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DSS 737

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October 9, 2003

Mr. Charles Burke, P.E.
Risk Management Department
National Fuel Gas Distribution Corp.
Building 11
365 Mineral Springs Road
Buffalo, NY 14210

Re: Annual Operations and Maintenance Report, 2003
Mineral Springs Road Site

Dear Charlie:

The following is an annual report documenting the results of the site-wide operations and maintenance program being implemented at National Fuel Gas Distribution Corporation's Mineral Springs Road former manufactured gas plant site under Voluntary Cleanup Agreement B9-0538-98-08 and as described in the Final Engineering Report – Volume II, Operations and Maintenance Plan, dated May 2002.

Evaluation of Groundwater and Surface Water Monitoring Results

The Mineral Springs groundwater and surface water monitoring program includes sample collection and analysis from 13 monitoring wells and two surface water locations. Depth-to-water measurements are taken at 14 monitoring wells and one surface water location. The groundwater and surface water analytical results (from August 1995 to date) are tabulated in Appendix A. Sampling locations are shown in Figure 1.

As stated in Section 2.1 of the Operations and Maintenance Plan, "After two years of post-remediation sampling and analysis (June 2003), the program will be evaluated with regard to reducing the number of monitoring locations, the number of analysis parameters, and the frequency of sampling." NFG has evaluated the program and does not at this time propose modifications, though may do so in the future following additional sampling rounds.

Groundwater Elevations and Flow

Groundwater flows onto the site from the east and southeast, then flows to the west and northwest towards Calais Street, Mineral Springs Road, and ultimately to the Buffalo River. Onsite groundwater also appears to discharge to the Class D Stream, which in turn discharges to the Calais Street storm sewer and the municipal wastewater treatment system.

Groundwater elevations fluctuate approximately 2 feet over the year with highest elevations measured in April and lowest in June/July.

Assuming an aquifer conductivity of approximately 4.5×10^{-2} cm/sec, groundwater velocity across the site would be in the magnitude of 3 feet per day.

Sampling and Analysis

The primary constituents of interest (COI) are the manufactured gas plant (MGP) indicators BTEX, PAHs, and cyanide. Groundwater and surface water samples are analyzed using some or all of the following methods:

BTEX	Method SW846 8260B
PAHs	Method SW846 8270C
Cyanide (free)	Method ASTM D4282-89
Cyanide (total)	Method SW864 9012A

All sampling and analysis is conducted according to RETEC's Standard Operating Procedures as provided in the project Quality Assurance Plan (QAP) of June 11, 1999.

Analytical Results and Conclusions

Analytical results are tabulated in Appendix A. The locations, sampling objectives, and a discussion of the analytical results for each of the specific areas of interest at the site are provided in the following sections.

Upgradient Site Perimeter

Well MW-17 is located in the southeast corner of the site and monitors upgradient groundwater quality. Other than total cyanide at MW-17 (present in concentrations ranging from below the detection limit to 185 µg/L), MGP COI are not typically present in detectable concentrations in the upgradient groundwater.

Downgradient Site Perimeter

Wells MW-20 and MW-21 are located downgradient of the western boundary of the site on Calais Street. Wells MW-13, MW-14, MW-22, and MW-23 are located just inside the northern property boundary near Mineral Springs Road. These six "sentinel" wells monitor groundwater quality downgradient of the site.

The sentinel wells are typically analyzed for total and free cyanide only. On an annual basis, MW-13 and MW-23 are also analyzed for BTEX and PAHs.

Offsite groundwater does not appear to be impacted by hydrocarbon COI from the Mineral Springs site.

All six of the sentinel wells contain, or have periodically contained, total cyanide in concentrations above the NYSDEC groundwater standard of 200 µg/L. The average concentration has ranged between 400 µg/L and 600 µg/L. There does not appear to be a significant trend towards increase or reduction since the remedial actions were completed in 2001. Free cyanide has also occasionally been detected in the sentinel wells.

Onsite Purifier Residuals Impacted Areas

Wells MW-12 and MW-16 monitor groundwater quality at locations of known subsurface deposits of purifier box residuals. These deposits were remediated by capping. Samples from these two wells are typically analyzed for total and free cyanide only. There does not appear to be a significant trend towards increase or reduction over time. Free cyanide has occasionally been detected in samples from these wells.

Onsite Hydrocarbon Impacted Areas

Wells MW-7, MW-10, and MW-19 monitor onsite groundwater at locations downgradient of hydrocarbon-impacted subsurface soil. Samples from these wells are typically analyzed for BTEX and PAHs.

BTEX and PAH compounds are not typically detected in MW-10. BTEX and PAH concentrations in MW-7 and MW-19 have oscillated, though may be in decline.

