
1,2-Diphenylhydrazine	ND	2.4	7.9
Fluoranthene	ND	1.4	4.6
Fluorene	ND	1.5	4.6
Hexachlorobenzene	ND	1.4	4.8
Hexachlorobutadiene	ND	1.3	4.3
Hexachlorocyclopentadiene	ND	2.9	9.6
Hexachloroethane	ND	1.0	3.4
Indeno[1,2,3-cd]pyrene	ND	1.9	6.0
Isophorone	ND	1.7	5.8
2-Methylnaphthalene	16	1.6	5.5

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147161 MW-2 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.8	6.0
3 & 4-Methylphenol	ND	3.1	10
N-nitroso-di-n-propylamine	ND	1.6	5.3
N-nitrosodi-n-butylamine	ND	1.8	6.0
N-Nitrosodiethylamine	ND	6.7	22
N-nitrosodimethylamine	ND	1.1	3.8
N-Nitrosopyrrolidine	ND	6.7	22
N-nitrosopiperidine	ND	4.9	17
N-nitrosodiphenylamine	ND	1.7	5.5
Naphthalene	210	2.1	6.7
1-Naphthylamine	ND	1.0	3.4
2-Naphthylamine	ND	1.6	5.3
2-Nitroaniline	ND	1.4	4.8
3-Nitroaniline	ND	1.8	6.0
Nitrobenzene	ND	1.7	5.8
2-Nitrophenol	ND	3.1	10
4-Nitroaniline	ND	1.7	5.5
4-Nitrophenol	ND	1.0	3.4
Pentachlorobenzene	ND	1.5	5.0
Pentachloronitrobenzene	ND	1.5	5.0
Pentachlorophenol	ND	1.6	5.3
Phenanthrene	ND	1.5	4.8
Phenol	ND	1.1	3.6
Pyrene	ND	1.4	4.6
Pyridine	ND	7.4	24
1,2,4,5-Tetrachlorobenzene	ND	1.7	5.5
2,3,4,6-Tetrachlorophenol	ND	1.4	4.6
1,2,4-Trichlorobenzene	ND	1.5	4.8
2,4,5-Trichlorophenol	ND	1.8	6.0
2,4,6-Trichlorophenol	ND	2.1	7.0

Surrogate Recovery on 2-Fluorophenol = 36.2 %
Surrogate Recovery on Phenol-d5 = 29.0 %
Surrogate Recovery on Nitrobenzene-d5 = 42.7 %
Surrogate Recovery on 2-Fluorobiphenyl = 34.2 %
Surrogate Recovery on 2,4,6-Tribromophenol = 45.8 %
Surrogate Recovery on Terphenyl-d14 = 38.6 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147162 TW-6 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	150	2.1	6.9
Acenaphthylene	47	2.1	6.9
4-Aminobiphenyl	ND	2.0	6.9
Aniline	ND	1.8	6.0
Anthracene	34	1.8	5.7
Benzidine	ND	7.3	25
Benzo[a]anthracene	13	1.7	5.4
Benzo[a]pyrene	13	1.9	6.0
Benzo[b]fluoranthene	ND	5.7	19
Benzo[g,h,i]perylene	ND	2.3	7.5
Benzo[k]fluoranthene	< 5.0 >	1.8	5.7
Benzoic Acid	ND	8.4	28
Benzyl Alcohol	ND	3.7	12
Bis(2-chloroethyl)ether	ND	2.0	6.6
Bis(2-chloroethoxy)methane	ND	2.4	8.1
Bis(2-ethylhexyl)phthalate	ND	2.5	7.8
Bis(2-chloroisopropyl)ether	ND	2.1	7.2
4-Bromophenyl-phenyl ether	ND	1.7	5.7
Butylbenzylphthalate	ND	1.3	4.2
2-Chlorophenol	ND	2.0	6.6
4-Chloro-3-methylphenol	ND	2.1	6.9
1-Chloronaphthalene	ND	1.8	6.0
2-Chloronaphthalene	ND	2.3	7.8
4-Chloroaniline	ND	2.2	7.5
4-Chlorophenyl-phenyl ether	ND	2.0	6.6
Chrysene	12	2.0	6.6
Di-n-butylphthalate	ND	2.2	7.5
Di-n-octylphthalate	ND	1.3	4.2
Dibenzo[a,h]anthracene	ND	2.1	6.6
Dibenzofuran	ND	2.1	6.9
1,2-Dichlorobenzene	ND	1.4	4.5
1,3-Dichlorobenzene	ND	1.2	4.2
1,4-Dichlorobenzene	ND	1.4	4.8
3,3'-Dichlorobenzidine	ND	2.7	9.3
2,4-Dichlorophenol	ND	2.3	7.8
2,6-Dichlorophenol	ND	2.3	7.5
Diethylphthalate	ND	2.4	8.1
2,4-Dimethylphenol	ND	1.5	4.8
Dimethylphthalate	ND	2.3	7.8
p-(Dimethylamino)azobenzene	ND	1.6	5.1
4,6-Dinitro-2-methylphenol	ND	1.2	3.9
2,4-Dinitrophenol	ND	15	53
2,4-Dinitrotoluene	ND	2.1	6.9
2,6-Dinitrotoluene	ND	2.2	7.5
Diphenylamine	ND	2.1	6.9
1,2-Diphenylhydrazine	ND	3.0	9.9
Fluoranthene	33	1.8	5.7
Fluorene	32	1.8	5.7
Hexachlorobenzene	ND	1.8	6.0
Hexachlorobutadiene	ND	1.6	5.4
Hexachlorocyclopentadiene	ND	3.6	12
Hexachloroethane	ND	1.3	4.2
Indeno[1,2,3-cd]pyrene	ND	2.3	7.5
Isophorone	ND	2.2	7.2
2-Methylnaphthalene	98	2.0	6.9

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147162 TW-6 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	2.3	7.5
3 & 4-Methylphenol	ND	3.9	13
N-nitroso-di-n-propylamine	ND	2.0	6.6
N-nitrosodi-n-butylamine	ND	2.2	7.5
N-Nitrosodiethylamine	ND	8.4	28
N-nitrosodimethylamine	ND	1.4	4.8
N-Nitrosopyrrolidine	ND	8.4	28
N-nitrosopiperidine	ND	6.2	21
N-nitrosodiphenylamine	ND	2.1	6.9
Naphthalene	2100	2.6	8.4
1-Naphthylamine	ND	1.3	4.2
2-Naphthylamine	ND	2.0	6.6
2-Nitroaniline	ND	1.8	6.0
3-Nitroaniline	ND	2.2	7.5
Nitrobenzene	ND	2.1	7.2
2-Nitrophenol	ND	3.9	13
4-Nitroaniline	ND	2.1	6.9
4-Nitrophenol	ND	1.3	4.2
Pentachlorobenzene	ND	1.9	6.3
Pentachloronitrobenzene	ND	1.9	6.3
Pentachlorophenol	ND	2.0	6.6
Phenanthrene	120	1.9	6.0
Phenol	ND	1.4	4.5
Pyrene	62	1.8	5.7
Pyridine	ND	9.3	30
1,2,4,5-Tetrachlorobenzene	ND	2.1	6.9
2,3,4,6-Tetrachlorophenol	ND	1.7	5.7
1,2,4-Trichlorobenzene	ND	1.8	6.0
2,4,5-Trichlorophenol	ND	2.2	7.5
2,4,6-Trichlorophenol	ND	2.6	8.7

Surrogate Recovery on 2-Fluorophenol = 59.6 %
Surrogate Recovery on Phenol-d5 = 43.8 %
Surrogate Recovery on Nitrobenzene-d5 = 98.4 %
Surrogate Recovery on 2-Fluorobiphenyl = 91.2 %
Surrogate Recovery on 2,4,6-Tribromophenol = 86.2 %
Surrogate Recovery on Terphenyl-d14 = 102 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147163 TW-12 ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	41	1.8	5.8
Acenaphthylene	ND	1.8	5.8
4-Aminobiphenyl	ND	1.7	5.8
Aniline	ND	1.5	5.0
Anthracene	ND	1.5	4.8
Benzidine	ND	6.1	21
Benzo[a]anthracene	ND	1.4	4.5
Benzo[a]pyrene	ND	1.6	5.0
Benzo[b]fluoranthene	ND	4.8	16
Benzo[g,h,i]perylene	ND	2.0	6.2
Benzo[k]fluoranthene	ND	1.5	4.8
Benzoic Acid	ND	7.0	23
Benzyl Alcohol	ND	3.1	10
Bis(2-chloroethyl)ether	ND	1.7	5.5
Bis(2-chloroethoxy)methane	ND	2.0	6.8
Bis(2-ethylhexyl)phthalate	ND	2.0	6.5
Bis(2-chloroisopropyl)ether	ND	1.8	6.0
4-Bromophenyl-phenyl ether	ND	1.4	4.8
Butylbenzylphthalate	ND	1.1	3.5
2-Chlorophenol	ND	1.6	5.5
4-Chloro-3-methylphenol	ND	1.8	5.8
1-Chloronaphthalene	ND	1.5	5.0
2-Chloronaphthalene	ND	2.0	6.5
4-Chloroaniline	ND	1.9	6.2
4-Chlorophenyl-phenyl ether	ND	1.6	5.5
Chrysene	ND	1.7	5.5
Di-n-butylphthalate	ND	1.8	6.2
Di-n-octylphthalate	ND	1.1	3.5
Dibenzo[a,h]anthracene	ND	1.8	5.5
Dibenzofuran	ND	1.8	5.8
1,2-Dichlorobenzene	ND	1.1	3.8
1,3-Dichlorobenzene	ND	1.0	3.5
1,4-Dichlorobenzene	ND	1.2	4.0
3,3'-Dichlorobenzidine	ND	2.2	7.8
2,4-Dichlorophenol	ND	1.9	6.5
2,6-Dichlorophenol	ND	1.9	6.2
Diethylphthalate	ND	2.0	6.8
2,4-Dimethylphenol	ND	1.3	4.0
Dimethylphthalate	ND	1.9	6.5
p-(Dimethylamino)azobenzene	ND	1.3	4.2
4,6-Dinitro-2-methylphenol	ND	1.0	3.2
2,4-Dinitrophenol	ND	13	44
2,4-Dinitrotoluene	ND	1.8	5.8
2,6-Dinitrotoluene	ND	1.8	6.2
Diphenylamine	ND	1.8	5.8
1,2-Diphenylhydrazine	ND	2.5	8.2
Fluoranthene	ND	1.5	4.8
Fluorene	4.8	1.5	4.8
Hexachlorobenzene	ND	1.5	5.0
Hexachlorobutadiene	ND	1.4	4.5
Hexachlorocyclopentadiene	ND	3.0	10
Hexachloroethane	ND	1.1	3.5
Indeno[1,2,3-cd]pyrene	ND	2.0	6.2
Isophorone	ND	1.8	6.0
2-Methylnaphthalene	ND	1.7	5.8

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147163 TW-12	LOD	LOQ
Name	ug/L	ug/L	ug/L
2-Methylphenol	ND	1.9	6.2
3 & 4-Methylphenol	ND	3.2	11
N-nitroso-di-n-propylamine	ND	1.7	5.5
N-nitrosodi-n-butylamine	ND	1.9	6.2
N-Nitrosodiethylamine	ND	7.0	23
N-nitrosodimethylamine	ND	1.2	4.0
N-Nitrosopyrrolidine	ND	7.0	23
N-nitrosopiperidine	ND	5.1	18
N-nitrosodiphenylamine	ND	1.8	5.8
Naphthalene	250	2.2	7.0
1-Naphthylamine	ND	1.1	3.5
2-Naphthylamine	ND	1.6	5.5
2-Nitroaniline	ND	1.5	5.0
3-Nitroaniline	ND	1.9	6.2
Nitrobenzene	ND	1.8	6.0
2-Nitrophenol	ND	3.2	11
4-Nitroaniline	ND	1.7	5.8
4-Nitrophenol	ND	1.1	3.5
Pentachlorobenzene	ND	1.6	5.2
Pentachloronitrobenzene	ND	1.6	5.2
Pentachlorophenol	ND	1.6	5.5
Phenanthrene	ND	1.6	5.0
Phenol	ND	1.1	3.8
Pyrene	ND	1.5	4.8
Pyridine	ND	7.8	25
1,2,4,5-Tetrachlorobenzene	ND	1.7	5.8
2,3,4,6-Tetrachlorophenol	ND	1.4	4.8
1,2,4-Trichlorobenzene	ND	1.5	5.0
2,4,5-Trichlorophenol	ND	1.8	6.2
2,4,6-Trichlorophenol	ND	2.2	7.2

Surrogate Recovery on 2-Fluorophenol = 64.3 %
Surrogate Recovery on Phenol-d5 = 47.0 %
Surrogate Recovery on Nitrobenzene-d5 = 94.0 %
Surrogate Recovery on 2-Fluorobiphenyl = 87.6 %
Surrogate Recovery on 2,4,6-Tribromophenol = 85.8 %
Surrogate Recovery on Terphenyl-d14 = 94.8 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147164 TW-9	LOD	LOQ
Name	ug/L	ug/L	ug/L
Acenaphthene	560	19	62
Acenaphthylene	ND	19	62
4-Aminobiphenyl	ND	18	62
Aniline	ND	16	54
Anthracene	160	16	51
Benzidine	ND	66	230
Benzo[a]anthracene	71	15	49
Benzo[a]pyrene	83	17	54
Benzo[b]fluoranthene	ND	51	170
Benzo[g,h,i]perylene	< 26 >	21	68
Benzo[k]fluoranthene	ND	16	51
Benzoic Acid	ND	76	250
Benzyl Alcohol	ND	33	110
Bis(2-chloroethyl)ether	ND	18	59
Bis(2-chloroethoxy)methane	ND	22	73
Bis(2-ethylhexyl)phthalate	ND	22	70
Bis(2-chloroisopropyl)ether	ND	19	65
4-Bromophenyl-phenyl ether	ND	15	51
Butylbenzylphthalate	ND	12	38
2-Chlorophenol	ND	18	59
4-Chloro-3-methylphenol	ND	19	62
1-Chloronaphthalene	ND	16	54
2-Chloronaphthalene	ND	21	70
4-Chloroaniline	ND	20	68
4-Chlorophenyl-phenyl ether	ND	18	59
Chrysene	71	18	59
Di-n-butylphthalate	ND	20	68
Di-n-octylphthalate	ND	12	38
Dibenzo[a,h]anthracene	ND	19	59
Dibenzofuran	ND	19	62
1,2-Dichlorobenzene	ND	12	40
1,3-Dichlorobenzene	ND	11	38
1,4-Dichlorobenzene	ND	13	43
3,3'-Dichlorobenzidine	ND	24	84
2,4-Dichlorophenol	ND	21	70
2,6-Dichlorophenol	ND	21	68
Diethylphthalate	ND	22	73
2,4-Dimethylphenol	ND	14	43
Dimethylphthalate	ND	21	70
p-(Dimethylamino)azobenzene	ND	14	46
4,6-Dinitro-2-methylphenol	ND	11	35
2,4-Dinitrophenol	ND	140	480
2,4-Dinitrotoluene	ND	19	62
2,6-Dinitrotoluene	ND	20	68
Diphenylamine	ND	19	62
1,2-Diphenylhydrazine	ND	27	89
Fluoranthene	240	16	51
Fluorene	140	16	51
Hexachlorobenzene	ND	16	54
Hexachlorobutadiene	ND	15	49
Hexachlorocyclopentadiene	ND	32	110
Hexachloroethane	ND	12	38
Indeno[1,2,3-cd]pyrene	ND	21	68
Isophorone	ND	19	65
2-Methylnaphthalene	740	18	62

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147164 TW-9 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	21	68
3 & 4-Methylphenol	ND	35	120
N-nitroso-di-n-propylamine	ND	18	59
N-nitrosodi-n-butylamine	ND	20	68
N-Nitrosodiethylamine	ND	76	250
N-nitrosodimethylamine	ND	13	43
N-Nitrosopyrrolidine	ND	76	250
N-nitrosopiperidine	ND	55	190
N-nitrosodiphenylamine	ND	19	62
Naphthalene	2600	24	76
1-Naphthylamine	ND	12	38
2-Naphthylamine	ND	18	59
2-Nitroaniline	ND	16	54
3-Nitroaniline	ND	20	68
Nitrobenzene	ND	19	65
2-Nitrophenol	ND	35	120
4-Nitroaniline	ND	19	62
4-Nitrophenol	ND	12	38
Pentachlorobenzene	ND	17	57
Pentachloronitrobenzene	ND	17	57
Pentachlorophenol	ND	18	59
Phenanthrene	680	17	54
Phenol	ND	12	40
Pyrene	410	16	51
Pyridine	ND	84	270
1,2,4,5-Tetrachlorobenzene	ND	19	62
2,3,4,6-Tetrachlorophenol	ND	16	51
1,2,4-Trichlorobenzene	ND	16	54
2,4,5-Trichlorophenol	ND	20	68
2,4,6-Trichlorophenol	ND	23	78

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147165 MW-7 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	11000	180	580
Acenaphthylene	ND	180	580
4-Aminobiphenyl	ND	170	580
Aniline	ND	150	500
Anthracene	4100	150	480
Benzidine	ND	610	2100
Benzo[a]anthracene	3000	140	450
Benzo[a]pyrene	3300	160	500
Benzo[b]fluoranthene	< 1300 >	480	1600
Benzo[g,h,i]perylene	1500	200	620
Benzo[k]fluoranthene	1600	150	480
Benzoic Acid	ND	700	2300
Benzyl Alcohol	ND	310	1000
Bis(2-chloroethyl)ether	ND	170	550
Bis(2-chloroethoxy)methane	ND	200	680
Bis(2-ethylhexyl)phthalate	ND	200	650
Bis(2-chloroisopropyl)ether	ND	180	600
4-Bromophenyl-phenyl ether	ND	140	480
Butylbenzylphthalate	ND	110	350
2-Chlorophenol	ND	160	550
4-Chloro-3-methylphenol	ND	180	580
1-Chloronaphthalene	ND	150	500
2-Chloronaphthalene	ND	200	650
4-Chloroaniline	ND	190	620
4-Chlorophenyl-phenyl ether	ND	160	550
Chrysene	2500	170	550
Di-n-butylphthalate	ND	180	620
Di-n-octylphthalate	ND	110	350
Dibenzo[a,h]anthracene	ND	180	550
Dibenzofuran	ND	180	580
1,2-Dichlorobenzene	ND	110	380
1,3-Dichlorobenzene	ND	100	350
1,4-Dichlorobenzene	ND	120	400
3,3'-Dichlorobenzidine	ND	220	780
2,4-Dichlorophenol	ND	190	650
2,6-Dichlorophenol	ND	190	620
Diethylphthalate	ND	200	680
2,4-Dimethylphenol	ND	130	400
Dimethylphthalate	ND	190	650
p-(Dimethylamino)azobenzene	ND	130	420
4,6-Dinitro-2-methylphenol	ND	100	320
2,4-Dinitrophenol	ND	1300	4400
2,4-Dinitrotoluene	ND	180	580
2,6-Dinitrotoluene	ND	180	620
Diphenylamine	ND	180	580
1,2-Diphenylhydrazine	ND	250	820
Fluoranthene	7100	150	480
Fluorene	5100	150	480
Hexachlorobenzene	ND	150	500
Hexachlorobutadiene	ND	140	450
Hexachlorocyclopentadiene	ND	300	1000
Hexachloroethane	ND	110	350
Indeno[1,2,3-cd]pyrene	1000	200	620
Isophorone	ND	180	600
2-Methylnaphthalene	12000	170	580

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147165 MW-7 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	190	620
3 & 4-Methylphenol	ND	320	1100
N-nitroso-di-n-propylamine	ND	170	550
N-nitrosodi-n-butylamine	ND	190	620
N-Nitrosodiethylamine	ND	700	2300
N-nitrosodimethylamine	ND	120	400
N-Nitrosopyrrolidine	ND	700	2300
N-nitrosopiperidine	ND	510	1800
N-nitrosodiphenylamine	ND	180	580
Naphthalene	24000	220	700
1-Naphthylamine	ND	110	350
2-Naphthylamine	ND	160	550
2-Nitroaniline	ND	150	500
3-Nitroaniline	ND	190	620
Nitrobenzene	ND	180	600
2-Nitrophenol	ND	320	1100
4-Nitrophenol	ND	110	350
4-Nitroaniline	ND	170	580
Pentachlorobenzene	ND	160	520
Pentachloronitrobenzene	ND	160	520
Pentachlorophenol	ND	160	550
Phenanthrene	17000	160	500
Phenol	ND	110	380
Pyrene	10000	150	480
Pyridine	ND	780	2500
1,2,4,5-Tetrachlorobenzene	ND	170	580
2,3,4,6-Tetrachlorophenol	ND	140	480
1,2,4-Trichlorobenzene	ND	150	500
2,4,5-Trichlorophenol	ND	180	620
2,4,6-Trichlorophenol	ND	220	720

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte	147166 TW-13	LOD	LOQ
Name	ug/L	ug/L	ug/L
Acenaphthene	2700	180	580
Acenaphthylene	6100	180	580
4-Aminobiphenyl	ND	170	580
Aniline	ND	150	500
Anthracene	3900	150	480
Benzidine	ND	610	2100
Benzo[a]anthracene	2200	140	450
Benzo[a]pyrene	2400	160	500
Benzo[b]fluoranthene	< 1000 >	480	1600
Benzo[g,h,i]perylene	1000	200	620
Benzo[k]fluoranthene	1100	150	480
Benzoic Acid	ND	700	2300
Benzyl Alcohol	ND	310	1000
Bis(2-chloroethyl)ether	ND	170	550
Bis(2-chloroethoxy)methane	ND	200	680
Bis(2-ethylhexyl)phthalate	ND	200	650
Bis(2-chloroisopropyl)ether	ND	180	600
4-Bromophenyl-phenyl ether	ND	140	480
Butylbenzylphthalate	ND	110	350
2-Chlorophenol	ND	160	550
4-Chloro-3-methylphenol	ND	180	580
1-Chloronaphthalene	ND	150	500
2-Chloronaphthalene	ND	200	650
4-Chloroaniline	ND	190	620
4-Chlorophenyl-phenyl ether	ND	160	550
Chrysene	2000	170	550
Di-n-butylphthalate	ND	180	620
Di-n-octylphthalate	ND	110	350
Dibenzo[a,h]anthracene	ND	180	550
Dibenzofuran	< 450 >	180	580
1,2-Dichlorobenzene	ND	110	380
1,3-Dichlorobenzene	ND	100	350
1,4-Dichlorobenzene	ND	120	400
3,3'-Dichlorobenzidine	ND	220	780
2,4-Dichlorophenol	ND	190	650
2,6-Dichlorophenol	ND	190	620
Diethylphthalate	ND	200	680
2,4-Dimethylphenol	ND	130	400
Dimethylphthalate	ND	190	650
p-(Dimethylamino)azobenzene	ND	130	420
4,6-Dinitro-2-methylphenol	ND	100	320
2,4-Dinitrophenol	ND	1300	4400
2,4-Dinitrotoluene	ND	180	580
2,6-Dinitrotoluene	ND	180	620
Diphenylamine	ND	180	580
1,2-Diphenylhydrazine	ND	250	820
Fluoranthene	5200	150	480
Fluorene	3800	150	480
Hexachlorobenzene	ND	150	500
Hexachlorobutadiene	ND	140	450
Hexachlorocyclopentadiene	ND	300	1000
Hexachloroethane	ND	110	350
Indeno[1,2,3-cd]pyrene	700	200	620
Isophorone	ND	180	600
2-Methylnaphthalene	21000	170	580