Surface Water

Surface water samples are collected at the Calais Street storm sewer inlet (SW-01) and at the Eastern Drainage Ditch near the Class D Stream (SW-02). These surface sampling locations monitor the effectiveness of the Eastern Drainage Ditch Cap and also monitor the concentrations of COI in surface water at its most downgradient location at the Mineral Springs site.

BTEX and PAHs are not typically detected in the surface water samples. Total cyanide is consistently detected, but at low concentrations. Free cyanide has been sporadically detected, also at low concentrations.

QA/QC

Quality control samples, consisting of duplicates, equipment blanks, and trip blanks, are collected during the sampling events to meet the requirements of the project QAP. With rare exception, the results are within acceptable ranges.

DNAPL Recovery Test System Evaluation

The groundwater monitoring program has included periodic checking of the DNAPL Recovery Test Well (RTW-01) and recovery of any accumulated DNAPL. The total measurable volume of

DNAPL recovered to date has remained at less than 100 gallons, nearly all of which was recovered in the initial month of system operations in 2001. Continuous operation of the system was discontinued in April 2001.

Site Inspection and Maintenance

An annual site inspection was conducted on April 10, 2003 by Mr. Mark Hofferbert, P.E., (RETEC). The inspection checklist is included as Appendix B and the observations are discussed below.

Clay Caps

Clay caps are located behind Building 14 and in the Eastern Drainage Ditch north of the northern culvert and south of the southern culvert.

The clay cap behind Building 14 has been mowed periodically to prevent tree growth. No erosion or blue-stained soils (purifier residuals) were visible. No active woodchuck dens were observed.

In the clay-capped sections of the Eastern Drainage Ditch, no erosion, woodchuck or muskrat dens, deep-rooted perennial plant species, or hydrocarbon sheen were detected.

Geomembrane Caps

Geomembrane caps, constructed of 40-mil HDPE and soil or stone cover, are located in the Eastern Swale and in the Eastern Drainage Ditch between the culverts.

The Eastern Swale cap has been mowed periodically. No erosion, HDPE plastic or geofabric, woodchuck dens, or blue-stained surface soil were visible. Some seasonal wet spots were observed.

The Eastern Drainage Ditch cap is located below an 18-inch diameter HDPE drain pipe. The pipe was observed to be free flowing and there was no erosion, woodchuck or muskrat dens, deep-rooted perennial plant species, or hydrocarbon sheen observed. Some debris was observed to have collected in the trash grates and should be removed. The "no dig" signage was in place.

Asphalt Caps

The asphalt caps are located south and east of Building 3, and north and south of the Eastern Swale.

No blue-stained surface soil was visible in the area. The edges of the caps have been mowed periodically. Additional crushed stone has been placed to protect one lower-elevation edge against erosion.

Minor cracking of the asphalt surface due to seasonal expansion/shrinkage was observed south of Bldg #3 and reported to NFG with the recommendation that the cracks be monitored for any significant future degradation. NFG is currently soliciting costs for repairs.

Other Areas

Throughout the remainder of the site, no tar boils or blue-stained soils were observed.

No hydrocarbon sheens were observed in the Class D Stream or the Eastern Drainage Ditch.

The compacted backfill placed in the various former Tar Boils and Separator Pit excavations has been maintained as necessary to assure runoff control.

The site perimeter security fence was observed to be intact except for one set of gate sections over the Class D stream which were sagging. NFG subsequently repaired the sagging sections in May.

During the April groundwater sampling event, it was noted (and reported to NFG) that MW-21 (on Calais Street) was missing its cover plate and that a small number of other cover boxes were loose. In July, NFG completed the repairs and performed additional routine maintenance on other wells including replacing all locks and several plugs. During the work it was necessary to cut 3 and 2 inches, respectively, from the PVC risers in MW-07 and MW-14. The new top-of-PVC elevations are tabulated in Appendix D.

In addition to the monitoring well repairs described above, monitoring well MW-11 was replaced with a new well MW-11A. MW-11 had been installed with the well screen straddling the upper clay layer and was, therefore, suspected by NFG and RETEC to be partially influenced by periodic perched water from above the upper clay layer. In consultation with NYSDEC, it was decided to reconstruct the well, like other wells at the site, with the screen exposed only to the site aquifer below the upper clay layer. MW-11A is 5-feet north and 1-foot east of the former MW-11, which was removed and grouted. During construction of MW-11A, split spoon sampling was conducted from 20 to 24 feet bgs, and a boring log was produced (Appendix C). The MW-11A log includes lithology from 0 to 20 feet bgs as previously reported on the MW-11 log.