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147166 TW-13 ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	190	620
3 & 4-Methylphenol	ND	320	1100
N-nitroso-di-n-propylamine	ND	170	550
N-nitrosodi-n-butylamine	ND	190	620
N-Nitrosodiethylamine	ND	700	2300
N-nitrosodimethylamine	ND	120	400
N-Nitrosopyrrolidine	ND	700	2300
N-nitrosopiperidine	ND	510	1800
N-nitrosodiphenylamine	ND	180	580
Naphthalene	35000	220	700
1-Naphthylamine	ND	110	350
2-Naphthylamine	ND	160	550
2-Nitroaniline	ND	150	500
3-Nitroaniline	ND	190	620
Nitrobenzene	ND	180	600
2-Nitrophenol	ND	320	1100
4-Nitroaniline	ND	170	580
4-Nitrophenol	ND	110	350
Pentachlorobenzene	ND	160	520
Pentachloronitrobenzene	ND	160	520
Pentachlorophenol	ND	160	550
Phenanthrene	13000	160	500
Phenol	ND	110	380
Pyrene	7300	150	480
Pyridine	ND	780	2500
1,2,4,5-Tetrachlorobenzene	ND	170	580
2,3,4,6-Tetrachlorophenol	ND	140	480
1,2,4-Trichlorobenzene	ND	150	500
2,4,5-Trichlorophenol	ND	180	620
2,4,6-Trichlorophenol	ND	220	720

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147167 MW-3 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	54	1.3	4.4
Acenaphthylene	13	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	ND	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	ND	1.1	3.4
Benzo[a]pyrene	ND	1.2	3.8
Benzo[b]fluoranthene	ND	3.6	12
Benzo[g,h,i]perylene	ND	1.5	4.8
Benzo[k]fluoranthene	ND	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	ND	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	10	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	ND	1.1	3.6
Fluorene	7.9	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	ND	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	99	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147167 MW-3 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	560	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitroaniline	ND	1.3	4.4
4-Nitrophenol	ND	0.82	2.7
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	26	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	ND	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 65.4 %
Surrogate Recovery on Phenol-d5 = 49.2 %
Surrogate Recovery on Nitrobenzene-d5 = 94.1 %
Surrogate Recovery on 2-Fluorobiphenyl = 88.9 %
Surrogate Recovery on 2,4,6-Tribromophenol = 97.0 %
Surrogate Recovery on Terphenyl-d14 = 103 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147168 MW-2 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	ND	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	ND	1.1	3.4
Benzo[a]pyrene	ND	1.2	3.8
Benzo[b]fluoranthene	ND	3.6	12
Benzo[g,h,i]perylene	ND	1.5	4.8
Benzo[k]fluoranthene	ND	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	ND	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	ND	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	ND	1.1	3.6
Fluorene	ND	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	ND	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	ND	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147168 MW-2 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	ND	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitroaniline	ND	1.3	4.4
4-Nitrophenol	ND	0.82	2.7
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	ND	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	ND	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 62.5 %
Surrogate Recovery on Phenol-d5 = 43.0 %
Surrogate Recovery on Nitrobenzene-d5 = 96.2 %
Surrogate Recovery on 2-Fluorobiphenyl = 91.3 %
Surrogate Recovery on 2,4,6-Tribromophenol = 61.9 %
Surrogate Recovery on Terphenyl-d14 = 61.8 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147169 MW-5 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	180	25	80
Acenaphthylene	ND	25	80
4-Aminobiphenyl	ND	23	80
Aniline	ND	21	70
Anthracene	ND	21	66
Benzidine	ND	85	290
Benzo[a]anthracene	ND	20	63
Benzo[a]pyrene	ND	22	70
Benzo[b]fluoranthene	ND	66	220
Benzo[g,h,i]perylene	ND	27	88
Benzo[k]fluoranthene	ND	21	66
Benzoic Acid	ND	98	330
Benzyl Alcohol	ND	43	140
Bis(2-chloroethyl)ether	ND	23	77
Bis(2-chloroethoxy)methane	ND	28	94
Bis(2-ethylhexyl)phthalate	ND	29	91
Bis(2-chloroisopropyl)ether	ND	25	84
4-Bromophenyl-phenyl ether	ND	20	66
Butylbenzylphthalate	ND	15	49
2-Chlorophenol	ND	23	77
4-Chloro-3-methylphenol	ND	24	80
1-Chloronaphthalene	ND	21	70
2-Chloronaphthalene	ND	27	91
4-Chloroaniline	ND	26	88
4-Chlorophenyl-phenyl ether	ND	23	77
Chrysene	ND	24	77
Di-n-butylphthalate	ND	26	88
Di-n-octylphthalate	ND	15	49
Dibenzo[a,h]anthracene	ND	24	77
Dibenzofuran	ND	24	80
1,2-Dichlorobenzene	ND	16	52
1,3-Dichlorobenzene	ND	14	49
1,4-Dichlorobenzene	ND	17	56
3,3'-Dichlorobenzidine	ND	32	110
2,4-Dichlorophenol	ND	27	91
2,6-Dichlorophenol	ND	27	88
Diethylphthalate	ND	28	94
2,4-Dimethylphenol	ND	18	56
Dimethylphthalate	ND	27	91
p-(Dimethylamino)azobenzene	ND	19	60
4,6-Dinitro-2-methylphenol	ND	14	45
2,4-Dinitrophenol	ND	180	620
2,4-Dinitrotoluene	ND	25	80
2,6-Dinitrotoluene	ND	26	88
Diphenylamine	ND	24	80
1,2-Diphenylhydrazine	ND	35	120
Fluoranthene	ND	21	66
Fluorene	ND	21	66
Hexachlorobenzene	ND	21	70
Hexachlorobutadiene	ND	19	63
Hexachlorocyclopentadiene	ND	42	140
Hexachloroethane	ND	15	49
Indeno[1,2,3-cd]pyrene	ND	27	88
Isophorone	ND	25	84
2-Methylnaphthalene	110	24	80

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147169 MW-5 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	27	88
3 & 4-Methylphenol	ND	46	150
N-nitroso-di-n-propylamine	ND	23	77
N-nitrosodi-n-butylamine	ND	26	88
N-Nitrosodiethylamine	ND	98	330
N-nitrosodimethylamine	ND	16	56
N-Nitrosopyrrolidine	ND	98	330
N-nitrosopiperidine	ND	72	250
N-nitrosodiphenylamine	ND	24	80
Naphthalene	1300	31	98
1-Naphthylamine	ND	15	49
2-Naphthylamine	ND	23	77
2-Nitroaniline	ND	21	70
3-Nitroaniline	ND	26	88
Nitrobenzene	ND	25	84
2-Nitrophenol	ND	45	150
4-Nitroaniline	ND	24	80
4-Nitrophenol	ND	15	49
Pentachlorobenzene	ND	22	74
Pentachloronitrobenzene	ND	22	74
Pentachlorophenol	ND	23	77
Phenanthrene	ND	22	70
Phenol	ND	16	52
Pyrene	ND	21	66
Pyridine	ND	110	350
1,2,4,5-Tetrachlorobenzene	ND	24	80
2,3,4,6-Tetrachlorophenol	ND	20	66
1,2,4-Trichlorobenzene	ND	21	70
2,4,5-Trichlorophenol	ND	26	88
2,4,6-Trichlorophenol	ND	30	100

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147170 MW-1 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.4
Acenaphthylene	ND	1.3	4.4
4-Aminobiphenyl	ND	1.3	4.4
Aniline	ND	1.1	3.8
Anthracene	ND	1.1	3.6
Benzidine	ND	4.6	16
Benzo[a]anthracene	ND	1.1	3.4
Benzo[a]pyrene	ND	1.2	3.8
Benzo[b]fluoranthene	ND	3.6	12
Benzo[g,h,i]perylene	ND	1.5	4.8
Benzo[k]fluoranthene	ND	1.1	3.6
Benzoic Acid	ND	5.3	18
Benzyl Alcohol	ND	2.4	7.8
Bis(2-chloroethyl)ether	ND	1.3	4.2
Bis(2-chloroethoxy)methane	ND	1.5	5.1
Bis(2-ethylhexyl)phthalate	ND	1.6	4.9
Bis(2-chloroisopropyl)ether	ND	1.3	4.6
4-Bromophenyl-phenyl ether	ND	1.1	3.6
Butylbenzylphthalate	ND	0.82	2.7
2-Chlorophenol	ND	1.2	4.2
4-Chloro-3-methylphenol	ND	1.3	4.4
1-Chloronaphthalene	ND	1.1	3.8
2-Chloronaphthalene	ND	1.5	4.9
4-Chloroaniline	ND	1.4	4.8
4-Chlorophenyl-phenyl ether	ND	1.2	4.2
Chrysene	ND	1.3	4.2
Di-n-butylphthalate	ND	1.4	4.8
Di-n-octylphthalate	ND	0.82	2.7
Dibenzo[a,h]anthracene	ND	1.3	4.2
Dibenzofuran	ND	1.3	4.4
1,2-Dichlorobenzene	ND	0.86	2.8
1,3-Dichlorobenzene	ND	0.78	2.7
1,4-Dichlorobenzene	ND	0.91	3.0
3,3'-Dichlorobenzidine	ND	1.7	5.9
2,4-Dichlorophenol	ND	1.5	4.9
2,6-Dichlorophenol	ND	1.4	4.8
Diethylphthalate	ND	1.5	5.1
2,4-Dimethylphenol	ND	0.97	3.0
Dimethylphthalate	ND	1.5	4.9
p-(Dimethylamino)azobenzene	ND	1.0	3.2
4,6-Dinitro-2-methylphenol	ND	0.78	2.5
2,4-Dinitrophenol	ND	9.7	34
2,4-Dinitrotoluene	ND	1.3	4.4
2,6-Dinitrotoluene	ND	1.4	4.8
Diphenylamine	ND	1.3	4.4
1,2-Diphenylhydrazine	ND	1.9	6.3
Fluoranthene	ND	1.1	3.6
Fluorene	ND	1.2	3.6
Hexachlorobenzene	ND	1.1	3.8
Hexachlorobutadiene	ND	1.0	3.4
Hexachlorocyclopentadiene	ND	2.3	7.6
Hexachloroethane	ND	0.82	2.7
Indeno[1,2,3-cd]pyrene	ND	1.5	4.8
Isophorone	ND	1.4	4.6
2-Methylnaphthalene	ND	1.3	4.4

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147170 MW-1 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.8
3 & 4-Methylphenol	ND	2.5	8.2
N-nitroso-di-n-propylamine	ND	1.3	4.2
N-nitrosodi-n-butylamine	ND	1.4	4.8
N-Nitrosodiethylamine	ND	5.3	18
N-nitrosodimethylamine	ND	0.89	3.0
N-Nitrosopyrrolidine	ND	5.3	18
N-nitrosopiperidine	ND	3.9	13
N-nitrosodiphenylamine	ND	1.3	4.4
Naphthalene	ND	1.7	5.3
1-Naphthylamine	ND	0.82	2.7
2-Naphthylamine	ND	1.2	4.2
2-Nitroaniline	ND	1.1	3.8
3-Nitroaniline	ND	1.4	4.8
Nitrobenzene	ND	1.3	4.6
2-Nitrophenol	ND	2.5	8.2
4-Nitroaniline	ND	1.3	4.4
4-Nitrophenol	ND	0.82	2.7
Pentachlorobenzene	ND	1.2	4.0
Pentachloronitrobenzene	ND	1.2	4.0
Pentachlorophenol	ND	1.2	4.2
Phenanthrene	ND	1.2	3.8
Phenol	ND	0.86	2.8
Pyrene	ND	1.1	3.6
Pyridine	ND	5.9	19
1,2,4,5-Tetrachlorobenzene	ND	1.3	4.4
2,3,4,6-Tetrachlorophenol	ND	1.1	3.6
1,2,4-Trichlorobenzene	ND	1.2	3.8
2,4,5-Trichlorophenol	ND	1.4	4.8
2,4,6-Trichlorophenol	ND	1.6	5.5

Surrogate Recovery on 2-Fluorophenol = 50.4 %
Surrogate Recovery on Phenol-d5 = 32.1 %
Surrogate Recovery on Nitrobenzene-d5 = 94.2 %
Surrogate Recovery on 2-Fluorobiphenyl = 89.8 %
Surrogate Recovery on 2,4,6-Tribromophenol = 58.6 %
Surrogate Recovery on Terphenyl-d14 = 86.9 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147171 MW-10 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.1
Acenaphthylene	ND	1.3	4.1
4-Aminobiphenyl	ND	1.2	4.1
Aniline	ND	1.1	3.6
Anthracene	ND	1.1	3.4
Benzidine	ND	4.4	15
Benzo[a]anthracene	ND	1.0	3.2
Benzo[a]pyrene	ND	1.2	3.6
Benzo[b]fluoranthene	ND	3.4	11
Benzo[g,h,i]perylene	ND	1.4	4.5
Benzo[k]fluoranthene	ND	1.1	3.4
Benzoic Acid	ND	5.0	17
Benzyl Alcohol	ND	2.2	7.4
Bis(2-chloroethyl)ether	ND	1.2	4.0
Bis(2-chloroethoxy)methane	ND	1.4	4.9
Bis(2-ethylhexyl)phthalate	ND	1.5	4.7
Bis(2-chloroisopropyl)ether	ND	1.3	4.3
4-Bromophenyl-phenyl ether	ND	1.0	3.4
Butylbenzylphthalate	ND	0.77	2.5
2-Chlorophenol	ND	1.2	4.0
4-Chloro-3-methylphenol	ND	1.3	4.1
1-Chloronaphthalene	ND	1.1	3.6
2-Chloronaphthalene	ND	1.4	4.7
4-Chloroaniline	ND	1.4	4.5
4-Chlorophenyl-phenyl ether	ND	1.2	4.0
Chrysene	ND	1.2	4.0
Di-n-butylphthalate	ND	1.3	4.5
Di-n-octylphthalate	ND	0.77	2.5
Dibenzo[a,h]anthracene	ND	1.3	4.0
Dibenzofuran	ND	1.3	4.1
1,2-Dichlorobenzene	ND	0.81	2.7
1,3-Dichlorobenzene	ND	0.74	2.5
1,4-Dichlorobenzene	ND	0.86	2.9
3,3'-Dichlorobenzidine	ND	1.6	5.6
2,4-Dichlorophenol	ND	1.4	4.7
2,6-Dichlorophenol	ND	1.4	4.5
Diethylphthalate	ND	1.5	4.9
2,4-Dimethylphenol	ND	0.92	2.9
Dimethylphthalate	ND	1.4	4.7
p-(Dimethylamino)azobenzene	ND	0.95	3.1
4,6-Dinitro-2-methylphenol	ND	0.73	2.3
2,4-Dinitrophenol	ND	9.2	32
2,4-Dinitrotoluene	ND	1.3	4.1
2,6-Dinitrotoluene	ND	1.3	4.5
Diphenylamine	ND	1.3	4.1
1,2-Diphenylhydrazine	ND	1.8	5.9
Fluoranthene	ND	1.1	3.4
Fluorene	ND	1.1	3.4
Hexachlorobenzene	ND	1.1	3.6
Hexachlorobutadiene	ND	0.97	3.2
Hexachlorocyclopentadiene	ND	2.2	7.2
Hexachloroethane	ND	0.77	2.5
Indeno[1,2,3-cd]pyrene	ND	1.4	4.5
Isophorone	ND	1.3	4.3
2-Methylnaphthalene	ND	1.2	4.1

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147171 MW-10 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.5
3 & 4-Methylphenol	ND	2.3	7.7
N-nitroso-di-n-propylamine	ND	1.2	4.0
N-nitrosodi-n-butylamine	ND	1.4	4.5
N-Nitrosodiethylamine	ND	5.0	17
N-nitrosodimethylamine	ND	0.85	2.9
N-Nitrosopyrrolidine	ND	5.0	17
N-nitrosopiperidine	ND	3.7	13
N-nitrosodiphenylamine	ND	1.3	4.1
Naphthalene	ND	1.6	5.0
1-Naphthylamine	ND	0.77	2.5
2-Naphthylamine	ND	1.2	4.0
2-Nitroaniline	ND	1.1	3.6
3-Nitroaniline	ND	1.4	4.5
Nitrobenzene	ND	1.3	4.3
2-Nitrophenol	ND	2.3	7.8
4-Nitroaniline	ND	1.2	4.1
4-Nitrophenol	ND	0.77	2.5
Pentachlorobenzene	ND	1.1	3.8
Pentachloronitrobenzene	ND	1.1	3.8
Pentachlorophenol	ND	1.2	4.0
Phenanthrene	ND	1.1	3.6
Phenol	ND	0.81	2.7
Pyrene	ND	1.1	3.4
Pyridine	ND	5.6	18
1,2,4,5-Tetrachlorobenzene	ND	1.2	4.1
2,3,4,6-Tetrachlorophenol	ND	1.0	3.4
1,2,4-Trichlorobenzene	ND	1.1	3.6
2,4,5-Trichlorophenol	ND	1.3	4.5
2,4,6-Trichlorophenol	ND	1.5	5.2

Surrogate Recovery on 2-Fluorophenol = 73.9 %
Surrogate Recovery on Phenol-d5 = 52.9 %
Surrogate Recovery on Nitrobenzene-d5 = 97.5 %
Surrogate Recovery on 2-Fluorobiphenyl = 85.5 %
Surrogate Recovery on 2,4,6-Tribromophenol = 79.9 %
Surrogate Recovery on Terphenyl-d14 = 89.2 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147172 MW-8 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	1.3	4.1
Acenaphthylene	ND	1.3	4.1
4-Aminobiphenyl	ND	1.2	4.1
Aniline	ND	1.1	3.6
Anthracene	ND	1.1	3.4
Benzidine	ND	4.4	15
Benzo[a]anthracene	ND	1.0	3.2
Benzo[a]pyrene	ND	1.2	3.6
Benzo[b]fluoranthene	ND	3.4	11
Benzo[g,h,i]perylene	ND	1.4	4.5
Benzo[k]fluoranthene	ND	1.1	3.4
Benzoic Acid	ND	5.0	17
Benzyl Alcohol	ND	2.2	7.4
Bis(2-chloroethyl)ether	ND	1.2	4.0
Bis(2-chloroethoxy)methane	ND	1.4	4.9
Bis(2-ethylhexyl)phthalate	ND	1.5	4.7
Bis(2-chloroisopropyl)ether	ND	1.3	4.3
4-Bromophenyl-phenyl ether	ND	1.0	3.4
Butylbenzylphthalate	ND	0.77	2.5
2-Chlorophenol	ND	1.2	4.0
4-Chloro-3-methylphenol	ND	1.3	4.1
1-Chloronaphthalene	ND	1.1	3.6
2-Chloronaphthalene	ND	1.4	4.7
4-Chloroaniline	ND	1.4	4.5
4-Chlorophenyl-phenyl ether	ND	1.2	4.0
Chrysene	ND	1.2	4.0
Di-n-butylphthalate	ND	1.3	4.5
Di-n-octylphthalate	ND	0.77	2.5
Dibenzo[a,h]anthracene	ND	1.3	4.0
Dibenzofuran	ND	1.3	4.1
1,2-Dichlorobenzene	ND	0.81	2.7
1,3-Dichlorobenzene	ND	0.74	2.5
1,4-Dichlorobenzene	ND	0.86	2.9
3,3'-Dichlorobenzidine	ND	1.6	5.6
2,4-Dichlorophenol	ND	1.4	4.7
2,6-Dichlorophenol	ND	1.4	4.5
Diethylphthalate	ND	1.5	4.9
2,4-Dimethylphenol	ND	0.92	2.9
Dimethylphthalate	ND	1.4	4.7
p-(Dimethylamino)azobenzene	ND	0.95	3.1
4,6-Dinitro-2-methylphenol	ND	0.73	2.3
2,4-Dinitrophenol	ND	9.2	32
2,4-Dinitrotoluene	ND	1.3	4.1
2,6-Dinitrotoluene	ND	1.3	4.5
Diphenylamine	ND	1.3	4.1
1,2-Diphenylhydrazine	ND	1.8	5.9
Fluoranthene	ND	1.1	3.4
Fluorene	ND	1.1	3.4
Hexachlorobenzene	ND	1.1	3.6
Hexachlorobutadiene	ND	0.97	3.2
Hexachlorocyclopentadiene	ND	2.2	7.2
Hexachloroethane	ND	0.77	2.5
Indeno[1,2,3-cd]pyrene	ND	1.4	4.5
Isophorone	ND	1.3	4.3
2-Methylnaphthalene	ND	1.2	4.1

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147172 MW-8 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	1.4	4.5
3 & 4-Methylphenol	ND	2.3	7.7
N-nitroso-di-n-propylamine	ND	1.2	4.0
N-nitrosodi-n-butylamine	ND	1.4	4.5
N-Nitrosodiethylamine	ND	5.0	17
N-nitrosodimethylamine	ND	0.85	2.9
N-Nitrosopyrrolidine	ND	5.0	17
N-nitrosopiperidine	ND	3.7	13
N-nitrosodiphenylamine	ND	1.3	4.1
Naphthalene	ND	1.6	5.0
1-Naphthylamine	ND	0.77	2.5
2-Naphthylamine	ND	1.2	4.0
2-Nitroaniline	ND	1.1	3.6
3-Nitroaniline	ND	1.4	4.5
Nitrobenzene	ND	1.3	4.3
2-Nitrophenol	ND	2.3	7.8
4-Nitrophenol	ND	0.77	2.5
4-Nitroaniline	ND	1.2	4.1
Pentachlorobenzene	ND	1.1	3.8
Pentachloronitrobenzene	ND	1.1	3.8
Pentachlorophenol	ND	1.2	4.0
Phenanthrene	ND	1.1	3.6
Phenol	ND	0.81	2.7
Pyrene	ND	1.1	3.4
Pyridine	ND	5.6	18
1,2,4,5-Tetrachlorobenzene	ND	1.2	4.1
2,3,4,6-Tetrachlorophenol	ND	1.0	3.4
1,2,4-Trichlorobenzene	ND	1.1	3.6
2,4,5-Trichlorophenol	ND	1.3	4.5
2,4,6-Trichlorophenol	ND	1.5	5.2

Surrogate Recovery on 2-Fluorophenol = 63.5 %
Surrogate Recovery on Phenol-d5 = 47.8 %
Surrogate Recovery on Nitrobenzene-d5 = 91.4 %
Surrogate Recovery on 2-Fluorobiphenyl = 80.8 %
Surrogate Recovery on 2,4,6-Tribromophenol = 67.6 %
Surrogate Recovery on Terphenyl-d14 = 77.5 %

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147173 MW-4 (D&M) ug/L	LOD ug/L	LOQ ug/L
Acenaphthene	ND	2.1	6.9
Acenaphthylene	ND	2.1	6.9
4-Aminobiphenyl	ND	2.0	6.9
Aniline	ND	1.8	6.0
Anthracene	7.9	1.8	5.7
Benzidine	ND	7.3	25
Benzo[a]anthracene	ND	1.7	5.4
Benzo[a]pyrene	7.6	1.9	6.0
Benzo[b]fluoranthene	ND	5.7	19
Benzo[g,h,i]perylene	< 2.5 >	2.3	7.5
Benzo[k]fluoranthene	ND	1.8	5.7
Benzoic Acid	ND	8.4	28
Benzyl Alcohol	ND	3.7	12
Bis(2-chloroethyl)ether	ND	2.0	6.6
Bis(2-chloroethoxy)methane	ND	2.4	8.1
Bis(2-ethylhexyl)phthalate	ND	2.5	7.8
Bis(2-chloroisopropyl)ether	ND	2.1	7.2
4-Bromophenyl-phenyl ether	ND	1.7	5.7
Butylbenzylphthalate	ND	1.3	4.2
2-Chlorophenol	ND	2.0	6.6
4-Chloro-3-methylphenol	ND	2.1	6.9
1-Chloronaphthalene	ND	1.8	6.0
2-Chloronaphthalene	ND	2.3	7.8
4-Chloroaniline	ND	2.2	7.5
4-Chlorophenyl-phenyl ether	ND	2.0	6.6
Chrysene	ND	2.0	6.6
Di-n-butylphthalate	ND	2.2	7.5
Di-n-octylphthalate	ND	1.3	4.2
Dibenzo[a,h]anthracene	ND	2.1	6.6
Dibenzofuran	29	2.1	6.9
1,2-Dichlorobenzene	ND	1.4	4.5
1,3-Dichlorobenzene	ND	1.2	4.2
1,4-Dichlorobenzene	ND	1.4	4.8
3,3'-Dichlorobenzidine	ND	2.7	9.3
2,4-Dichlorophenol	ND	2.3	7.8
2,6-Dichlorophenol	ND	2.3	7.5
Diethylphthalate	ND	2.4	8.1
2,4-Dimethylphenol	200	1.5	4.8
Dimethylphthalate	ND	2.3	7.8
p-(Dimethylamino)azobenzene	ND	1.6	5.1
4,6-Dinitro-2-methylphenol	ND	1.2	3.9
2,4-Dinitrophenol	ND	15	53
2,4-Dinitrotoluene	ND	2.1	6.9
2,6-Dinitrotoluene	ND	2.2	7.5
Diphenylamine	ND	2.1	6.9
1,2-Diphenylhydrazine	ND	3.0	9.9
Fluoranthene	ND	1.8	5.7
Fluorene	51	1.8	5.7
Hexachlorobenzene	ND	1.8	6.0
Hexachlorobutadiene	ND	1.6	5.4
Hexachlorocyclopentadiene	ND	3.6	12
Hexachloroethane	ND	1.3	4.2
Indeno[1,2,3-cd]pyrene	ND	2.3	7.5
Isophorone	ND	2.2	7.2
2-Methylnaphthalene	1300	2.0	6.9

ANALYTICAL RESULTS: Semi-Volatile Organic Compounds by EPA 8270B

Customer: Short-Elliott-Hendrickson, Inc.
Project Description: Ashland Lakefront Property Project Title: WIDNR 9401.00
Northern Lake Service Project Number: 36318

Analyte Name	147173 MW-4 (D&M) ug/L	LOD ug/L	LOQ ug/L
2-Methylphenol	ND	2.3	7.5
3 & 4-Methylphenol	76	3.9	13
N-nitroso-di-n-propylamine	ND	2.0	6.6
N-nitrosodi-n-butylamine	ND	2.2	7.5
N-Nitrosodiethylamine	ND	8.4	28
N-nitrosodimethylamine	ND	1.4	4.8
N-Nitrosopyrrolidine	ND	8.4	28
N-nitrosopiperidine	ND	6.2	21
N-nitrosodiphenylamine	ND	2.1	6.9
Naphthalene	3000	2.6	8.4
1-Naphthylamine	ND	1.3	4.2
2-Naphthylamine	ND	2.0	6.6
2-Nitroaniline	ND	1.8	6.0
3-Nitroaniline	ND	2.2	7.5
Nitrobenzene	ND	2.1	7.2
2-Nitrophenol	ND	3.9	13
4-Nitrophenol	ND	1.3	4.2
4-Nitroaniline	ND	2.1	6.9
Pentachlorobenzene	ND	1.9	6.3
Pentachloronitrobenzene	ND	1.9	6.3
Pentachlorophenol	76	2.0	6.6
Phenanthrene	56	1.9	6.0
Phenol	ND	1.4	4.5
Pyrene	7.7	1.8	5.7
Pyridine	ND	9.3	30
1,2,4,5-Tetrachlorobenzene	ND	2.1	6.9
2,3,4,6-Tetrachlorophenol	ND	1.7	5.7
1,2,4-Trichlorobenzene	ND	1.8	6.0
2,4,5-Trichlorophenol	ND	2.2	7.5
2,4,6-Trichlorophenol	ND	2.6	8.7

Surrogate Recovery on 2-Fluorophenol = 59.4 %
Surrogate Recovery on Phenol-d5 = 46.2 %
Surrogate Recovery on Nitrobenzene-d5 = 154 %
Surrogate Recovery on 2-Fluorobiphenyl = 91.4 %
Surrogate Recovery on 2,4,6-Tribromophenol = 99.0 %
Surrogate Recovery on Terphenyl-d14 = 85.2 %

NO. 22149

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721025460

RETURN THIS FORM WITH SAMPLES.

CLIENT	PROJECT TITLE	
SIKRT ELLIOTT HENDRICKSON INC.	ASHLAND LAKEFRONT PROPERTY	
ADDRESS	**PROJECT NO.**	**P.O. NO.**
421 FRENETTE DRIVE	WIDNR9401.00	
CITY / STATE / ZIP	**CONTACT**	**PHONE**
CHIPPEWA FALLS, WI 54729	JOHN GUHL	(715) 720-6225

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE GNPX2	CONTAINER/PRESERVATIVE VHX2	COLLECTION REMARKS
1.	147158	TW-11	9-03-97		GW	GRAB	✓	✓	
2.	147159	MW-1					✓	✓	
3.	147160	MW-3					✓	✓	
4.	147161	MW-2					✓	✓	
5.	147162	TW-6					✓	✓	
6.	147163	TW-12					✓	✓	
7.	147164	TW-9					✓	✓	Very Contaminated
8.	147165	MW-7 (D+M)					✓	✓	Very Contaminated
9.	147166	TW-13					✓	✓	
10.	147167	MW-3 (D+M)					✓	✓	
11.	147168	MW-2 (D+M)					✓	✓	
12.	147169	MW-5 (D+M					✓	✓	

SAMPLE TYPE:
SW = surface water; WW = wastewater; GW = groundwater; DW = drinking water; TIS = tissue; AIR = air; PROD = product; SOIL = soil; SED = sediment; describe others

CONTAINER: P = plastic; G = glass; V = glass vial; B = plastic bag; describe others

PRESERVATIVES & PREPARATION: NP = nothing added; S = sulfuric acid; N = nitric acid; Z = zinc acetate; OH = sodium hydroxide; HA = hydrochloric & ascorbic acid; H = hydrochloric acid; F = field filtered

COLLECTED BY (signatures)	CUSTODY SEAL NO. (IF ANY)	DATE/TIME
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT: UPS Next Day	DATE/TIME: 9/4/97 14:00
RECEIVED AT NLS BY (signature)	DATE/TIME: 9-5-97 10:15	CONDITION: ok; TEMP
SEAL INTACT? ☐ YES ☐ NO	SEAL #	REMARKS & OTHER INFORMATION

IMPORTANT
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY

NORTHERN LAKE SERVICE, INC.

Analytical Laboratory and Environmental Services

400 North Lake Avenue • Crandon, WI 54520
Tel: (715) 478-2777 • Fax: (715) 478-3060

NO. 22150

SAMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

Wisconsin Lab Cert. No. 721026460

RETURN THIS FORM WITH SAMPLES.

CLIENT	PROJECT TITLE	
SHORT ELLIOTT HENDRICKSON INC	ASHLAND LAKEFRONT PROPERTY	
ADDRESS	PROJECT NO.	P.O. NO.
421 FRENETTE DRIVE	WIDNR9401.00	
CITY / STATE / ZIP	CONTACT	PHONE
CHIPPEWA FALLS WI 54729	JOHN GUHL	(715) 720-6225

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION DATE	COLLECTION TIME	SAMPLE TYPE	GRAB/ COMP.	CONTAINER/PRESERVATIVE GNPXZ		GVHXZ			COLLECTION REMARKS
1.	147170	MW-1 (D+M)	9-03-97		GW	GRAB	✓		✓			
2.	147171	MW-10 (D+M)	↓		↓	↓	✓		✓			
3.	147172	MW-8 (D+M)					✓		✓			
4.	147173	MW-4 (D+M)					✓		✓			
5.	147174											
6.												
7.												
8.												
9.												
10.												
11.												
12.												

SAMPLE TYPE:
SW = surface water; WW = wastewater; GW = groundwater; DW = drinking water; TIS = tissue; AIR = air; PROD = product; SOIL = soil; SED = sediment; describe others

CONTAINER: P = plastic; G = glass; V = glass vial; B = plastic bag; describe others

PRESERVATIVES & PREPARATION: NP = nothing added; S = sulfuric acid; N = nitric acid; Z = zinc acetate; OH = sodium hydroxide; HA = hydrochloric & ascorbic acid; H = hydrochloric acid; F = field filtered

COLLECTED BY (signatures) John T. Guhl / Dave Etheridge	CUSTODY SEAL NO. IF ANY	DATE/TIME
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
RELINQUISHED BY (signature)	RECEIVED BY (signature)	DATE/TIME
DISPATCHED BY (signature)	METHOD OF TRANSPORT: UPS Next Day	DATE/TIME: 9/4/97 14:00
RECEIVED AT NLS BY (signature)	DATE/TIME: 9-5-97 10:15	CONDITION / TEMP
SEAL INTACT? ☐ YES ☐ NO	SEAL #	REMARKS & OTHER INFORMATION

IMPORTANT:
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM MUST BE COMPLETED IN DETAIL AND INCLUDED IN THE SHIPPER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, NOT PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP PINK COPY.

DUPLICATE COPY

NORTHERN LAKE SERVICE, INC.

400 NORTH LAKE AVENUE
CRANDON, WI 54520 (715)478-2777

ORDER OF ANALYSIS

RESULTS ORDERED BY:	CHAIN OF CUSTODY RECORD NUMBER:
Short Elliott Hendrickson Inc. 421 Frenette Drive Chippewa Falls, WI 54729 Attn: John Gust	22149 and 22150
	QUOTATION NUMBER:
	ANALYZE FOR DISSOLVED OR TOTAL PARAMETERS?
SEND RESULTS TO:	SEND INVOICE TO:
Same	Same

Note "L" for low level ICP analysis, and "F" for furnace analysis.

Samples on line #s: 1 through 16 to be analyzed for the parameters checked below:

- ☐ Alkalinity, total
- ☐ Alkalinity, bicarb.
- ☐ Aluminum
- ☐ Antimony
- ☐ Arsenic
- ☐ Barium
- ☐ Beryllium
- ☐ B.O.D.-5
- ☐ Boron
- ☐ Cadmium
- ☐ Calcium
- ☐ C.O.D.
- ☐ Chloride
- ☐ Chromium
- ☐ Chromium, hexavalent
- ☐ Cobalt
- ☐ Coliform, fecal
- ☐ Coliform, total
- ☐ Color
- ☐ Conductivity
- ☐ Copper
- ☐ VOCs and SVOCs
- ☐ Cyanide, total
- ☐ Amenable
- ☐ Fluoride
- ☐ Hardness
- ☐ Iron
- ☐ Lead
- ☐ Magnesium
- ☐ Manganese
- ☐ Mercury
- ☐ Molybdenum
- ☐ Nickel
- ☐ Nitrogen, total
- ☐ Ammonia
- ☐ Nitrate
- ☐ Nitrite
- ☐ Nitrate + Nitrite
- ☐ Total Kjeldahl
- ☐ Total Organic
- ☐ Oil & Grease
- ☐ pH
- ☐ _____
- ☐ _____
- ☐ Phenols
- ☐ Phosphorus, total
- ☐ Tot. reactive
- ☐ Dis. reactive
- ☐ Potassium
- ☐ Selenium
- ☐ Silica
- ☐ Silver
- ☐ Sodium
- ☐ Solics, total
- ☐ Tot. dissolved
- ☐ Tot. suspended
- ☐ Sulfate
- ☐ Sulfide
- ☐ Surfactants (MBAS)
- ☐ Thallium
- ☐ Tin
- ☐ T.O.C.
- ☐ Turbidity
- ☐ Vanadium
- ☐ Zinc
- ☐ Munic.Sludge,WI List
- ☐ Acid Extractables by 625/8270
- ☐ Base/Neutral Extractables by 625/8270
- ☐ BNAs by 625/8270
- ☐ Chlorinated Hydrocarbons by 612
- ☐ Haloethers by 611
- ☐ Nitrosamines by 607
- ☐ Pesticides-Organochlorine by 608/8080
- ☐ Pesticides-Organophosphate by 8141
- ☐ PCBs by 608/8080
- ☐ Phenols by GC 604/8040
- ☐ Phenoxy Acid Herbicides by 8150
- ☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-BNAs
- ☐ TCLP-pesticides/herbicides
- ☐ VOCs by EPA 601-602 or 8010-8020
  - ☐ -by EPA 8021
  - ☐ -by EPA 624/8260
  - ☐ -by EPA 524.2 (SDWA)
- ☐ BTEX by 8020
- ☐ PVOCs by 8020
- ☐ GRO-WI Modified ☐ GRO - PVOCs
- ☐ DRO-WI Modified
- ☐ PAHs by 610LC/8310

Samples on line #s: 1 through 17 to be analyzed for the parameters checked below:

- ☐ Alkalinity, total
- ☐ Alkalinity, bicarb.
- ☐ Aluminum
- ☐ Antimony
- ☐ Arsenic
- ☐ Barium
- ☐ Beryllium
- ☐ B.O.D.-5
- ☐ Boron
- ☐ Cadmium
- ☐ Calcium
- ☐ C.O.D.
- ☐ Chloride
- ☐ Chromium
- ☐ Chromium, hexavalent
- ☐ Cobalt
- ☐ Coliform, fecal
- ☐ Coliform, total
- ☐ Color
- ☐ Conductivity
- ☐ Copper
- ☐ _____
- ☐ Cyanide, total
- ☐ Amenable
- ☐ Fluoride
- ☐ Hardness
- ☐ Iron
- ☐ Lead
- ☐ Magnesium
- ☐ Manganese
- ☐ Mercury
- ☐ Molybdenum
- ☐ Nickel
- ☐ Nitrogen, total
- ☐ Ammonia
- ☐ Nitrate
- ☐ Nitrite
- ☐ Nitrate + Nitrite
- ☐ Total Kjeldahl
- ☐ Total Organic
- ☐ Oil & Grease
- ☐ pH
- ☐ _____
- ☐ _____
- ☐ Phenols
- ☐ Phosphorus, total
- ☐ Tot. reactive
- ☐ Dis. reactive
- ☐ Potassium
- ☐ Selenium
- ☐ Silica
- ☐ Silver
- ☐ Sodium
- ☐ Solics, total
- ☐ Tot. dissolved
- ☐ Tot. suspended
- ☐ Sulfate
- ☐ Sulfide
- ☐ Surfactants (MBAS)
- ☐ Thallium
- ☐ Tin
- ☐ T.O.C.
- ☐ Turbidity
- ☐ Vanadium
- ☐ Zinc
- ☐ Munic.Sludge,WI List
- ☐ Acid Extractables by 625/8270
- ☐ Base/Neutral Extractables by 625/8270
- ☐ BNAs by 625/8270
- ☐ Chlorinated Hydrocarbons by 612
- ☐ Haloethers by 611
- ☐ Nitrosamines by 607
- ☐ Pesticides-Organochlorine by 608/8080
- ☐ Pesticides-Organophosphate by 8141
- ☐ PCBs by 608/8080
- ☐ Phenols by GC 604/8040
- ☐ Phenoxy Acid Herbicides by 8150
- ☐ TCLP-metals ☐ TCLP-VOCs ☐ TCLP-BNAs
- ☐ TCLP-pesticides/herbicides
- ☐ VOCs by EPA 601-602 or 8010-8020
  - ☐ -by EPA 8021
  - ☐ -by EPA 624/8260
  - ☐ -by EPA 524.2 (SDWA)
- ☐ BTEX by 8020
- ☐ PVOCs by 8020
- ☐ GRO-WI Modified ☐ GRO - PVOCs
- ☐ DRO-WI Modified
- ☐ PAHs by 610LC/8310

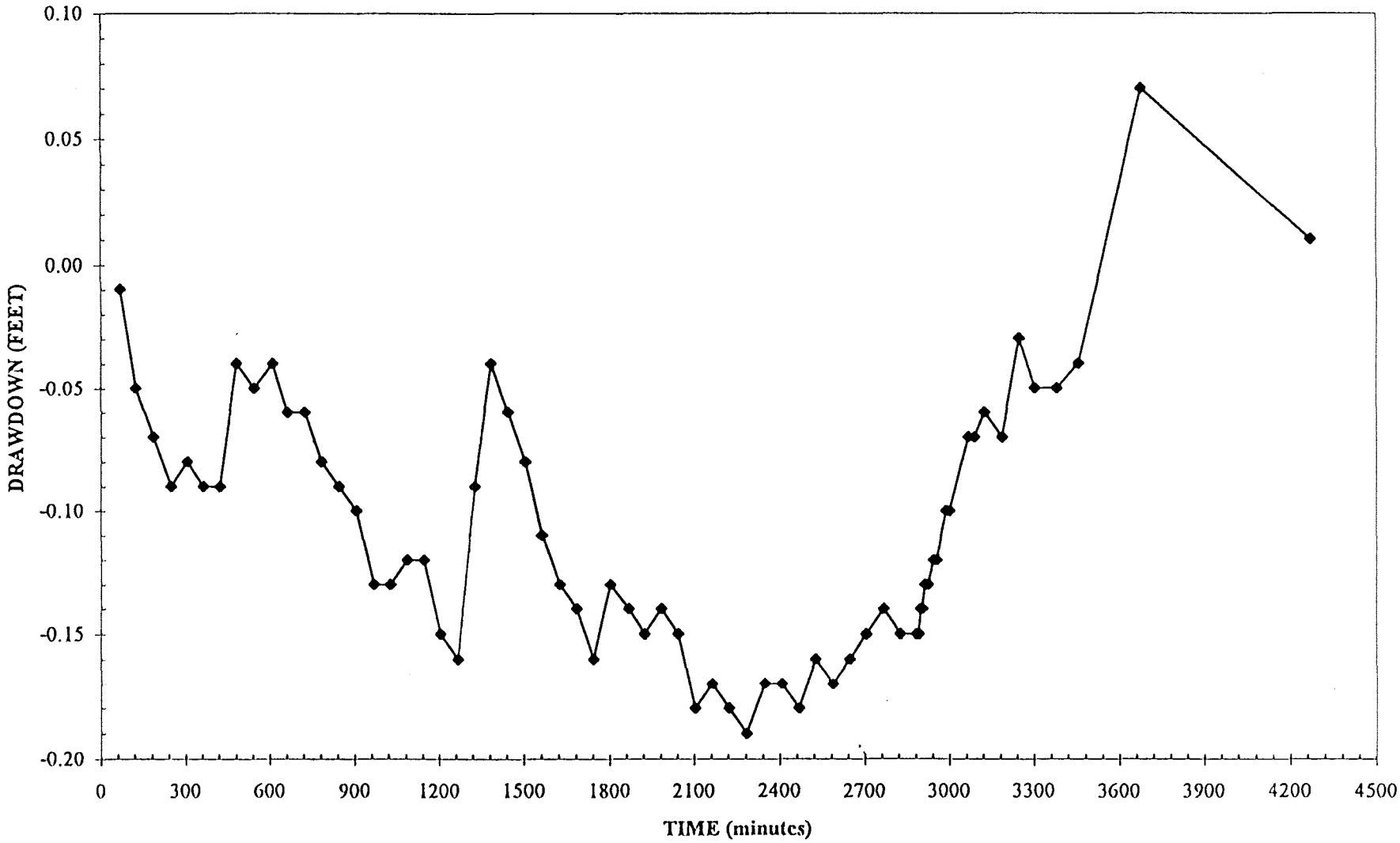
SPECIAL INSTRUCTIONS: _____

APPENDIX C

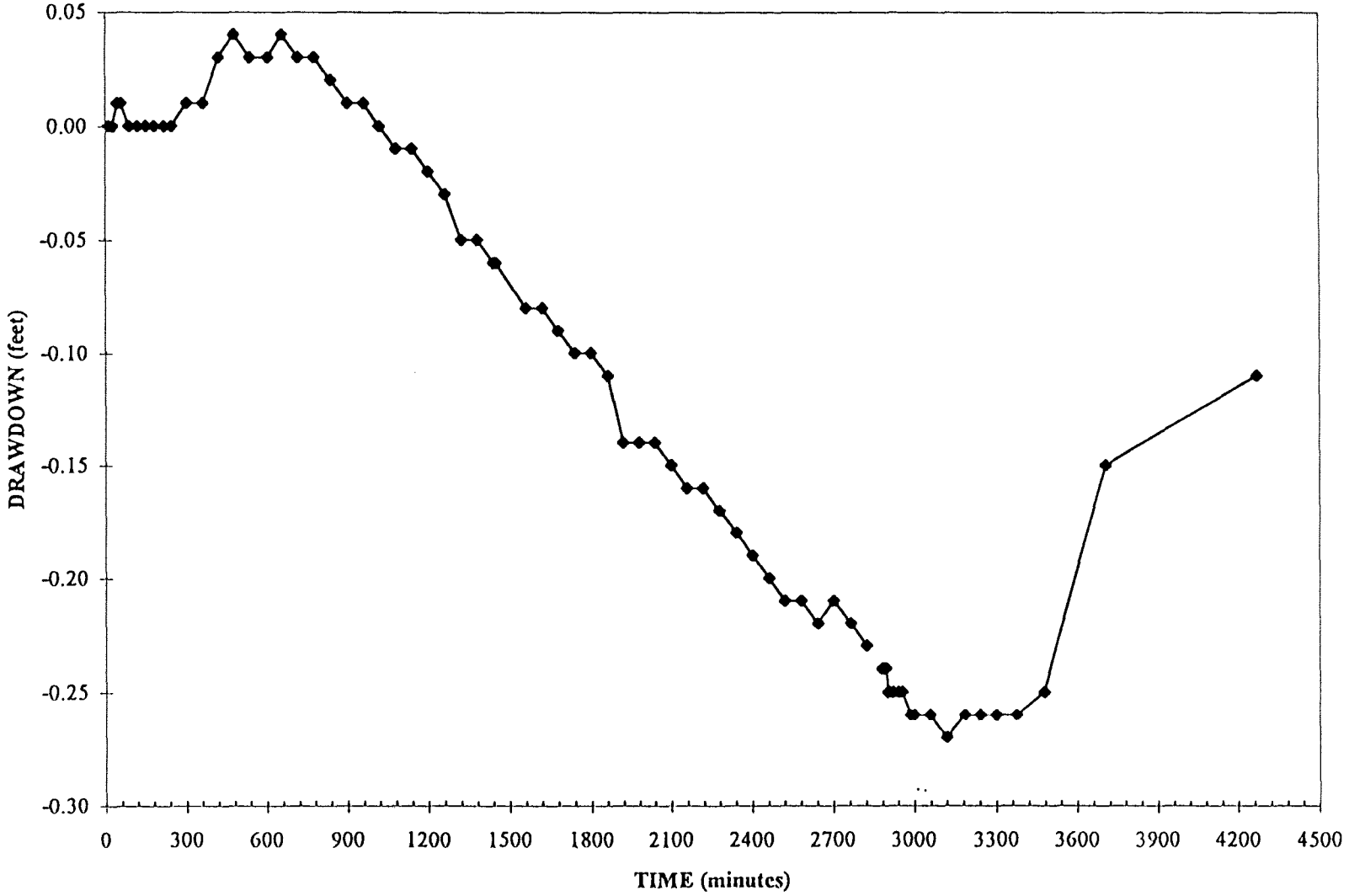
PUMPING WELL AND OBSERVATION WELL

DRAWDOWN DATA

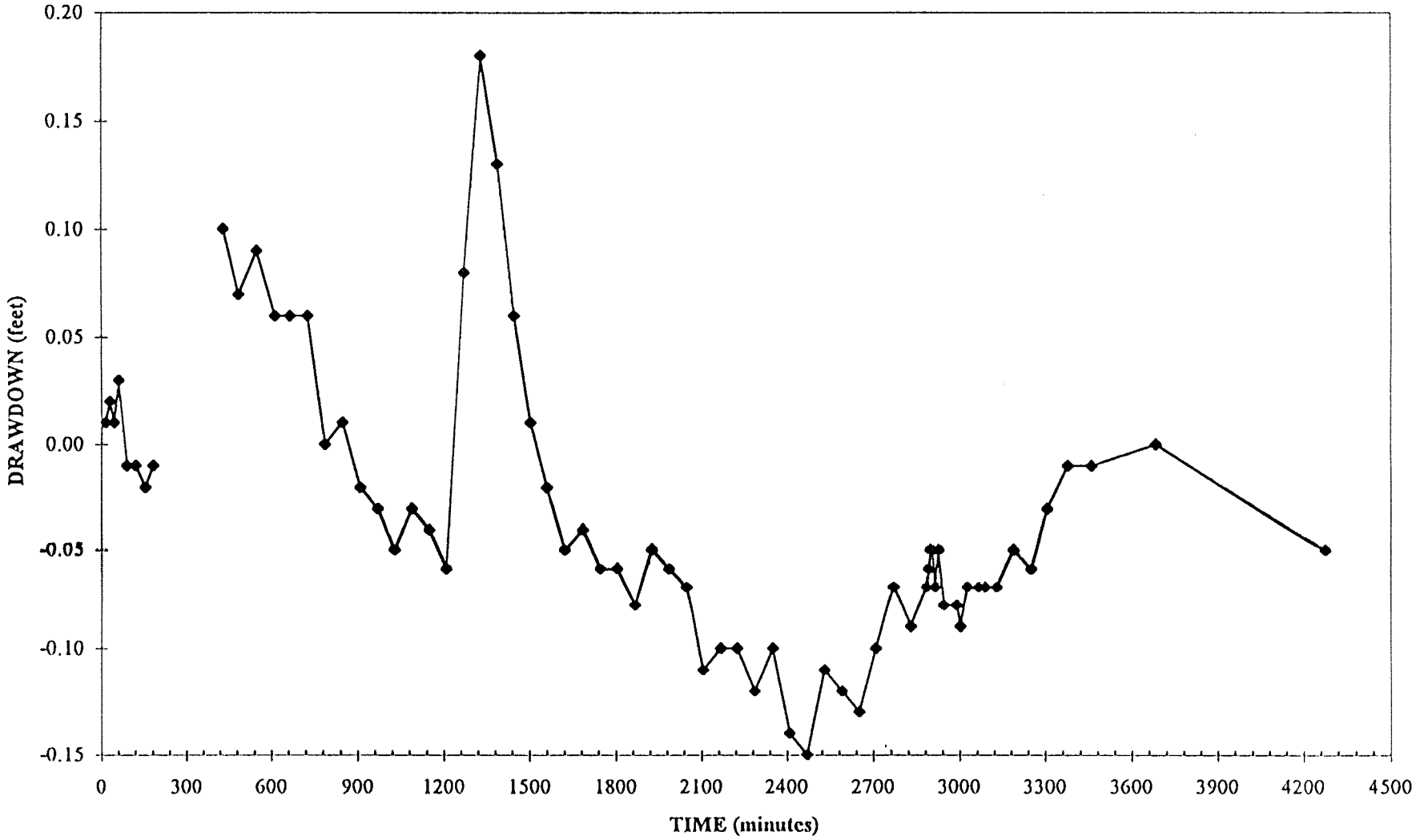
NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL MW-4B



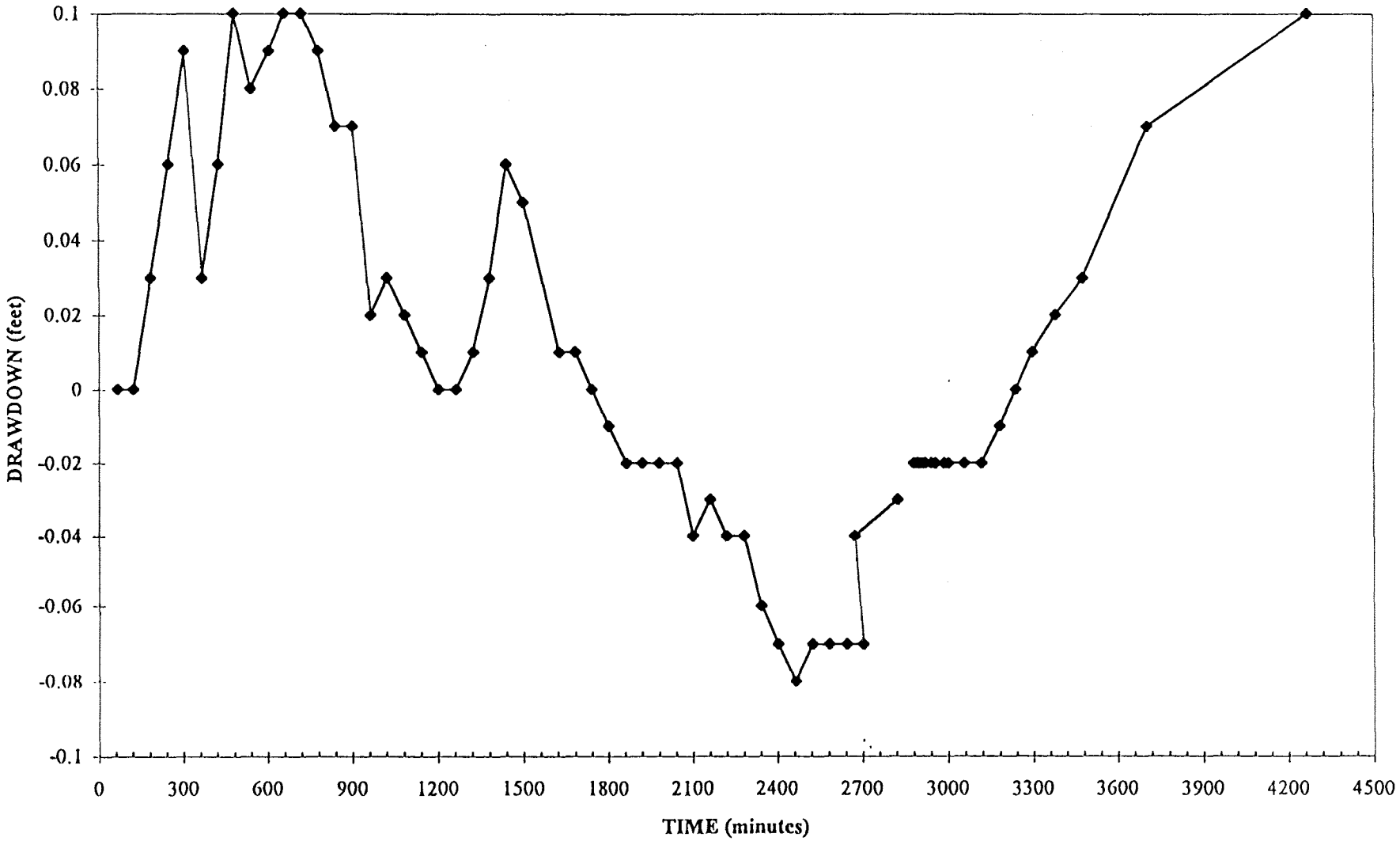
NSP ASHLAND - AQUIFER PERFORMENACE TEST WELL MW-8A



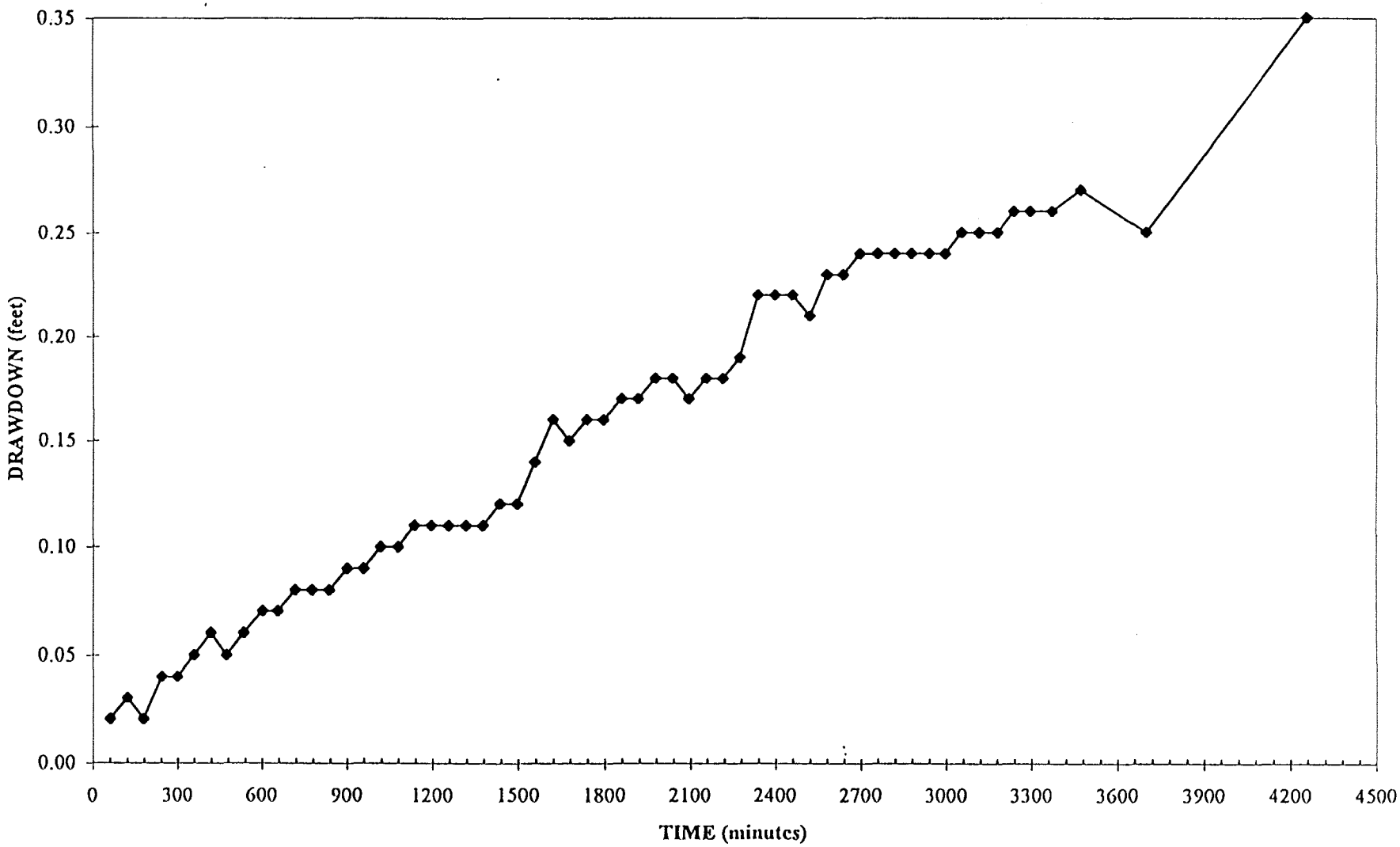
NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL MW-9A



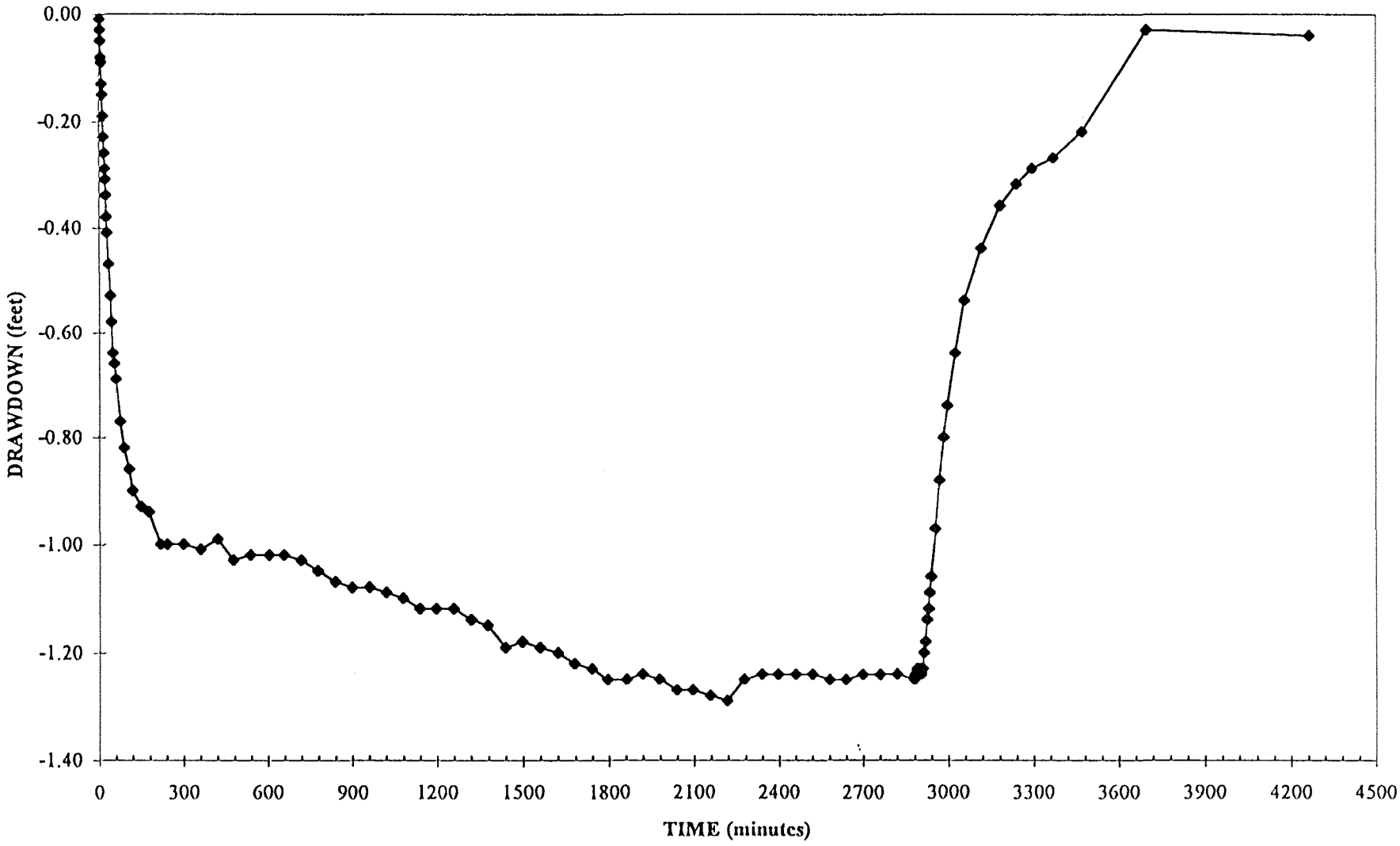
NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL MW-10A



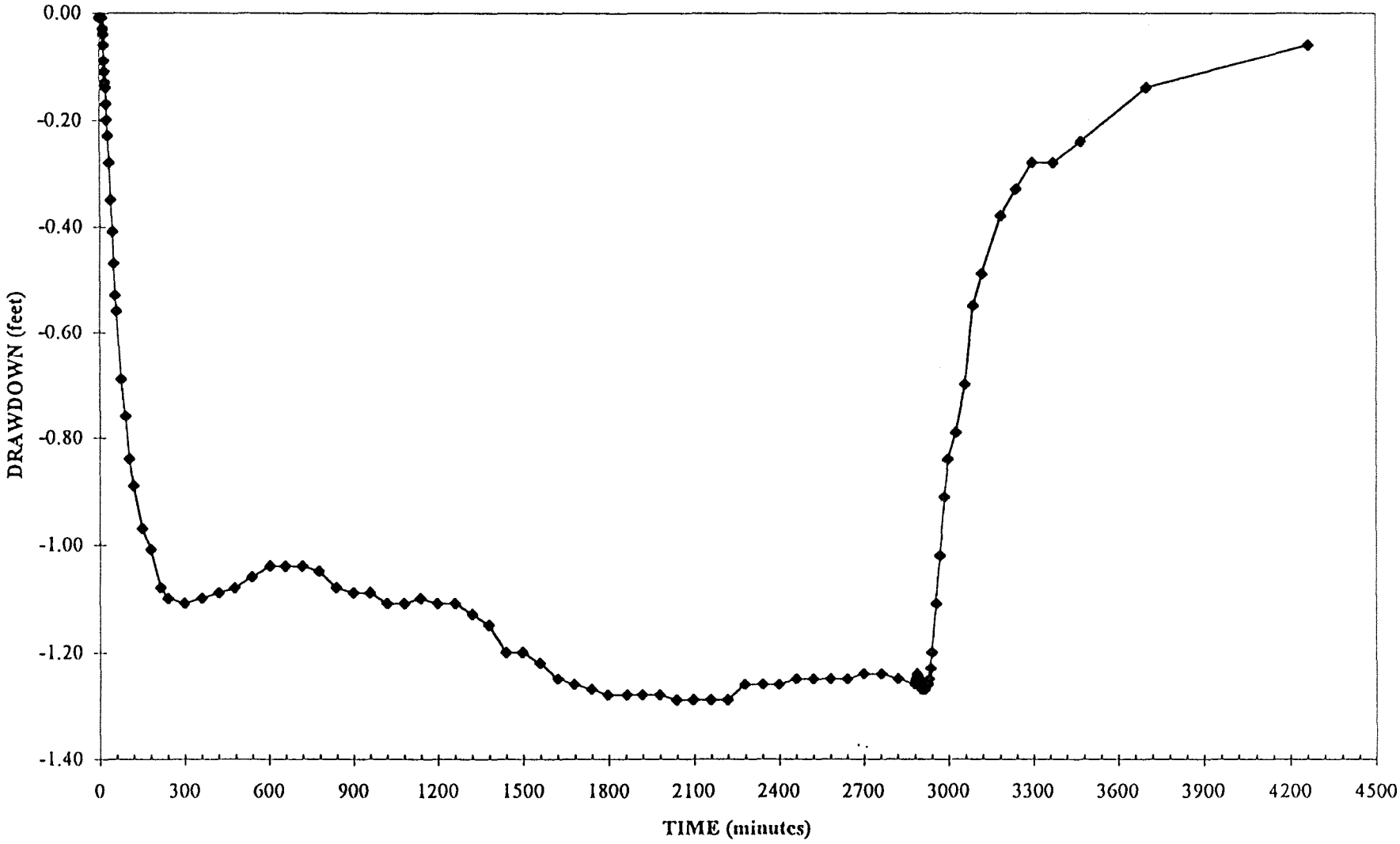
NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL TW-13



NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL MW-13A



NSP ASHLAND - AQUIFER PERFORMANCE TEST WELL MW-13B



NSP ASHLAND - Aquifer Performance Test
Well EW-1 Water Level Measurments

NSP - EW-1 PUMP TEST
PWRATE
0.100
RADIUS
0.42
TSDATA

0.01	0	1	82	20.893	1	170	27.355	1	258	28.437	1
1	0.006	1	83	21.032	1	171	27.368	1	259	28.45	1
2	0	1	84	21.247	1	172	27.399	1	260	28.437	1
3	0	1	85	21.431	1	173	27.443	1	261	28.418	1
4	0	1	86	21.652	1	174	27.45	1	262	28.405	1
5	0	1	87	21.861	1	175	27.462	1	263	28.386	1
6	1.045	1	88	22.032	1	176	27.481	1	264	28.367	1
7	1.963	1	89	22.216	1	177	27.5	1	265	28.355	1
8	2.711	1	90	22.405	1	178	27.507	1	266	28.342	1
9	3.332	1	91	22.576	1	179	27.526	1	267	28.31	1
10	3.908	1	92	22.747	1	180	27.526	1	268	28.285	1
11	4.453	1	93	22.912	1	181	27.526	1	269	28.279	1
12	5.017	1	94	23.07	1	182	27.538	1	270	28.254	1
13	5.562	1	95	23.254	1	183	27.557	1	271	28.235	1
14	6.075	1	96	23.418	1	184	27.57	1	272	28.216	1
15	6.588	1	97	23.551	1	185	27.57	1	273	28.165	1
16	7.196	1	98	23.697	1	186	27.583	1	274	28.14	1
17	7.893	1	99	23.83	1	187	27.583	1	275	28.108	1
18	8.482	1	100	23.982	1	188	27.583	1	276	28.076	1
19	9.001	1	101	24.108	1	189	27.589	1	277	28.032	1
20	9.495	1	102	24.241	1	190	27.583	1	278	28.007	1
21	9.976	1	103	24.374	1	191	27.602	1	279	27.962	1
22	10.432	1	104	24.482	1	192	27.583	1	280	27.931	1
23	10.876	1	105	24.576	1	193	27.57	1	281	27.905	1
24	11.313	1	106	24.64	1	194	27.551	1	282	27.868	1
25	11.724	1	107	24.722	1	195	27.545	1	283	27.848	1
26	12.111	1	108	24.804	1	196	27.519	1	284	27.804	1
27	12.491	1	109	24.893	1	197	27.456	1	285	27.785	1
28	12.883	1	110	24.975	1	198	27.481	1	286	27.76	1
29	13.251	1	111	25.045	1	199	27.488	1	287	27.722	1
30	13.611	1	112	25.121	1	200	27.494	1	288	27.709	1
31	13.96	1	113	25.19	1	201	27.519	1	289	27.678	1
32	14.308	1	114	25.279	1	202	27.526	1	290	27.652	1
33	14.618	1	115	25.342	1	203	27.519	1	291	27.614	1
34	14.929	1	116	25.437	1	204	27.513	1	292	27.595	1
35	15.214	1	117	25.494	1	205	27.494	1	293	27.564	1
36	15.511	1	118	25.545	1	206	27.469	1	294	27.551	1
37	15.758	1	119	25.602	1	207	27.475	1	295	27.526	1
38	15.999	1	120	25.678	1	208	27.443	1	296	27.481	1
39	16.271	1	121	25.747	1	209	27.412	1	297	27.494	1
40	16.537	1	122	25.83	1	210	27.412	1	298	27.519	1
41	16.803	1	123	25.893	1	211	27.406	1	299	27.551	1
42	17.05	1	124	25.944	1	212	27.374	1	300	27.583	1
43	17.297	1	125	26.026	1	213	27.374	1	301	27.595	1
44	17.531	1	126	26.102	1	214	27.342	1	303	27.633	1
45	17.765	1	127	26.178	1	215	27.317	1	305	27.64	1
46	17.936	1	128	26.26	1	216	27.298	1	307	27.614	1
47	18.094	1	129	26.323	1	217	27.273	1	309	27.621	1
48	18.24	1	130	26.393	1	218	27.247	1	311	27.621	1
49	18.335	1	131	26.456	1	219	27.228	1	313	27.646	1
50	18.411	1	132	26.5	1	220	27.209	1	315	27.627	1
51	18.5	1	133	26.545	1	221	27.133	1	317	27.633	1
52	18.575	1	134	26.583	1	222	27.045	1	319	27.709	1
53	18.677	1	135	26.614	1	223	26.95	1	321	27.773	1
54	18.81	1	136	26.646	1	224	26.849	1	323	27.817	1
55	18.93	1	137	26.671	1	225	26.766	1	325	27.836	1
56	19.044	1	138	26.69	1	226	26.671	1	327	27.88	1
57	19.158	1	139	26.69	1	227	26.583	1	329	27.905	1
58	19.272	1	140	26.703	1	228	26.557	1	331	27.937	1
59	19.392	1	141	26.716	1	229	26.589	1	333	27.95	1
60	19.512	1	142	26.728	1	230	26.709	1	335	27.95	1
61	19.601	1	143	26.716	1	231	26.836	1	337	27.937	1
62	19.721	1	144	26.773	1	232	26.937	1	339	27.912	1
63	19.816	1	145	26.937	1	233	27.051	1	341	27.893	1
64	19.911	1	146	27	1	234	27.159	1	343	27.874	1
65	20.025	1	147	27.032	1	235	27.273	1	345	27.886	1
66	20.127	1	148	27.064	1	236	27.368	1	347	27.861	1
67	20.222	1	149	27.095	1	237	27.469	1	349	27.842	1
68	20.316	1	150	27.121	1	238	27.557	1	351	27.817	1
69	20.38	1	151	27.146	1	239	27.665	1	353	27.798	1
70	20.437	1	152	27.178	1	240	27.741	1	355	27.773	1
71	20.475	1	153	27.197	1	241	27.848	1	357	27.671	1
72	20.519	1	154	27.241	1	242	27.937	1	359	27.557	1
73	20.563	1	155	27.241	1	243	28.013	1	361	27.475	1
74	20.608	1	156	27.26	1	244	28.095	1	363	27.386	1
75	20.652	1	157	27.279	1	245	28.159	1	365	27.279	1
76	20.671	1	158	27.311	1	246	28.228	1	367	27.171	1
77	20.696	1	159	27.304	1	247	28.279	1	369	27.07	1
78	20.715	1	160	27.311	1	248	28.323	1	371	26.969	1
79	20.614	1	161	27.317	1	249	28.329	1	373	26.868	1
80	20.665	1	162	27.342	1	250	28.348	1	375	26.754	1
81	20.747	1	163	27.336	1	251	28.355	1	377	26.823	1
			164	27.342	1	252	28.367	1	379	26.874	1
			165	27.33	1	253	28.386	1	381	26.887	1
			166	27.323	1	254	28.399	1	383	27.102	1
			167	27.323	1	255	28.405	1	385	27.184	1
			168	27.317	1	256	28.418	1	387	27.273	1
			169	27.311	1	257	28.431	1	389	27.323	1

NSP ASHLAND - Aquifer Performance Test
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391	27.361	567	27.975	743	29.842	919	28.456
393	27.399	569	28.222	745	29.905	921	28.285
395	27.386	571	28.348	747	29.949	923	28.519
397	27.33	573	28.437	749	29.987	925	28.716
399	27.361	575	28.507	751	30.019	927	28.874
401	27.488	577	28.424	753	30.051	929	29.032
403	27.576	579	28.304	755	30.07	931	29.165
405	27.665	581	28.171	757	30.101	933	29.285
407	27.747	583	28.038	759	30.108	935	29.38
409	27.811	585	27.874	761	30.101	937	29.355
411	27.874	587	27.716	763	30.095	939	29.31
413	27.912	589	27.545	765	30.089	941	29.253
415	28.026	591	27.323	767	30.076	943	29.209
417	28.14	593	27.152	769	30.032	945	29.102
419	28.254	595	26.925	771	29.994	947	29.013
421	28.361	597	26.728	773	29.93	949	28.931
423	28.437	599	26.5	775	29.848	951	28.855
425	28.519	601	26.361	777	29.899	953	28.785
427	28.595	603	26.323	779	30.095	955	28.684
429	28.665	605	26.564	781	30.234	957	28.899
431	28.728	607	26.741	783	30.348	959	29.215
433	28.785	609	26.887	785	30.462	961	29.38
435	28.848	611	27.007	787	30.544	963	29.57
437	28.905	613	27.165	789	30.639	965	29.747
439	28.95	615	27.386	791	30.715	967	29.911
441	28.994	617	27.557	793	30.785	969	30.063
443	29.045	619	27.659	795	30.854	971	30.215
445	29.095	621	27.735	797	30.911	973	30.348
447	29.102	623	27.811	799	30.968	975	30.468
449	29.07	625	27.848	801	31.013	977	30.576
451	29.045	627	27.893	803	31.057	979	30.677
453	29.013	629	28.007	805	31.082	981	30.778
455	29.196	631	28.121	807	31.082	983	30.873
457	29.317	633	28.19	809	31.082	985	30.949
459	29.38	635	28.266	811	31.044	987	31.025
461	29.424	637	28.298	813	31.006	989	31.101
463	29.456	639	28.329	815	30.962	991	31.171
465	29.5	641	28.488	817	30.905	993	31.247
467	29.431	643	28.671	819	30.848	995	31.291
469	29.38	645	28.829	821	30.785	997	31.361
471	29.367	647	28.975	823	30.683	999	31.417
473	29.298	649	29.114	825	30.557	1001	31.462
475	29.177	651	29.222	827	30.418	1003	31.481
477	29.057	653	29.272	829	30.253	1005	31.468
479	29.07	655	29.317	831	30.057	1007	31.462
481	29.133	657	29.329	833	29.836	1009	31.449
483	29.158	659	29.336	835	29.779	1011	31.436
485	29.045	661	29.298	837	30.051	1013	31.405
487	28.88	663	29.241	839	30.234	1015	31.361
489	28.716	665	29.184	841	30.411	1017	31.297
491	28.405	667	29.102	843	30.589	1019	31.215
493	28.095	669	28.994	845	30.74	1021	31.145
495	27.962	671	28.893	847	30.848	1023	31.057
497	27.969	673	28.772	849	30.937	1025	30.968
499	27.994	675	28.766	851	31.019	1027	30.88
501	27.994	677	28.817	853	31.069	1029	30.772
503	28.026	679	28.829	855	31.101	1031	30.664
505	28.032	681	28.785	857	31.12	1033	30.532
507	28.026	683	28.741	859	31.152	1035	30.411
509	28.019	685	28.659	861	31.139	1037	30.297
511	28.032	687	28.602	863	31.114	1039	30.184
513	28.114	689	28.513	865	31.082	1041	30.063
515	28.178	691	28.412	867	31.006	1043	29.918
517	28.209	693	28.273	869	30.924	1045	29.779
519	28.197	695	28.159	871	30.829	1047	29.633
521	28.171	697	27.994	873	30.886	1049	29.475
523	28.127	699	27.83	875	30.943	1051	29.329
525	28.095	701	27.633	877	30.981	1053	29.158
527	28.07	703	27.469	879	30.981	1055	29.007
529	28.07	705	27.614	881	30.956	1057	28.848
531	28.089	707	27.608	883	30.924	1059	28.69
533	28.089	709	27.614	885	30.88	1061	28.526
535	28.089	711	27.621	887	30.829	1063	28.336
537	28.348	713	27.842	889	30.766	1065	28.14
539	28.576	715	28.114	891	30.664	1067	27.943
541	28.671	717	28.336	893	30.544	1069	27.76
543	28.659	719	28.538	895	30.411	1071	27.557
545	28.608	721	28.703	897	30.297	1073	27.38
547	28.519	723	28.88	899	30.165	1075	27.203
549	28.374	725	29.045	901	30.038	1077	27.045
551	28.19	727	29.171	903	29.861	1079	27.152
553	27.988	729	29.285	905	29.703	1081	27.133
555	27.804	731	29.386	907	29.519	1083	27.076
557	27.76	733	29.481	909	29.355	1085	26.988
559	27.76	735	29.57	911	29.165	1087	26.887
561	27.823	737	29.639	913	28.969	1089	26.792
563	27.836	739	29.715	915	28.798	1091	26.69
565	27.83	741	29.791	917	28.627	1093	26.545

NSP ASHLAND - Aquifer Performance Test
Well EW-1 Water Level Measurments

1095	26.418	1	1271	25.982	1	1447	26.595	1	1623	32.892	1
1097	26.247	1	1273	25.798	1	1449	26.849	1	1625	32.904	1
1099	26.083	1	1275	25.621	1	1451	27.057	1	1627	32.885	1
1101	25.918	1	1277	25.431	1	1453	27.209	1	1629	32.892	1
1103	25.773	1	1279	25.804	1	1455	27.323	1	1631	32.892	1
1105	25.842	1	1281	26.02	1	1457	27.437	1	1633	32.898	1
1107	25.842	1	1283	26.602	1	1459	27.557	1	1635	32.885	1
1109	25.849	1	1285	26.507	1	1461	27.614	1	1637	32.892	1
1111	25.849	1	1287	26.899	1	1463	27.614	1	1639	32.885	1
1113	25.785	1	1289	27.349	1	1465	27.608	1	1641	32.892	1
1115	25.709	1	1291	27.766	1	1467	27.741	1	1643	32.879	1
1117	25.621	1	1293	28.133	1	1469	27.886	1	1645	32.898	1
1119	25.513	1	1295	28.405	1	1471	28.007	1	1647	32.885	1
1121	25.406	1	1297	28.627	1	1473	28.057	1	1649	32.784	1
1123	25.292	1	1299	28.772	1	1475	28.291	1	1651	32.62	1
1125	25.171	1	1301	28.905	1	1477	28.456	1	1653	32.461	1
1127	25.039	1	1303	29	1	1479	28.557	1	1655	32.297	1
1129	24.893	1	1305	29.102	1	1481	28.595	1	1657	32.094	1
1131	24.728	1	1307	29.146	1	1483	28.602	1	1659	31.905	1
1133	24.539	1	1309	29.139	1	1485	28.576	1	1661	31.721	1
1135	24.349	1	1311	29.127	1	1487	28.526	1	1663	31.487	1
1137	24.178	1	1313	29.139	1	1489	28.5	1	1665	31.278	1
1139	24.709	1	1315	29.171	1	1491	28.393	1	1667	31.069	1
1141	24.374	1	1317	29.386	1	1493	28.254	1	1669	30.867	1
1143	24.975	1	1319	29.507	1	1495	28.057	1	1671	30.646	1
1145	24.944	1	1321	29.589	1	1497	27.855	1	1673	30.399	1
1147	24.836	1	1323	29.639	1	1499	27.823	1	1675	30.456	1
1149	25.963	1	1325	29.677	1	1501	27.924	1	1677	30.316	1
1151	25.956	1	1327	29.633	1	1503	28.026	1	1679	30.063	1
1153	26.013	1	1329	29.589	1	1505	28.013	1	1681	29.804	1
1155	26.026	1	1331	29.538	1	1507	27.969	1	1683	29.519	1
1157	26.013	1	1333	29.45	1	1509	27.893	1	1685	29.247	1
1159	26.032	1	1335	29.38	1	1511	27.798	1	1687	28.969	1
1161	26.45	1	1337	29.279	1	1513	27.684	1	1689	28.709	1
1163	26.785	1	1339	29.766	1	1515	27.754	1	1691	28.45	1
1165	27.108	1	1341	30.297	1	1517	27.741	1	1693	28.178	1
1167	27.368	1	1343	30.772	1	1519	27.652	1	1695	28.026	1
1169	27.595	1	1345	31.285	1	1521	27.576	1	1697	28.032	1
1171	27.792	1	1347	31.658	1	1523	27.462	1	1699	28.076	1
1173	27.95	1	1349	31.835	1	1525	27.304	1	1701	28.197	1
1175	28.095	1	1351	31.974	1	1527	27.108	1	1703	28.285	1
1177	28.216	1	1353	32.088	1	1529	26.899	1	1705	28.355	1
1179	28.329	1	1355	31.873	1	1531	27.083	1	1707	28.431	1
1181	28.418	1	1357	31.633	1	1533	27.247	1	1709	28.469	1
1183	28.456	1	1359	31.373	1	1535	27.342	1	1711	28.488	1
1185	28.469	1	1361	31.057	1	1537	27.368	1	1713	28.532	1
1187	28.469	1	1363	30.734	1	1539	27.317	1	1715	28.576	1
1189	28.45	1	1365	30.373	1	1541	27.209	1	1717	28.608	1
1191	28.437	1	1367	30.006	1	1543	27.108	1	1719	28.646	1
1193	28.393	1	1369	29.614	1	1545	27.19	1	1721	28.614	1
1195	28.355	1	1371	29.209	1	1547	27.551	1	1723	28.551	1
1197	28.291	1	1373	28.804	1	1549	27.836	1	1725	28.5	1
1199	28.317	1	1375	28.367	1	1551	28.038	1	1727	28.513	1
1201	28.393	1	1377	27.937	1	1553	28.178	1	1729	28.532	1
1203	28.424	1	1379	27.45	1	1555	28.304	1	1731	28.57	1
1205	28.443	1	1381	27.633	1	1557	28.405	1	1733	28.602	1
1207	28.431	1	1383	27.924	1	1559	28.684	1	1735	28.627	1
1209	28.412	1	1385	28.336	1	1561	29.045	1	1737	28.64	1
1211	28.361	1	1387	27.804	1	1563	29.38	1	1739	28.621	1
1213	28.279	1	1389	27.273	1	1565	29.677	1	1741	28.608	1
1215	28.184	1	1391	26.741	1	1567	29.962	1	1743	28.57	1
1217	28.07	1	1393	26.228	1	1569	30.165	1	1745	28.545	1
1219	27.931	1	1395	25.728	1	1571	30.354	1	1747	28.513	1
1221	28.152	1	1397	25.209	1	1573	30.513	1	1749	28.437	1
1223	28.412	1	1399	25.209	1	1575	30.658	1	1751	28.329	1
1225	28.532	1	1401	25.463	1	1577	30.797	1	1753	28.209	1
1227	28.614	1	1403	25.621	1	1579	30.911	1	1755	28.076	1
1229	28.665	1	1405	25.621	1	1581	31.013	1	1757	28.197	1
1231	28.633	1	1407	25.545	1	1583	31.082	1	1759	28.329	1
1233	28.57	1	1409	25.488	1	1585	31.183	1	1761	28.38	1
1235	28.5	1	1411	25.431	1	1587	31.253	1	1763	28.418	1
1237	28.412	1	1413	25.361	1	1589	31.329	1	1765	28.456	1
1239	28.317	1	1415	25.285	1	1591	31.373	1	1767	28.494	1
1241	28.216	1	1417	25.197	1	1593	31.405	1	1769	28.5	1
1243	28.095	1	1419	25.108	1	1595	31.436	1	1771	28.507	1
1245	27.95	1	1421	25.02	1	1597	31.468	1	1773	28.519	1
1247	27.792	1	1423	24.937	1	1599	31.468	1	1775	28.507	1
1249	27.627	1	1425	24.83	1	1601	31.531	1	1777	28.481	1
1251	27.412	1	1427	24.735	1	1603	31.873	1	1779	28.57	1
1253	27.197	1	1429	24.64	1	1605	32.12	1	1781	28.671	1
1255	26.988	1	1431	24.747	1	1607	32.341	1	1783	28.741	1
1257	26.956	1	1433	24.944	1	1609	32.556	1	1785	28.81	1
1259	26.868	1	1435	25.108	1	1611	32.765	1	1787	28.836	1
1261	26.747	1	1437	25.222	1	1613	32.892	1	1789	28.855	1
1263	26.621	1	1439	25.317	1	1615	32.892	1	1791	28.886	1
1265	26.5	1	1441	25.633	1	1617	32.898	1	1793	28.905	1
1267	26.342	1	1443	25.994	1	1619	32.898	1	1795	28.899	1
1269	26.171	1	1445	26.323	1	1621	32.898	1	1797	29	1

NSP ASHLAND - Aquifer Performance Test
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1799	29.146		1975	29.62		2151	30.949		2327	26.779	
1801	29.26		1977	29.842		2153	30.937		2329	26.311	
1803	29.171		1979	30.032		2155	30.911		2331	25.874	
1805	29.089		1981	30.215		2157	30.905		2333	25.444	
1807	29		1983	30.342		2159	30.88		2335	25.114	
1809	28.912		1985	30.411		2161	30.842		2337	25.133	
1811	28.842		1987	30.481		2163	30.797		2339	24.95	
1813	28.747		1989	30.538		2165	30.753		2341	24.583	
1815	28.678		1991	30.595		2167	30.709		2343	24.228	
1817	28.804		1993	30.633		2169	30.658		2345	23.855	
1819	28.943		1995	30.664		2171	30.608		2347	23.532	
1821	29.051		1997	30.652		2173	30.557		2349	23.216	
1823	29.177		1999	30.589		2175	30.5		2351	22.867	
1825	29.241		2001	30.57		2177	30.449		2353	22.519	
1827	29.298		2003	30.544		2179	30.443		2355	22.197	
1829	29.355		2005	30.525		2181	30.506		2357	21.88	
1831	29.405		2007	30.494		2183	30.551		2359	21.557	
1833	29.443		2009	30.462		2185	30.468		2361	21.253	
1835	29.488		2011	30.437		2187	30.411		2363	20.899	
1837	29.507		2013	30.405		2189	30.342		2365	21.481	
1839	29.544		2015	30.411		2191	30.272		2367	22.792	
1841	29.57		2017	30.367		2193	30.209		2369	24.039	
1843	29.576		2019	30.367		2195	30.152		2371	24.76	
1845	29.601		2021	30.367		2197	30.076		2373	25.399	
1847	29.614		2023	30.367		2199	29.994		2375	25.925	
1849	29.62		2025	30.354		2201	29.937		2377	26.361	
1851	29.627		2027	30.342		2203	29.842		2379	26.76	
1853	29.652		2029	30.373		2205	29.772		2381	27.064	
1855	29.652		2031	30.449		2207	29.696		2383	27.349	
1857	29.633		2033	30.437		2209	29.614		2385	27.576	
1859	29.627		2035	30.418		2211	29.544		2387	27.779	
1861	29.665		2037	30.38		2213	29.601		2389	27.962	
1863	29.715		2039	30.354		2215	29.658		2391	28.127	
1865	29.722		2041	30.31		2217	29.633		2393	28.273	
1867	29.728		2043	30.266		2219	29.614		2395	28.399	
1869	29.703		2045	30.241		2221	29.563		2397	28.5	
1871	29.677		2047	30.203		2223	29.538		2399	28.507	
1873	29.633		2049	30.184		2225	29.481		2401	28.5	
1875	29.589		2051	30.184		2227	29.418		2403	28.494	
1877	29.544		2053	30.158		2229	29.348		2405	28.475	
1879	29.532		2055	30.146		2231	29.31		2407	28.424	
1881	29.633		2057	30.127		2233	29.241		2409	28.348	
1883	29.722		2059	30.266		2235	29.418		2411	28.823	
1885	29.779		2061	30.354		2237	29.62		2413	29.279	
1887	29.842		2063	30.424		2239	29.76		2415	30.032	
1889	29.899		2065	30.468		2241	29.88		2417	29.785	
1891	29.949		2067	30.494		2243	29.987		2419	29.272	
1893	30		2069	30.513		2245	30.095		2421	28.722	
1895	30.044		2071	30.525		2247	30.19		2423	28.203	
1897	30.076		2073	30.544		2249	30.266		2425	27.684	
1899	30.114		2075	30.557		2251	30.348		2427	27.178	
1901	30.12		2077	30.57		2253	30.43		2429	26.684	
1903	30.139		2079	30.633		2255	30.513		2431	26.178	
1905	30.165		2081	30.696		2257	30.576		2433	25.709	
1907	30.171		2083	30.753		2259	30.658		2435	25.241	
1909	30.171		2085	30.785		2261	30.696		2437	24.773	
1911	30.165		2087	30.81		2263	30.759		2439	24.33	
1913	30.171		2089	30.816		2265	30.816		2441	23.887	
1915	30.152		2091	30.842		2267	30.873		2443	23.462	
1917	30.114		2093	30.848		2269	30.905		2445	23.051	
1919	30.057		2095	30.861		2271	30.943		2447	22.652	
1921	29.987		2097	30.854		2273	30.975		2449	22.494	
1923	29.937		2099	30.842		2275	30.994		2451	23.222	
1925	29.867		2101	30.842		2277	31.013		2453	22.817	
1927	29.81		2103	30.829		2279	31.044		2455	22.329	
1929	29.747		2105	30.823		2281	31.063		2457	21.817	
1931	29.677		2107	30.816		2283	31.063		2459	21.329	
1933	29.62		2109	30.766		2285	31.069		2461	21.367	
1935	29.532		2111	30.721		2287	31.069		2463	21.886	
1937	29.582		2113	30.683		2289	31.076		2465	22.057	
1939	29.627		2115	30.639		2291	31.05		2467	22.798	
1941	29.677		2117	30.601		2293	31.013		2469	23.481	
1943	29.69		2119	30.652		2295	30.962		2471	24.089	
1945	29.677		2121	30.702		2297	30.918		2473	24.621	
1947	29.671		2123	30.747		2299	30.867		2475	25.146	
1949	29.639		2125	30.791		2301	30.728		2477	25.614	
1951	29.633		2127	30.823		2303	30.544		2479	26.064	
1953	29.601		2129	30.835		2305	30.399		2481	26.482	
1955	29.576		2131	30.848		2307	30.646		2483	26.861	
1957	29.551		2133	30.873		2309	30.981		2485	27.222	
1959	29.532		2135	30.892		2311	30.778		2487	27.538	
1961	29.488		2137	30.905		2313	30.253		2489	27.83	
1963	29.469		2139	30.93		2315	29.728		2491	28.064	
1965	29.412		2141	30.956		2317	29.209		2493	28.197	
1967	29.405		2143	30.968		2319	28.684		2495	28.273	
1969	29.5		2145	30.968		2321	28.222		2497	28.254	
1971	29.551		2147	30.981		2323	27.703		2499	28.197	
1973	29.563		2149	30.981		2325	27.228		2501	28.127	

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2503	28.038	2679	30.146	2855	29.538	2958	8.672
2505	27.969	2681	30.177	2857	29.298	2959	8.526
2507	27.823	2683	30.19	2859	29.102	2960	8.387
2509	27.671	2685	30.203	2861	28.867	2961	8.254
2511	27.538	2687	30.184	2863	28.633	2962	8.121
2513	27.386	2689	30.171	2865	28.418	2963	7.988
2515	27.222	2691	30.12	2867	28.165	2964	7.861
2517	27.462	2693	30.051	2869	27.943	2965	7.734
2519	27.728	2695	30	2871	27.899	2966	7.608
2521	27.931	2697	29.905	2873	28.013	2967	7.487
2523	28.064	2699	30.475	2875	28.076	2968	7.361
2525	28.127	2701	30.12	2877	28.102	2969	7.247
2527	28.133	2703	29.671	2879	28.121	2970	7.126
2529	28.108	2705	29.19	2881	28.121	2971	7.012
2531	28.114	2707	28.924	2883	28.108	2972	6.898
2533	28.026	2709	28.766	2885	28.114	2973	6.791
2535	27.951	2711	28.614	2886	27.481	2974	6.683
2537	27.868	2713	28.431	2887	26.988	2975	6.575
2539	27.747	2715	28.247	2888	26.576	2976	6.467
2541	28.519	2717	28.064	2889	26.171	2977	6.366
2543	29.064	2719	27.886	2890	25.773	2978	6.265
2545	29.165	2721	27.88	2891	25.387	2979	6.163
2547	28.95	2723	28.07	2892	25.007	2980	6.068
2549	28.962	2725	28.228	2893	24.627	2981	5.967
2551	29.177	2727	28.361	2894	24.254	2982	5.872
2553	29.317	2729	28.488	2895	23.887	2983	5.783
2555	29.437	2731	28.589	2896	23.526	2984	5.688
2557	29.538	2733	28.659	2897	23.165	2985	5.6
2559	29.544	2735	28.696	2898	22.811	2986	5.505
2561	29.544	2737	28.753	2899	22.456	2987	5.422
2563	29.481	2739	28.798	2900	22.045	2988	5.34
2565	29.38	2741	28.836	2901	21.551	2989	5.258
2567	29.253	2743	28.836	2902	21.215	2990	5.175
2569	29.108	2745	28.836	2903	20.899	2991	5.099
2571	28.937	2747	28.836	2904	20.589	2992	5.017
2573	28.734	2749	28.76	2905	20.279	2993	4.947
2575	28.519	2751	28.684	2906	19.981	2994	4.871
2577	28.595	2753	28.552	2907	19.683	2995	4.795
2579	28.64	2755	28.405	2908	19.405	2996	4.719
2581	28.532	2757	28.627	2909	19.145	2997	4.65
2583	28.393	2759	29.102	2910	18.892	2998	4.58
2585	28.228	2761	29.475	2911	18.645	2999	4.516
2587	28.019	2763	29.823	2912	18.398	3000	4.453
2589	27.817	2765	30.146	2913	18.158	3001	4.383
2591	27.538	2767	30.437	2914	17.93	3002	4.32
2593	27.241	2769	30.721	2915	17.696	3003	4.257
2595	27.254	2771	31.006	2916	17.43	3004	4.193
2597	27.602	2773	31.247	2917	17.145	3005	4.13
2599	28.355	2775	31.449	2918	16.86	3006	4.073
2601	28.564	2777	31.696	2919	16.575	3007	4.016
2603	28.481	2779	31.886	2920	16.303	3008	3.953
2605	28.386	2781	32.057	2921	16.03	3009	3.902
2607	28.279	2783	32.183	2922	15.764	3010	3.839
2609	28.133	2785	32.284	2923	15.505	3011	3.788
2611	28	2787	32.348	2924	15.245	3012	3.731
2613	27.842	2789	32.379	2925	14.992	3013	3.674
2615	27.633	2791	32.367	2926	14.745	3014	3.623
2617	27.406	2793	32.341	2927	14.498	3015	3.566
2619	27.127	2795	32.284	2928	14.257	3016	3.516
2621	26.817	2797	32.208	2929	14.023	3017	3.465
2623	26.469	2799	32.132	2930	13.789	3018	3.414
2625	26.127	2801	32.012	2931	13.561	3019	3.37
2627	25.779	2803	31.879	2932	13.339	3020	3.319
2629	25.456	2805	31.753	2933	13.118	3021	3.268
2631	25.114	2807	31.633	2934	12.902	3022	3.224
2633	24.798	2809	31.519	2935	12.687	3023	3.18
2635	24.469	2811	31.38	2936	12.472	3024	3.142
2637	24.146	2813	31.209	2937	12.269	3025	3.097
2639	24.032	2815	31.044	2938	12.066	3026	3.053
2641	24.842	2817	31.424	2939	11.87	3027	3.015
2643	25.216	2819	31.455	2940	11.667	3028	2.977
2645	25.773	2821	31.531	2941	11.477	3029	2.932
2647	26.254	2823	31.582	2942	11.294	3030	2.901
2649	26.728	2825	31.55	2943	11.104	3031	2.863
2651	27.165	2827	31.531	2944	10.92	3032	2.825
2653	27.557	2829	31.474	2945	10.736	3033	2.787
2655	27.937	2831	31.367	2946	10.565	3034	2.755
2657	28.291	2833	31.196	2947	10.388	3035	2.724
2659	28.621	2835	30.975	2948	10.217	3036	2.692
2661	28.899	2837	30.772	2949	10.052	3037	2.66
2663	29.139	2839	30.538	2950	9.888	3038	2.629
2665	29.317	2841	30.31	2951	9.723	3039	2.597
2667	29.5	2843	30.07	2952	9.565	3040	2.565
2669	29.627	2845	30.12	2953	9.413	3041	2.533
2671	29.76	2847	30.12	2954	9.254	3042	2.508
2673	29.855	2849	30.025	2955	9.109	3043	2.477
2675	29.962	2851	29.874	2956	8.957	3044	2.445
2677	30.051	2853	29.753	2957	8.817	3045	2.42

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3046	2.394	]	3134	1.241	]	3222	0.969	]	3310	0.874	]
3047	2.363	]	3135	1.235	]	3223	0.969	]	3311	0.874	]
3048	2.337	]	3136	1.229	]	3224	0.969	]	3312	0.867	]
3049	2.312	]	3137	1.222	]	3225	0.969	]	3313	0.867	]
3050	2.287	]	3138	1.216	]	3226	0.963	]	3314	0.867	]
3051	2.267	]	3139	1.209	]	3227	0.963	]	3315	0.867	]
3052	2.236	]	3140	1.209	]	3228	0.963	]	3316	0.867	]
3053	2.217	]	3141	1.203	]	3229	0.963	]	3317	0.861	]
3054	2.192	]	3142	1.197	]	3230	0.956	]	3318	0.861	]
3055	2.166	]	3143	1.19	]	3231	0.963	]	3319	0.861	]
3056	2.147	]	3144	1.184	]	3232	0.956	]	3320	0.861	]
3057	2.122	]	3145	1.184	]	3233	0.956	]	3321	0.861	]
3058	2.103	]	3146	1.178	]	3234	0.956	]	3322	0.861	]
3059	2.084	]	3147	1.171	]	3235	0.95	]	3323	0.861	]
3060	2.065	]	3148	1.171	]	3236	0.95	]	3324	0.855	]
3061	2.039	]	3149	1.165	]	3237	0.95	]	3325	0.855	]
3062	2.02	]	3150	1.165	]	3238	0.95	]	3326	0.861	]
3063	2.001	]	3151	1.159	]	3239	0.943	]	3327	0.855	]
3064	1.982	]	3152	1.152	]	3240	0.943	]	3328	0.855	]
3065	1.963	]	3153	1.146	]	3241	0.943	]	3329	0.855	]
3066	1.944	]	3154	1.146	]	3242	0.943	]	3330	0.855	]
3067	1.926	]	3155	1.14	]	3243	0.943	]	3331	0.855	]
3068	1.906	]	3156	1.14	]	3244	0.937	]	3332	0.855	]
3069	1.887	]	3157	1.133	]	3245	0.937	]	3333	0.848	]
3070	1.875	]	3158	1.127	]	3246	0.937	]	3334	0.848	]
3071	1.856	]	3159	1.127	]	3247	0.937	]	3335	0.848	]
3072	1.837	]	3160	1.121	]	3248	0.937	]	3336	0.848	]
3073	1.824	]	3161	1.115	]	3249	0.931	]	3337	0.848	]
3074	1.805	]	3162	1.115	]	3250	0.931	]	3338	0.848	]
3075	1.792	]	3163	1.108	]	3251	0.931	]	3339	0.848	]
3076	1.774	]	3164	1.108	]	3252	0.931	]	3340	0.848	]
3077	1.761	]	3165	1.102	]	3253	0.931	]	3341	0.842	]
3078	1.748	]	3166	1.102	]	3254	0.924	]	3342	0.848	]
3079	1.736	]	3167	1.096	]	3255	0.924	]	3343	0.842	]
3080	1.716	]	3168	1.096	]	3256	0.924	]	3344	0.842	]
3081	1.703	]	3169	1.089	]	3257	0.924	]	3345	0.842	]
3082	1.691	]	3170	1.089	]	3258	0.924	]	3346	0.842	]
3083	1.678	]	3171	1.083	]	3259	0.924	]	3347	0.842	]
3084	1.666	]	3172	1.083	]	3260	0.924	]	3348	0.842	]
3085	1.653	]	3173	1.076	]	3261	0.918	]	3349	0.842	]
3086	1.64	]	3174	1.076	]	3262	0.918	]	3350	0.842	]
3087	1.628	]	3175	1.076	]	3263	0.918	]	3351	0.836	]
3088	1.615	]	3176	1.07	]	3264	0.918	]	3352	0.842	]
3089	1.602	]	3177	1.07	]	3265	0.912	]	3353	0.836	]
3090	1.59	]	3178	1.064	]	3266	0.912	]	3354	0.836	]
3091	1.583	]	3179	1.064	]	3267	0.912	]	3355	0.836	]
3092	1.571	]	3180	1.064	]	3268	0.912	]	3356	0.836	]
3093	1.558	]	3181	1.058	]	3269	0.912	]	3357	0.836	]
3094	1.545	]	3182	1.058	]	3270	0.905	]	3358	0.836	]
3095	1.539	]	3183	1.051	]	3271	0.905	]	3359	0.836	]
3096	1.526	]	3184	1.045	]	3272	0.905	]	3360	0.836	]
3097	1.514	]	3185	1.051	]	3273	0.905	]	3361	0.836	]
3098	1.507	]	3186	1.045	]	3274	0.905	]	3362	0.829	]
3099	1.495	]	3187	1.045	]	3275	0.899	]	3363	0.829	]
3100	1.488	]	3188	1.038	]	3276	0.899	]	3364	0.829	]
3101	1.476	]	3189	1.038	]	3277	0.899	]	3365	0.829	]
3102	1.469	]	3190	1.032	]	3278	0.899	]	3366	0.829	]
3103	1.457	]	3191	1.032	]	3279	0.899	]	3367	0.829	]
3104	1.45	]	3192	1.032	]	3280	0.899	]	3368	0.829	]
3105	1.444	]	3193	1.026	]	3281	0.899	]	3369	0.829	]
3106	1.431	]	3194	1.026	]	3282	0.899	]	3370	0.829	]
3107	1.425	]	3195	1.019	]	3283	0.893	]	3371	0.829	]
3108	1.412	]	3196	1.019	]	3284	0.893	]	3372	0.829	]
3109	1.406	]	3197	1.019	]	3285	0.893	]	3373	0.823	]
3110	1.399	]	3198	1.013	]	3286	0.893	]	3374	0.823	]
3111	1.387	]	3199	1.013	]	3287	0.893	]	3375	0.823	]
3112	1.381	]	3200	1.013	]	3288	0.893	]	3376	0.823	]
3113	1.374	]	3201	1.007	]	3289	0.886	]	3377	0.823	]
3114	1.368	]	3202	1	]	3290	0.886	]	3378	0.823	]
3115	1.362	]	3203	1	]	3291	0.886	]	3379	0.823	]
3116	1.349	]	3204	1	]	3292	0.886	]	3380	0.823	]
3117	1.342	]	3205	0.994	]	3293	0.886	]	3381	0.823	]
3118	1.342	]	3206	0.994	]	3294	0.886	]	3382	0.817	]
3119	1.33	]	3207	0.994	]	3295	0.886	]	3383	0.817	]
3120	1.324	]	3208	0.994	]	3296	0.886	]	3384	0.817	]
3121	1.317	]	3209	0.994	]	3297	0.886	]	3385	0.817	]
3122	1.311	]	3210	0.987	]	3298	0.88	]	3386	0.817	]
3123	1.304	]	3211	0.987	]	3299	0.88	]	3387	0.817	]
3124	1.298	]	3212	0.987	]	3300	0.88	]	3388	0.817	]
3125	1.292	]	3213	0.981	]	3301	0.88	]	3389	0.817	]
3126	1.285	]	3214	0.981	]	3302	0.88	]	3390	0.817	]
3127	1.279	]	3215	0.981	]	3303	0.874	]	3391	0.81	]
3128	1.279	]	3216	0.981	]	3304	0.874	]	3392	0.81	]
3129	1.266	]	3217	0.981	]	3305	0.874	]	3393	0.81	]
3130	1.26	]	3218	0.975	]	3306	0.874	]	3394	0.81	]
3131	1.26	]	3219	0.975	]	3307	0.874	]	3395	0.81	]
3132	1.248	]	3220	0.975	]	3308	0.874	]	3396	0.81	]
3133	1.248	]	3221	0.969	]	3309	0.874	]	3397	0.81	]

NSP ASHLAND - Aquifer Performance Test
Well EW-1 Water Level Measurments

3398	0.81	3486	0.741	3574	0.671	3872	0.329
3399	0.81	3487	0.741	3575	0.665	3874	0.329
3400	0.804	3488	0.741	3576	0.671	3876	0.322
3401	0.804	3489	0.741	3577	0.671	3878	0.329
3402	0.804	3490	0.734	3578	0.671	3880	0.322
3403	0.804	3491	0.734	3579	0.665	3882	0.322
3404	0.804	3492	0.734	3580	0.652	3884	0.322
3405	0.804	3493	0.734	3581	0.563	3886	0.322
3406	0.804	3494	0.734	3646	-0.849	3888	0.322
3407	0.804	3495	0.734	3714	0.006	3890	0.322
3408	0.798	3496	0.734	3716	0.018	3892	0.322
3409	0.798	3497	0.734	3718	0.031	3894	0.322
3410	0.798	3498	0.728	3720	0.044	3896	0.322
3411	0.798	3499	0.728	3722	0.056	3898	0.322
3412	0.798	3500	0.728	3724	0.069	3900	0.322
3413	0.798	3501	0.728	3726	0.082	3902	0.316
3414	0.798	3502	0.728	3728	0.088	3904	0.316
3415	0.791	3503	0.728	3730	0.101	3906	0.316
3416	0.791	3504	0.728	3732	0.113	3908	0.316
3417	0.798	3505	0.728	3734	0.12	3910	0.316
3418	0.791	3506	0.728	3736	0.126	3912	0.316
3419	0.791	3507	0.722	3738	0.139	3914	0.316
3420	0.791	3508	0.722	3740	0.145	3916	0.316
3421	0.791	3509	0.722	3742	0.158	3918	0.316
3422	0.791	3510	0.722	3744	0.164	3920	0.31
3423	0.791	3511	0.722	3746	0.17	3922	0.31
3424	0.791	3512	0.715	3748	0.183	3924	0.31
3425	0.785	3513	0.715	3750	0.183	3926	0.31
3426	0.785	3514	0.715	3752	0.196	3928	0.31
3427	0.785	3515	0.715	3754	0.202	3930	0.303
3428	0.785	3516	0.715	3756	0.208	3932	0.303
3429	0.785	3517	0.715	3758	0.215	3934	0.303
3430	0.785	3518	0.715	3760	0.215	3936	0.303
3431	0.785	3519	0.715	3762	0.228	3938	0.303
3432	0.785	3520	0.709	3764	0.234	3940	0.303
3433	0.785	3521	0.709	3766	0.234	3942	0.303
3434	0.779	3522	0.709	3768	0.24	3944	0.303
3435	0.779	3523	0.709	3770	0.247	3946	0.303
3436	0.779	3524	0.709	3772	0.253	3948	0.297
3437	0.779	3525	0.709	3774	0.253	3950	0.297
3438	0.779	3526	0.709	3776	0.259	3952	0.303
3439	0.779	3527	0.709	3778	0.266	3954	0.297
3440	0.779	3528	0.709	3780	0.266	3956	0.297
3441	0.779	3529	0.709	3782	0.272	3958	0.297
3442	0.772	3530	0.703	3784	0.272	3960	0.297
3443	0.772	3531	0.703	3786	0.278	3962	0.297
3444	0.772	3532	0.703	3788	0.278	3964	0.291
3445	0.772	3533	0.703	3790	0.285	3966	0.291
3446	0.772	3534	0.703	3792	0.285	3968	0.291
3447	0.772	3535	0.703	3794	0.291	3970	0.291
3448	0.772	3536	0.703	3796	0.291	3972	0.291
3449	0.772	3537	0.703	3798	0.297	3974	0.291
3450	0.766	3538	0.696	3800	0.297	3976	0.291
3451	0.766	3539	0.696	3802	0.297	3978	0.285
3452	0.766	3540	0.703	3804	0.303	3980	0.291
3453	0.766	3541	0.696	3806	0.303	3982	0.291
3454	0.766	3542	0.696	3808	0.303	3984	0.285
3455	0.766	3543	0.696	3810	0.31	3986	0.285
3456	0.766	3544	0.696	3812	0.31	3988	0.285
3457	0.766	3545	0.69	3814	0.31	3990	0.285
3458	0.76	3546	0.69	3816	0.316	3992	0.285
3459	0.76	3547	0.69	3818	0.316	3994	0.278
3460	0.76	3548	0.69	3820	0.316	3996	0.278
3461	0.76	3549	0.69	3822	0.316	3998	0.278
3462	0.76	3550	0.69	3824	0.316	4000	0.278
3463	0.76	3551	0.69	3826	0.322	4002	0.278
3464	0.76	3552	0.69	3828	0.316	4004	0.278
3465	0.76	3553	0.69	3830	0.322	4006	0.278
3466	0.753	3554	0.684	3832	0.322	4008	0.272
3467	0.753	3555	0.684	3834	0.322	4010	0.272
3468	0.753	3556	0.684	3836	0.322	4012	0.272
3469	0.753	3557	0.684	3838	0.322	4014	0.272
3470	0.753	3558	0.684	3840	0.322	4016	0.272
3471	0.753	3559	0.684	3842	0.329	4018	0.272
3472	0.753	3560	0.684	3844	0.322	4020	0.266
3473	0.747	3561	0.677	3846	0.329	4022	0.266
3474	0.747	3562	0.677	3848	0.329	4024	0.266
3475	0.747	3563	0.677	3850	0.329	4026	0.266
3476	0.747	3564	0.677	3852	0.329	4028	0.266
3477	0.747	3565	0.677	3854	0.329	4030	0.266
3478	0.747	3566	0.677	3856	0.322	4032	0.259
3479	0.747	3567	0.671	3858	0.329	4034	0.259
3480	0.747	3568	0.677	3860	0.329	4036	0.259
3481	0.747	3569	0.677	3862	0.329	4038	0.259
3482	0.741	3570	0.671	3864	0.329	4040	0.259
3483	0.741	3571	0.671	3866	0.329	4042	0.259
3484	0.741	3572	0.671	3868	0.329	4044	0.253
3485	0.741	3573	0.665	3870	0.322	4046	0.253

NSP ASHLAND - Aquifer Performance Test
Well EW-1 Water Level Measurments

4048	0.253	]	4130	0.215	]	4212	0.196	]	4294	0.177	]
4050	0.253	]	4132	0.215	]	4214	0.189	]	4296	0.177	]
4052	0.253	]	4134	0.215	]	4216	0.189	]	4298	0.177	]
4054	0.247	]	4136	0.215	]	4218	0.189	]	4300	0.177	]
4056	0.253	]	4138	0.215	]	4220	0.189	]	4302	0.177	]
4058	0.247	]	4140	0.215	]	4222	0.189	]	4304	0.177	]
4060	0.247	]	4142	0.208	]	4224	0.189	]	4306	0.177	]
4062	0.247	]	4144	0.208	]	4226	0.189	]	4308	0.177	]
4064	0.247	]	4146	0.208	]	4228	0.189	]	4310	0.177	]
4066	0.247	]	4148	0.208	]	4230	0.189	]	4312	0.17	]
4068	0.24	]	4150	0.208	]	4232	0.189	]	4314	0.17	]
4070	0.24	]	4152	0.208	]	4234	0.189	]	4316	0.177	]
4072	0.24	]	4154	0.202	]	4236	0.189	]	4318	0.17	]
4074	0.24	]	4156	0.202	]	4238	0.189	]	4320	0.177	]
4076	0.24	]	4158	0.202	]	4240	0.189	]	4322	0.17	]
4078	0.24	]	4160	0.202	]	4242	0.189	]	4324	0.17	]
4080	0.234	]	4162	0.202	]	4244	0.189	]	4326	0.17	]
4082	0.234	]	4164	0.202	]	4246	0.183	]	4328	0.17	]
4084	0.234	]	4166	0.202	]	4248	0.183	]	4330	0.17	]
4086	0.234	]	4168	0.202	]	4250	0.183	]	4332	0.164	]
4088	0.234	]	4170	0.202	]	4252	0.183	]	4334	0.164	]
4090	0.234	]	4172	0.202	]	4254	0.183	]	4336	0.158	]
4092	0.228	]	4174	0.202	]	4256	0.183	]	4338	0.158	]
4094	0.228	]	4176	0.202	]	4258	0.183	]	4340	0.158	]
4096	0.228	]	4178	0.202	]	4260	0.183	]	4342	0.158	]
4098	0.228	]	4180	0.202	]	4262	0.183	]	4344	0.158	]
4100	0.228	]	4182	0.202	]	4264	0.183	]	4346	0.151	]
4102	0.228	]	4184	0.196	]	4266	0.183	]	4348	0.151	]
4104	0.228	]	4186	0.196	]	4268	0.183	]	4350	0.151	]
4106	0.221	]	4188	0.202	]	4270	0.183	]	4352	0.151	]
4108	0.228	]	4190	0.196	]	4272	0.183	]	4354	0.151	]
4110	0.221	]	4192	0.196	]	4274	0.183	]	4356	0.151	]
4112	0.221	]	4194	0.196	]	4276	0.183	]	4358	0.145	]
4114	0.221	]	4196	0.196	]	4278	0.183	]	4360	0.145	]
4116	0.221	]	4198	0.196	]	4280	0.183	]	4362	0.145	]
4118	0.221	]	4200	0.196	]	4282	0.183	]	4364	0.145	]
4120	0.221	]	4202	0.196	]	4284	0.183	]	4366	0.151	]
4122	0.221	]	4204	0.196	]	4286	0.177	]	4368	0.145	]
4124	0.221	]	4206	0.196	]	4288	0.177	]	4370	0.145	]
4126	0.215	]	4208	0.196	]	4290	0.177	]	4372	0.145	]
4128	0.215	]	4210	0.196	]	4292	0.177	]			

WELL LOCATION: MW-4B

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 16.58 (ft.)
Depth to bottom 54.90 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/16/97	9:14				16.58	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	10:49	69			16.59	-0.01			
9/16/97	11:45	125			16.63	-0.05			
9/16/97	12:47	187			16.65	-0.07			
9/16/97	13:50	250			16.67	-0.09			
9/16/97	14:47	307			16.66	-0.08			
9/16/97	15:45	365			16.67	-0.09			
9/16/97	16:44	424			16.67	-0.09			
9/16/97	17:42	482			16.62	-0.04			
9/16/97	18:45	545			16.63	-0.05			
9/16/97	19:50	610			16.62	-0.04			
9/16/97	20:43	663			16.64	-0.06			
9/16/97	21:44	724			16.64	-0.06			
9/16/97	22:44	784			16.66	-0.08			
9/16/97	23:46	846			16.67	-0.09			
9/17/97	0:47	907			16.68	-0.10			
9/17/97	1:48	968			16.71	-0.13			
9/17/97	2:46	1026			16.71	-0.13			
9/17/97	3:47	1087			16.70	-0.12			
9/17/97	4:46	1146			16.70	-0.12			
9/17/97	5:46	1206			16.73	-0.15			
9/17/97	6:48	1268			16.74	-0.16			
9/17/97	7:48	1328			16.67	-0.09			
9/17/97	8:46	1386			16.62	-0.04			
9/17/97	9:45	1445			16.64	-0.06			
9/17/97	10:45	1505			16.66	-0.08			
9/17/97	11:43	1563			16.69	-0.11			
9/17/97	12:44	1624			16.71	-0.13			
9/17/97	13:44	1684			16.72	-0.14			
9/17/97	14:44	1744			16.74	-0.16			
9/17/97	15:43	1803			16.71	-0.13			
9/17/97	16:48	1868			16.72	-0.14			
9/17/97	17:44	1924			16.73	-0.15			
9/17/97	18:45	1985			16.72	-0.14			
9/17/97	19:44	2044			16.73	-0.15			
9/17/97	20:44	2104			16.76	-0.18			
9/17/97	21:44	2164			16.75	-0.17			
9/17/97	22:43	2223			16.76	-0.18			
9/17/97	23:44	2284			16.77	-0.19			
9/18/97	0:47	2347			16.75	-0.17			
9/18/97	1:47	2407			16.75	-0.17			
9/18/97	2:47	2467			16.76	-0.18			
9/18/97	3:47	2527			16.74	-0.16			
9/18/97	4:47	2587			16.75	-0.17			
9/18/97	5:47	2647			16.74	-0.16			
9/18/97	6:45	2705			16.73	-0.15			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 16.58 (ft.)
Depth to bottom 54.90 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	7:47	2767			16.72	-0.14			
9/18/97	8:47	2827			16.73	-0.15			
9/18/97	9:40	2880	0						Pump off
9/18/97	9:45	2885	5		16.73	-0.15			
9/18/97	9:51	2891	11		16.73	-0.15			
9/18/97	9:58	2898	18		16.72	-0.14			
9/18/97	10:05	2905	25		16.72	-0.14			
9/18/97	10:13	2913	33		16.71	-0.13			
9/18/97	10:24	2924	44		16.71	-0.13			
9/18/97	10:44	2944	64		16.70	-0.12			
9/18/97	10:57	2954	74		16.70	-0.12			
9/18/97	11:30	2990	110		16.68	-0.10			
9/18/97	11:42	3002	122		16.68	-0.10			
9/18/97	12:46	3066	186		16.65	-0.07			
9/18/97	13:08	3088	208		16.65	-0.07			
9/18/97	13:45	3125	245		16.64	-0.06			
9/18/97	14:48	3188	308		16.65	-0.07			
9/18/97	15:47	3247	367		16.61	-0.03			
9/18/97	16:44	3304	424		16.63	-0.05			
9/18/97	18:01	3381	501		16.63	-0.05			
9/18/97	19:40	3458	578		16.62	-0.04			
9/18/97	23:32	3680	800		16.51	0.07			
9/19/97	8:53	4273	1393		16.57	0.01			

WELL LOCATION: MW-8A

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level	15.31	(ft.)
Depth to bottom	49.50	(ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/16/97	9:18				15.31	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	9:54	14			15.31	0.00			
9/16/97	10:09	29			15.31	0.00			
9/16/97	10:24	44			15.30	0.01			
9/16/97	10:38	58			15.30	0.01			
9/16/97	11:09	89			15.31	0.00			
9/16/97	11:39	119			15.31	0.00			
9/16/97	12:12	152			15.31	0.00			
9/16/97	12:41	181			15.31	0.00			
9/16/97	13:19	219			15.31	0.00			
9/16/97	13:46	246			15.31	0.00			
9/16/97	14:42	302			15.30	0.01			
9/16/97	15:43	363			15.30	0.01			
9/16/97	16:42	422			15.28	0.03			
9/16/97	17:38	478			15.27	0.04			
9/16/97	18:40	540			15.28	0.03			
9/16/97	19:45	605			15.28	0.03			
9/16/97	20:39	659			15.27	0.04			
9/16/97	21:39	719			15.28	0.03			
9/16/97	22:40	780			15.28	0.03			
9/16/97	23:40	840			15.29	0.02			
9/17/97	0:42	902			15.30	0.01			
9/17/97	1:42	962			15.30	0.01			
9/17/97	2:41	1021			15.31	0.00			
9/17/97	3:42	1082			15.32	-0.01			
9/17/97	4:41	1141			15.32	-0.01			
9/17/97	5:41	1201			15.33	-0.02			
9/17/97	6:42	1262			15.34	-0.03			
9/17/97	7:43	1323			15.36	-0.05			
9/17/97	8:41	1381			15.36	-0.05			
9/17/97	9:41	1441			15.37	-0.06			
9/17/97	10:39	1449			15.37	-0.06			
9/17/97	11:40	1560			15.39	-0.08			
9/17/97	12:41	1621			15.39	-0.08			
9/17/97	13:39	1679			15.40	-0.09			
9/17/97	14:40	1740			15.41	-0.10			
9/17/97	15:39	1799			15.41	-0.10			
9/17/97	16:44	1864			15.42	-0.11			
9/17/97	17:40	1920			15.45	-0.14			
9/17/97	18:41	1981			15.45	-0.14			
9/17/97	19:40	2040			15.45	-0.14			
9/17/97	20:39	2099			15.46	-0.15			
9/17/97	21:39	2159			15.47	-0.16			
9/17/97	22:38	2218			15.47	-0.16			
9/17/97	23:39	2279			15.48	-0.17			
9/18/97	0:42	2342			15.49	-0.18			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 15.31 (ft.)
Depth to bottom 49.50 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	1:42	2402			15.50	-0.19			
9/18/97	2:42	2462			15.51	-0.20			
9/18/97	3:42	2522			15.52	-0.21			
9/18/97	4:43	2583			15.52	-0.21			
9/18/97	5:42	2642			15.53	-0.22			
9/18/97	6:41	2701			15.52	-0.21			
9/18/97	7:43	2763			15.53	-0.22			
9/18/97	8:42	2822			15.54	-0.23			
9/18/97	9:40	2880	0						Pump off
9/18/97	9:41	2881	1		15.55	-0.24			
9/18/97	9:48	2888	8		15.55	-0.24			
9/18/97	9:55	2895	15		15.55	-0.24			
9/18/97	10:02	2902	22		15.56	-0.25			
9/18/97	10:09	2909	29		15.56	-0.25			
9/18/97	10:21	2921	41		15.56	-0.25			
9/18/97	10:40	2940	60		15.56	-0.25			
9/18/97	10:54	2954	74		15.56	-0.25			
9/18/97	11:26	2986	106		15.57	-0.26			
9/18/97	11:39	2999	119		15.57	-0.26			
9/18/97	12:39	3059	179		15.57	-0.26			
9/18/97	13:39	3119	239		15.58	-0.27			
9/18/97	14:45	3185	305		15.57	-0.26			
9/18/97	15:43	3243	363		15.57	-0.26			
9/18/97	16:40	3300	420		15.57	-0.26			
9/18/97	17:56	3376	496		15.57	-0.26			
9/18/97	19:36	3476	596		15.56	-0.25			
9/18/97	23:26	3706	826		15.46	-0.15			
9/19/97	8:49	4269	1389		15.42	-0.11			

WELL LOCATION: MW-9A

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 13.85 (ft.)
Depth to bottom 138.00 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/16/97	9:16				13.85	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	9:56	16			13.84	0.01			
9/16/97	10:11	31			13.83	0.02			
9/16/97	10:26	46			13.84	0.01			
9/16/97	10:41	61			13.82	0.03			
9/16/97	11:11	91			13.86	-0.01			
9/16/97	11:41	121			13.86	-0.01			
9/16/97	12:16	156			13.87	-0.02			
9/16/97	12:43	183			13.86	-0.01			
9/16/97	13:20	220							No water level
9/16/97	13:47	247							No water level
9/16/97	14:43	303							No water level
9/16/97	15:49	364							No water level
9/16/97	16:50	430			13.75	0.10			
9/16/97	17:45	485			13.78	0.07			
9/16/97	18:48	548			13.76	0.09			
9/16/97	19:52	612			13.79	0.06			
9/16/97	20:46	666			13.79	0.06			
9/16/97	21:46	726			13.79	0.06			
9/16/97	22:46	786			13.85	0.00			
9/16/97	23:48	848			13.84	0.01			
9/17/97	0:50	910			13.87	-0.02			
9/17/97	1:50	970			13.88	-0.03			
9/17/97	2:49	1029			13.90	-0.05			
9/17/97	3:49	1089			13.88	-0.03			
9/17/97	4:49	1149			13.89	-0.04			
9/17/97	5:49	1209			13.91	-0.06			
9/17/97	6:51	1271			13.77	0.08			
9/17/97	7:51	1331			13.67	0.18			
9/17/97	8:49	1389			13.72	0.13			
9/17/97	9:47	1447			13.79	0.06			
9/17/97	10:45	1505			13.84	0.01			
9/17/97	11:41	1561			13.87	-0.02			
9/17/97	12:42	1622			13.90	-0.05			
9/17/97	13:45	1685			13.89	-0.04			
9/17/97	14:47	1747			13.91	-0.06			
9/17/97	15:46	1806			13.91	-0.06			
9/17/97	16:50	1870			13.93	-0.08			
9/17/97	17:48	1928			13.90	-0.05			
9/17/97	18:47	1987			13.91	-0.06			
9/17/97	19:48	2048			13.92	-0.07			
9/17/97	20:47	2107			13.96	-0.11			
9/17/97	21:47	2167			13.95	-0.10			
9/17/97	22:46	2226			13.95	-0.10			
9/17/97	23:47	2287			13.97	-0.12			
9/18/97	0:50	2350			13.95	-0.10			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 13.85 (ft.)
Depth to bottom 138.00 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	1:49	2409			13.99	-0.14			
9/18/97	2:50	2470			14.00	-0.15			
9/18/97	3:50	2530			13.96	-0.11			
9/18/97	4:50	2590			13.97	-0.12			
9/18/97	5:50	2650			13.98	-0.13			
9/18/97	6:49	2709			13.95	-0.10			
9/18/97	7:50	2770			13.92	-0.07			
9/18/97	8:49	2829			13.94	-0.09			
9/18/97	9:40	2880	0						Pump off
9/18/97	9:45	2885	5		13.92	-0.07			
9/18/97	9:53	2893	13		13.91	-0.06			
9/18/97	9:59	2899	19		13.90	-0.05			
9/18/97	10:06	2906	26		13.90	-0.05			
9/18/97	10:14	2914	34		13.92	-0.07			
9/18/97	10:26	2926	46		13.90	-0.05			
9/18/97	10:46	2946	66		13.93	-0.08			
9/18/97	11:31	2991	111		13.93	-0.08			
9/18/97	11:43	3003	123		13.94	-0.09			
9/18/97	12:09	3029	149		13.92	-0.07			
9/18/97	12:47	3067	187		13.92	-0.07			
9/18/97	13:10	3090	210		13.92	-0.07			
9/18/97	13:49	3129	249		13.92	-0.07			
9/18/97	14:49	3189	309		13.90	-0.05			
9/18/97	15:50	3250	370		13.91	-0.06			
9/18/97	16:46	3306	426		13.88	-0.03			
9/18/97	17:58	3378	498		13.86	-0.01			
9/18/97	19:43	3461	581		13.86	-0.01			
9/18/97	23:36	3684	804		13.85	0.00			
9/19/97	8:56	4276	1406		13.90	-0.05			

WELL LOCATION: MW-10A

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level	13:55
Depth to bottom	49.80

Date	Clock Time	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/16/97	9:13			14.58	0.00			Static water level
9/16/97	9:40	0						Pump on
9/16/97	10:47	67		14.58	0.00			
9/16/97	11:42	122		14.58	0.00			
9/16/97	12:45	185		14.55	0.03			
9/16/97	13:48	248		14.52	0.06			
9/16/97	14:45	305		14.49	0.09			
9/16/97	15:46	366		14.55	0.03			
9/16/97	16:45	425		14.52	0.06			
9/16/97	17:40	480		14.48	0.10			
9/16/97	18:42	542		14.50	0.08			
9/16/97	19:48	608		14.49	0.09			
9/16/97	20:41	661		14.48	0.10			
9/16/97	21:42	722		14.48	0.10			
9/16/97	22:42	782		14.49	0.09			
9/16/97	23:43	843		14.51	0.07			
9/17/97	0:44	904		14.51	0.07			
9/17/97	1:45	965		14.56	0.02			
9/17/97	2:43	1023		14.55	0.03			
9/17/97	3:49	1084		14.56	0.02			
9/17/97	4:49	1144		14.57	0.01			
9/17/97	5:43	1203		14.58	0.00			
9/17/97	6:45	1265		14.58	0.00			
9/17/97	7:45	1325		14.57	0.01			
9/17/97	8:43	1383		14.55	0.03			
9/17/97	9:43	1443		14.52	0.06			
9/17/97	10:41	1501		14.53	0.05			
9/17/97	12:46	1626		14.57	0.01			
9/17/97	13:42	1682		14.57	0.01			
9/17/97	14:42	1742		14.58	0.00			
9/17/97	15:41	1801		14.59	-0.01			
9/17/97	16:46	1866		14.60	-0.02			
9/17/97	17:42	1922		14.60	-0.02			
9/17/97	18:43	1983		14.60	-0.02			
9/17/97	19:46	2046		14.60	-0.02			
9/17/97	20:41	2101		14.62	-0.04			
9/17/97	21:42	2162		14.61	-0.03			
9/17/97	22:41	2221		14.62	-0.04			
9/17/97	23:42	2282		14.62	-0.04			
9/18/97	0:44	2344		14.64	-0.06			
9/18/97	1:44	2404		14.65	-0.07			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 13:55
Depth to bottom 49.80

Date	Clock Time	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	2:45	2465		14.66	-0.08			
9/18/97	3:45	2525		14.65	-0.07			
9/18/97	4:45	2585		14.65	-0.07			
9/18/97	5:45	2645		14.65	-0.07			
9/18/97	6:43	2703		14.65	-0.07			
9/18/97	7:45	2675		14.62	-0.04			
9/18/97	8:44	2824		14.61	-0.03			
9/18/97	9:40	2880						Pump off
9/18/97	9:43	2883		14.60	-0.02			
9/18/97	9:50	2890		14.60	-0.02			
9/18/97	9:56	2896		14.60	-0.02			
9/18/97	10:03	2903		14.60	-0.02			
9/18/97	10:11	2911		14.60	-0.02			
9/18/97	10:23	2923		14.60	-0.02			
9/18/97	10:42	2942		14.60	-0.02			
9/18/97	10:56	2956		14.60	-0.02			
9/18/97	11:28	2988		14.60	-0.02			
9/18/97	11:41	3001		14.60	-0.02			
9/18/97	12:44	3058		14.60	-0.02			
9/18/97	13:44	3118		14.60	-0.02			
9/18/97	14:47	3181		14.59	-0.01			
9/18/97	15:45	3239		14.58	0.00			
9/18/97	16:42	3296		14.57	0.01			
9/18/97	18:00	3380		14.56	0.02			
9/18/97	19:38	3478		14.55	0.03			
9/18/97	23:28	3708		14.51	0.07			
9/19/97	8:51	4271		14.48	0.10			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level	11.32	(ft.)
Depth to bottom	18.30	(ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/16/97	9:20				11.32	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	10:41	61			11.30	0.02			
9/16/97	11:40	120			11.29	0.03			
9/16/97	12:37	177			11.30	0.02			
9/16/97	13:43	243			11.28	0.04			
9/16/97	14:38	298			11.28	0.04			
9/16/97	15:39	359			11.27	0.05			
9/16/97	16:38	418			11.26	0.06			
9/16/97	17:35	475			11.27	0.05			
9/16/97	18:36	536			11.26	0.06			
9/16/97	19:42	602			11.25	0.07			
9/16/97	20:35	655			11.25	0.07			
9/16/97	21:36	716			11.24	0.08			
9/16/97	22:36	776			11.24	0.08			
9/16/97	23:37	837			11.24	0.08			
9/17/97	0:40	900			11.23	0.09			
9/17/97	1:37	957			11.23	0.09			
9/17/97	2:37	1017			11.22	0.10			
9/17/97	3:38	1078			11.22	0.10			
9/17/97	4:37	1137			11.21	0.11			
9/17/97	5:36	1196			11.21	0.11			
9/17/97	6:37	1257			11.21	0.11			
9/17/97	7:38	1318			11.21	0.11			
9/17/97	8:37	1377			11.21	0.11			
9/17/97	9:38	1438			11.20	0.12			
9/17/97	10:36	1496			11.20	0.12			
9/17/97	11:36	1556			11.18	0.14			
9/17/97	12:38	1618			11.16	0.16			
9/17/97	13:36	1676			11.17	0.15			
9/17/97	14:37	1737			11.16	0.16			
9/17/97	15:34	1794			11.16	0.16			
9/17/97	16:40	1860			11.15	0.17			
9/17/97	17:36	1916			11.15	0.17			
9/17/97	18:37	1977			11.14	0.18			
9/17/97	19:37	2037			11.14	0.18			
9/17/97	20:34	2094			11.15	0.17			
9/17/97	21:35	2155			11.14	0.18			
9/17/97	22:35	2215			11.14	0.18			
9/17/97	23:34	2274			11.13	0.19			
9/18/97	0:37	2337			11.10	0.22			
9/18/97	1:36	2396			11.10	0.22			
9/18/97	2:37	2457			11.10	0.22			
9/18/97	3:38	2518			11.11	0.21			
9/18/97	4:39	2579			11.09	0.23			
9/18/97	5:38	2638			11.09	0.23			
9/18/97	6:37	2697			11.08	0.24			
9/18/97	7:39	2759			11.08	0.24			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 11.32 (ft.)
Depth to bottom 18.30 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	8:39	2819			11.08	0.24			
9/18/97	9:38	2878			11.08	0.24			
9/18/97	9:40	2880							Pump off
9/18/97	10:41	2941	61		11.08	0.24			
9/18/97	11:36	2996	116		11.08	0.24			
9/18/97	12:34	3054	174		11.07	0.25			
9/18/97	13:36	3116	236		11.07	0.25			
9/18/97	14:42	3182	302		11.07	0.25			
9/18/97	15:39	3239	359		11.06	0.26			
9/18/97	16:36	3296	416		11.06	0.26			
9/18/97	17:52	3372	492		11.06	0.26			
9/19/97	19:32	3472	592		11.05	0.27			
9/19/97	2320	3700	820		11.07	0.25			
9/19/97	8:40	4260	1380		10.97	0.35			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.38 (ft.)
Depth to bottom 45.40 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S'/So	Q (gpm)	Remarks
9/16/97	9:25				20.38	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	9:41	1			20.39	-0.01			
9/16/97	9:43	3			20.41	-0.03			
9/16/97	9:45	5			20.43	-0.05			
9/16/97	9:47	7			20.46	-0.08			
9/16/97	9:49	9			20.47	-0.09			
9/16/97	9:51	11			20.51	-0.13			
9/16/97	9:53	13			20.53	-0.15			
9/16/97	9:55	15			20.57	-0.19			
9/16/97	9:57	17			20.61	-0.23			
9/16/97	9:59	19			20.64	-0.26			
9/16/97	10:01	21			20.67	-0.29			
9/16/97	10:03	23			20.69	-0.31			
9/16/97	10:05	25			20.72	-0.34			
9/16/97	10:07	27			20.76	-0.38			
9/16/97	10:09	29			20.79	-0.41			
9/16/97	10:14	34			20.85	-0.47			
9/16/97	10:19	39			20.91	-0.53			
9/16/97	10:24	44			20.96	-0.58			
9/16/97	10:29	49			21.02	-0.64			
9/16/97	10:34	54			21.04	-0.66			
9/16/97	10:39	59			21.07	-0.69			
9/16/97	10:54	74			21.15	-0.77			
9/16/97	11:09	89			21.20	-0.82			
9/16/97	11:24	106			21.24	-0.86			
9/16/97	11:39	119			21.28	-0.90			
9/16/97	12:10	150			21.31	-0.93			
9/16/97	12:38	178			21.32	-0.94			
9/16/97	13:16	216			21.38	-1.00			
9/16/97	13:41	241			21.38	-1.00			
9/16/97	14:39	299			21.38	-1.00			
9/16/97	15:40	360			21.39	-1.01			
9/16/97	16:40	420			21.37	-0.99			
9/16/97	17:36	476			21.41	-1.03			
9/16/97	18:37	537			21.40	-1.02			
9/16/97	19:43	603			21.40	-1.02			
9/16/97	20:36	656			21.40	-1.02			
9/16/97	21:37	717			21.41	-1.03			
9/16/97	22:37	778			21.43	-1.05			
9/16/97	23:38	838			21.45	-1.07			
9/17/97	0:39	899			21.46	-1.08			
9/17/97	1:39	959			21.46	-1.08			
9/17/97	2:39	1019			21.47	-1.09			
9/17/97	3:39	1079			21.48	-1.10			
9/17/97	4:38	1138			21.50	-1.12			
9/17/97	5:37	1197			21.50	-1.12			
9/17/97	6:38	1258			21.50	-1.12			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.38 (ft.)
Depth to bottom 45.40 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/17/97	7:39	1319			21.52	-1.14			
9/17/97	8:38	1378			21.53	-1.15			
9/17/97	9:39	1439			21.57	-1.19			
9/17/97	10:37	1497			21.56	-1.18			
9/17/97	11:37	1557			21.57	-1.19			
9/17/97	12:39	1619			21.58	-1.20			
9/17/97	13:37	1677			21.60	-1.22			
9/17/97	14:38	1738			21.61	-1.23			
9/17/97	15:35	1795			21.63	-1.25			
9/17/97	16:42	1862			21.63	-1.25			
9/17/97	17:37	1917			21.62	-1.24			
9/17/97	18:38	1978			21.63	-1.25			
9/17/97	19:38	2038			21.65	-1.27			
9/17/97	20:35	2095			21.65	-1.27			
9/17/97	21:36	2156			21.66	-1.28			
9/18/97	22:36	2216			21.67	-1.29			
9/18/97	23:35	2275			21.63	-1.25			
9/18/97	0:38	2338			21.62	-1.24			
9/18/97	1:37	2397			21.62	-1.24			
9/18/97	2:39	2459			21.62	-1.24			
9/18/97	3:39	2519			21.62	-1.24			
9/18/97	4:40	2580			21.63	-1.25			
9/18/97	5:39	2639			21.63	-1.25			
9/18/97	6:38	2698			21.62	-1.24			
9/18/97	7:40	2760			21.62	-1.24			
9/18/97	8:40	2820			21.62	-1.24			
9/18/97	9:39	2879			21.63	-1.25			
9/18/97	9:40	2880	0						Pump off
9/18/97	9:41	2881	1		21.63	-1.25			
9/18/97	9:43	2883	3		21.62	-1.24			
9/18/97	9:45	2885	5		21.62	-1.24			
9/18/97	9:47	2887	7		21.62	-1.24			
9/18/97	9:49	2889	9		21.61	-1.23			
9/18/97	9:51	2891	11		21.61	-1.23			
9/18/97	9:53	2893	13		21.61	-1.23			
9/18/97	9:55	2895	15		21.61	-1.23			
9/18/97	9:57	2897	17		21.61	-1.23			
9/18/97	9:59	2899	19		21.62	-1.24			
9/18/97	10:01	2901	21		21.62	-1.24			
9/18/97	10:03	2903	23		21.61	-1.23			
9/18/97	10:05	2905	25		21.62	-1.24			
9/18/97	10:07	2907	27		21.61	-1.23			
9/18/97	10:09	2909	29		21.61	-1.23			
9/18/97	10:14	2914	34		21.58	-1.20			
9/18/97	10:19	2919	39		21.56	-1.18			
9/18/97	10:24	2924	44		21.52	-1.14			
9/18/97	10:29	2929	49		21.50	-1.12			
9/18/97	10:34	2934	54		21.47	-1.09			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.38 (ft.)
Depth to bottom 45.40 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	10:39	2939	59		21.44	-1.06			
9/18/97	10:54	2954	74		21.35	-0.97			
9/18/97	11:09	2969	89		21.26	-0.88			
9/18/97	11:24	2984	104		21.18	-0.80			
9/18/97	11:37	2997	117		21.12	-0.74			
9/18/97	12:04	3024	144		21.02	-0.64			
9/18/97	12:35	3055	175		20.92	-0.54			
9/18/97	13:36	3116	236		20.82	-0.44			
9/18/97	14:43	3183	303		20.74	-0.36			
9/18/97	15:40	3240	360		20.70	-0.32			
9/18/97	16:37	3297	417		20.67	-0.29			
9/18/97	17:53	3373	493		20.65	-0.27			
9/18/97	19:33	3473	593		20.60	-0.22			
9/18/97	23:22	3702	822		20.41	-0.03			
9/19/97	8:46	4266	1386		20.42	-0.04			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.07 (ft)
Depth to bottom 69.80 (ft)

Date	Clock Time	t min	t min	t/t	DTW (ft)	S' (ft)	S'/So	Q (gpm)	Remarks
9/16/97	9:26				20.07	0.00			Static Water Level
9/16/97	9:40	0							Pump on
9/16/97	9:42	2			20.08	-0.01			
9/16/97	9:44	4			20.08	-0.01			
9/16/97	9:46	6			20.08	-0.01			
9/16/97	9:48	8			20.08	-0.01			
9/16/97	9:50	10			20.08	-0.01			
9/16/97	9:52	12			20.10	-0.03			
9/16/97	9:54	14			20.11	-0.04			
9/16/97	9:56	16			20.13	-0.06			
9/16/97	9:58	18			20.16	-0.09			
9/16/97	10:00	20			20.18	-0.11			
9/16/97	10:02	22			20.20	-0.13			
9/16/97	10:04	24			20.21	-0.14			
9/16/97	10:06	26			20.24	-0.17			
9/16/97	10:08	28			20.27	-0.20			
9/16/97	10:10	30			20.30	-0.23			
9/16/97	10:15	35			20.35	-0.28			
9/16/97	10:20	40			20.42	-0.35			
9/16/97	10:25	45			20.48	-0.41			
9/16/97	10:30	50			20.54	-0.47			
9/16/97	10:35	55			20.60	-0.53			
9/16/97	10:40	60			20.63	-0.56			
9/16/97	10:55	75			20.76	-0.69			
9/16/97	11:10	90			20.83	-0.76			
9/16/97	11:25	105			20.91	-0.84			
9/16/97	11:40	120			20.96	-0.89			
9/16/97	12:11	151			21.04	-0.97			
9/16/97	12:40	180			21.08	-1.01			
9/16/97	13:17	217			21.15	-1.08			
9/16/97	13:42	242			21.17	-1.10			
9/16/97	14:40	300			21.18	-1.11			
9/16/97	15:41	361			21.17	-1.10			
9/16/97	16:41	421			21.16	-1.09			
9/16/97	17:37	477			21.15	-1.08			
9/16/97	18:38	538			21.13	-1.06			
9/16/97	19:44	604			21.11	-1.04			
9/16/97	20:37	657			21.11	-1.04			
9/16/97	21:38	718			21.11	-1.04			
9/16/97	22:38	778			21.12	-1.05			
9/16/97	23:39	839			21.15	-1.08			
9/17/97	0:40	900			21.16	-1.09			
9/17/97	1:40	960			21.16	-1.09			
9/17/97	2:40	1020			21.18	-1.11			
9/17/97	3:40	1080			21.18	-1.11			
9/17/97	4:39	1139			21.17	-1.10			
9/17/97	5:39	1199			21.18	-1.11			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.07 (ft.)
Depth to bottom 69.80 (ft.)

Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/17/97	6:40	1260			21.18	-1.11			
9/17/97	7:40	1320			21.20	-1.13			
9/17/97	8:39	1379			21.22	-1.15			
9/17/97	9:40	1440			21.27	-1.20			
9/17/97	10:38	1498			21.27	-1.20			
9/17/97	11:38	1558			21.29	-1.22			
9/17/97	12:40	1620			21.32	-1.25			
9/17/97	13:38	1678			21.33	-1.26			
9/17/97	14:39	1739			21.34	-1.27			
9/17/97	15:36	1796			21.35	-1.28			
9/17/97	16:43	1863			21.35	-1.28			
9/17/97	17:38	1918			21.35	-1.28			
9/17/97	18:39	1979			21.35	-1.28			
9/17/97	19:39	2039			21.36	-1.29			
9/17/97	20:36	2096			21.36	-1.29			
9/17/97	21:37	2157			21.36	-1.29			
9/17/97	22:37	2217			21.36	-1.29			
9/17/97	23:37	2277			21.33	-1.26			
9/18/97	0:40	2340			21.33	-1.26			
9/18/97	1:38	2398			21.33	-1.26			
9/18/97	2:40	2460			21.32	-1.25			
9/18/97	3:40	2520			21.32	-1.25			
9/18/97	4:41	2581			21.32	-1.25			
9/18/97	5:40	2640			21.32	-1.25			
9/18/97	6:39	2699			21.31	-1.24			
9/18/97	7:41	2761			21.31	-1.24			
9/18/97	8:41	2821			21.32	-1.25			
9/18/97	9:40	2880	0		21.33	-1.26			Pump off
9/18/97	9:42	2882	2		21.33	-1.26			
9/18/97	9:44	2884	4		21.32	-1.25			
9/18/97	9:46	2886	6		21.32	-1.25			
9/18/97	9:48	2888	8		21.31	-1.24			
9/18/97	9:50	2890	10		21.32	-1.25			
9/18/97	9:52	2892	12		21.32	-1.25			
9/18/97	9:54	2894	14		21.33	-1.26			
9/18/97	9:56	2896	16		21.32	-1.25			
9/18/97	9:58	2898	18		21.32	-1.25			
9/18/97	10:00	2900	20		21.33	-1.26			
9/18/97	10:02	2902	22		21.33	-1.26			
9/18/97	10:04	2904	24		21.34	-1.27			
9/18/97	10:06	2906	26		21.34	-1.27			
9/18/97	10:08	2908	28		21.34	-1.27			
9/18/97	10:10	2910	30		21.34	-1.27			
9/18/97	10:15	2915	35		21.34	-1.27			
9/18/97	10:20	2920	40		21.33	-1.26			
9/18/97	10:25	2925	45		21.33	-1.26			
9/18/97	10:30	2930	50		21.32	-1.25			

PROJECT NAME NSP
PROJECT NUMBER 05644-077
LOCATION Ashland

REFERENCE POINT Top of well casing

	DATE	TIME
PUMP ON	9/16/97	9:40 AM
PUMP OFF	9/18/97	9:40 AM

HOW Q MEASURED _____

Static water level 20.07 (ft.)
Depth to bottom 69.80 (ft.)

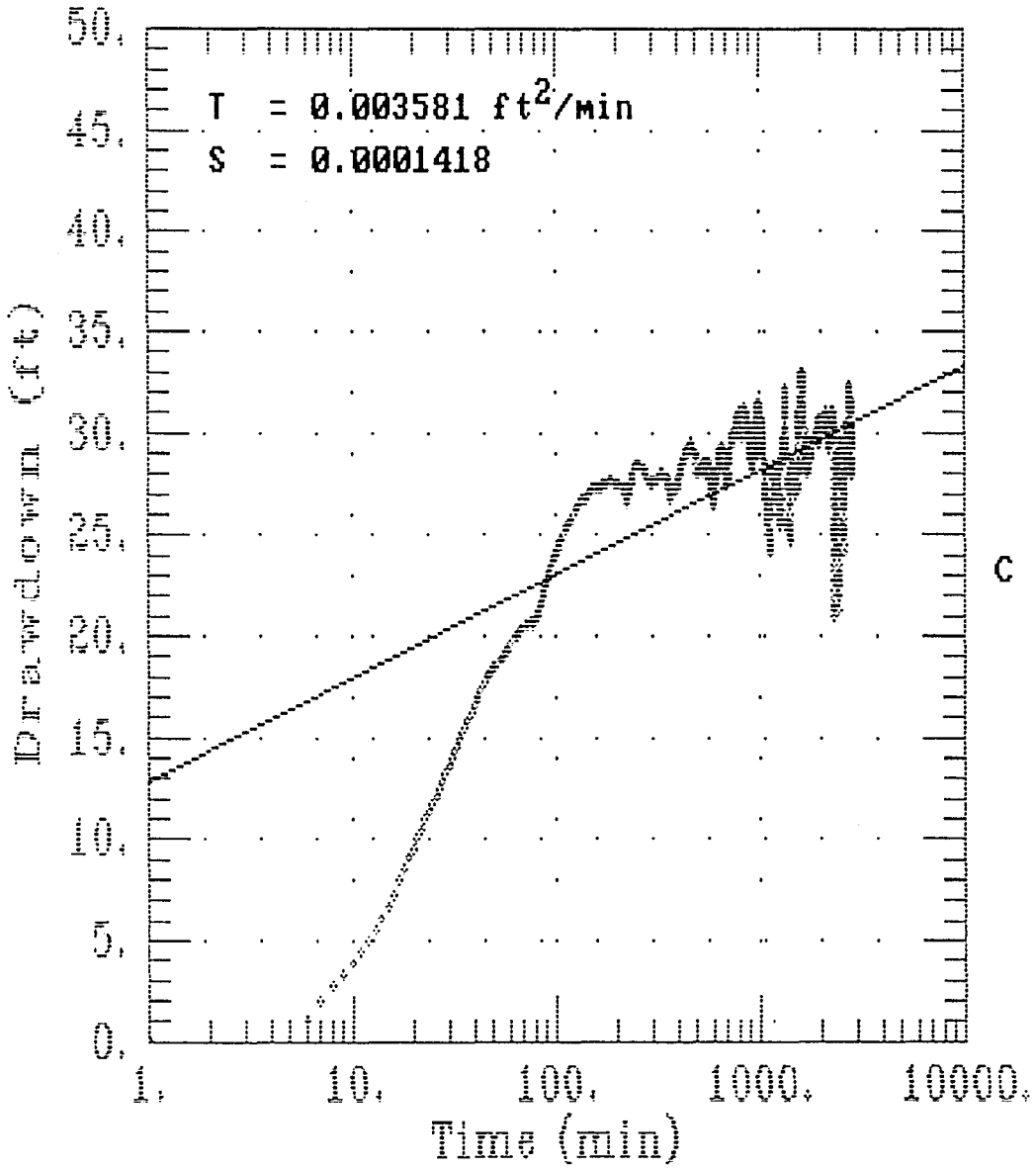
Date	Clock Time	t min.	t min.	t/t	DTW (ft.)	S' (ft.)	S/So	Q (gpm)	Remarks
9/18/97	10:35	2935	55		21.30	-1.23			
9/18/97	10:40	2940	60		21.27	-1.20			
9/18/97	10:55	2955	75		21.18	-1.11			
9/18/97	11:10	2970	90		21.09	-1.02			
9/18/97	11:25	2985	105		20.98	-0.91			
9/18/97	11:38	2998	118		20.91	-0.84			
9/18/97	12:06	3026	146		20.86	-0.79			
9/18/97	12:37	3057	177		20.77	-0.70			
9/18/97	13:07	3087	207		20.62	-0.55			
9/18/97	13:37	3117	237		20.56	-0.49			
9/18/97	14:44	3184	304		20.45	-0.38			
9/18/97	15:41	3241	361		20.40	-0.33			
9/18/97	16:38	3298	418		20.35	-0.28			
9/18/97	17:54	3374	494		20.35	-0.28			
9/18/97	19:34	3474	594		20.31	-0.24			
9/18/97	23:24	3704	824		20.21	-0.14			
9/19/97	8:47	4267	1387		20.13	-0.06			

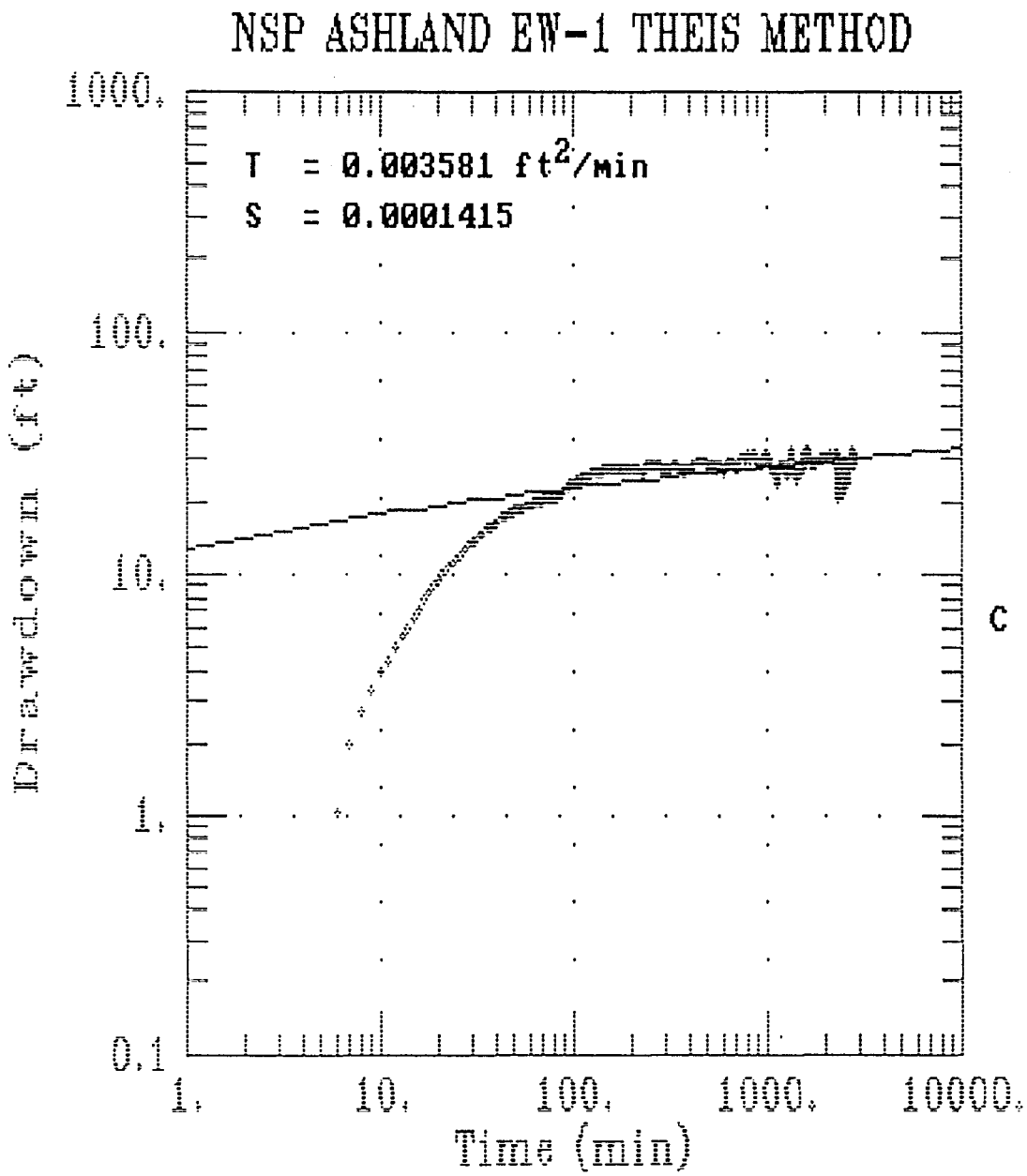
APPENDIX D

COPPER FALLS AQUIFER

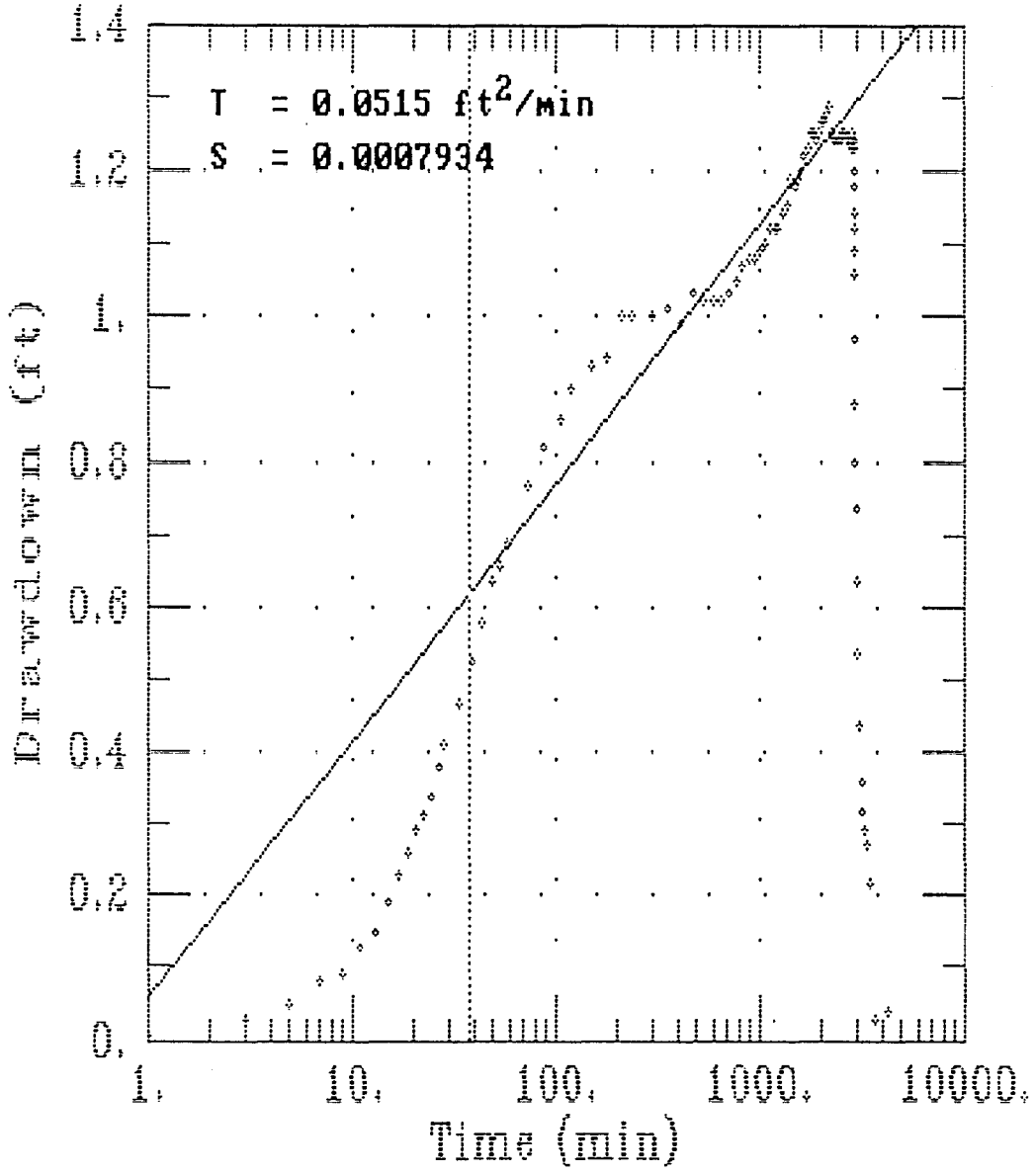
TRANSMISITY ESTIMATES

NSP ASHLAND EW-1 COOPER JACOB METHOD

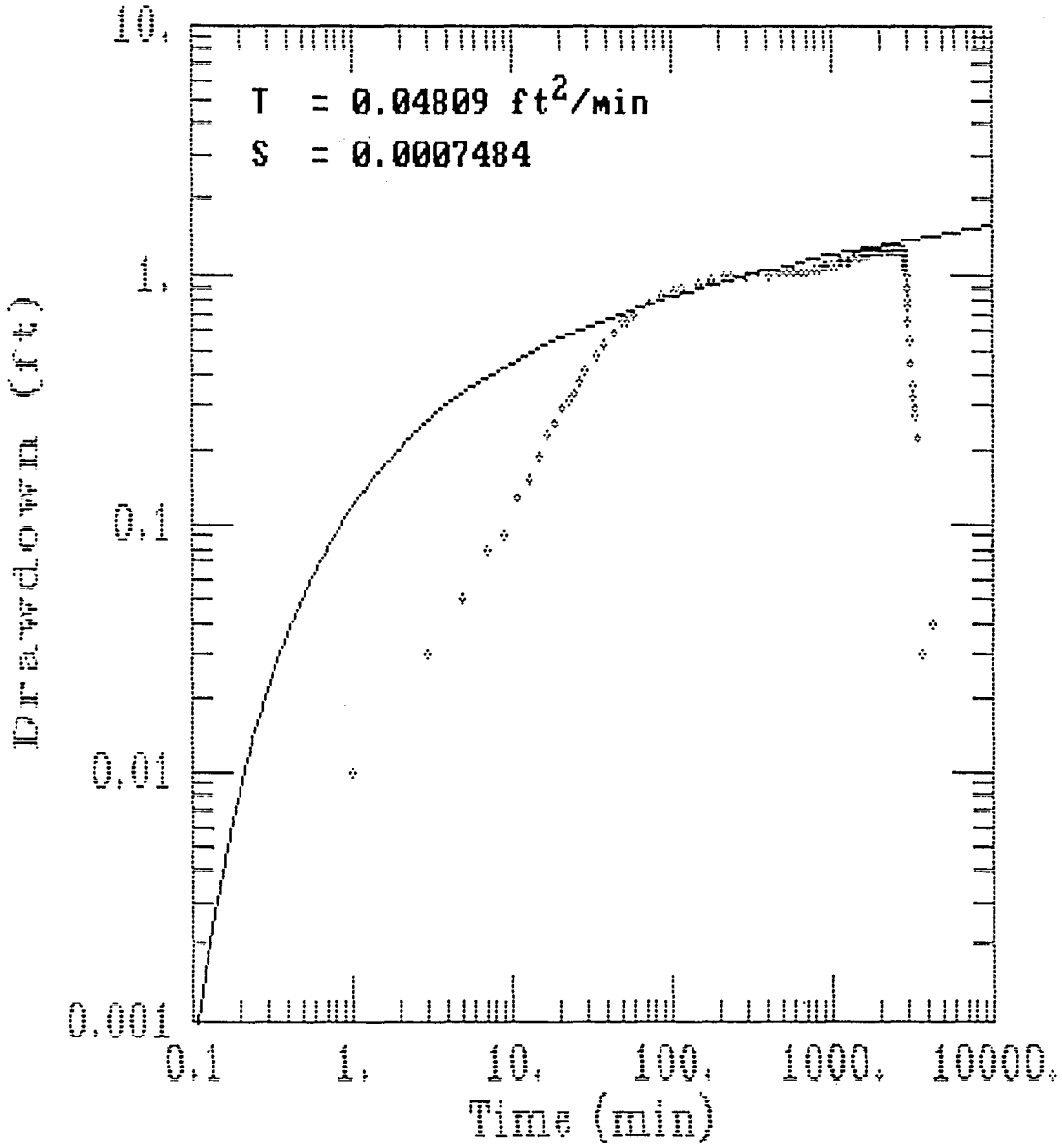



NSP ASHLAND EW-1 THEIS METHOD
T = 0.003581 ft²/min
S = 0.0001415
1000.
100.
10.
1.
0.1
1.
10.
100.
1000.
10000.
Time (min)

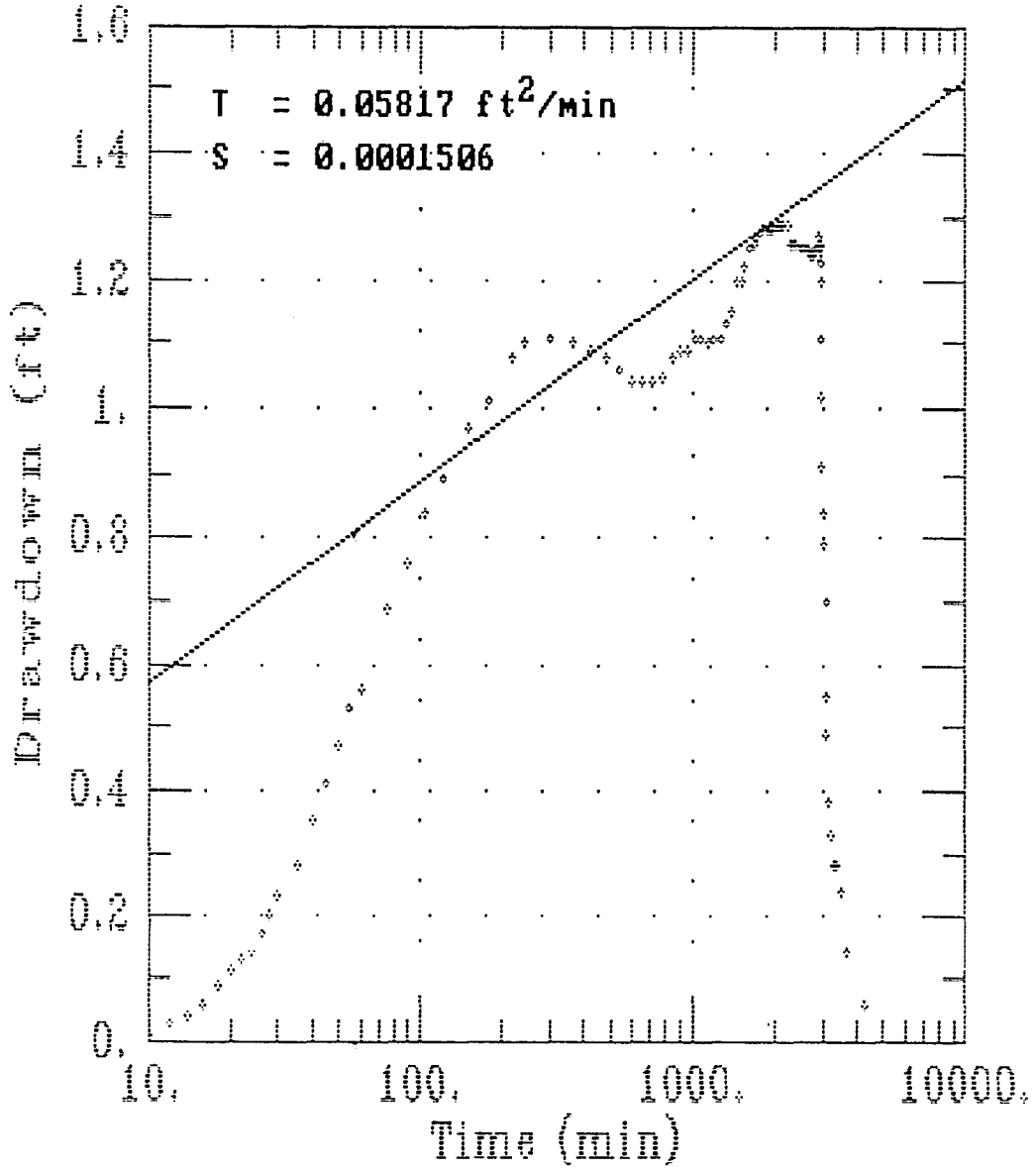
NSP ASHLAND - MW-13A COOPER JACOB METHOD



NSP ASHLAND - MW-13A THEIS METHOD



NSP ASHLAND - MW-13B COOPER JACOB METHOD



NSP ASHLAND - MW-13B THEIS METHOD