An Annual Certification of Institutional/Engineering Controls is included in Appendix E.

Please call me with questions at 607-277-5716.

Sincerely,
The RETEC Group, Inc.

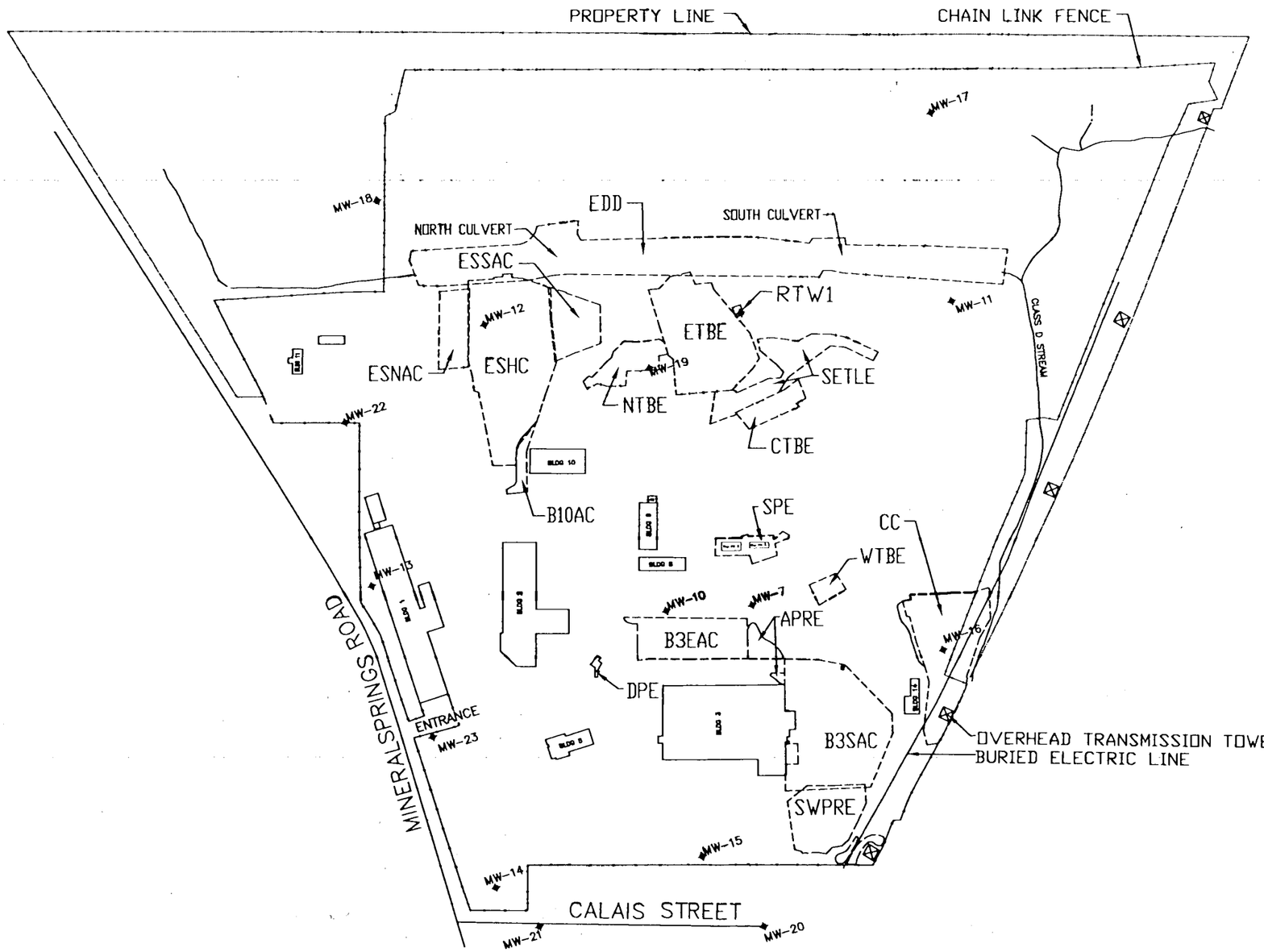
Mark Hofferbert, P.E.
Project Engineer

Attachments:

Figure 1 - Site Plan
Appendix A - Tabulation of Groundwater and Surface Water Analytical Results
Appendix B - Annual Site Inspection Form
Appendix C - Boring Log for MW-11A
Appendix D - Revised Groundwater Benchmark Elevations
Appendix E - Certification of Institutional/Engineering Controls

cc: T. Alexander - NFG
J. Loesch - NFG
G. Sutton - NYSDEC
M. Doster - NYSDEC
G. Bailey - NYSDEC
G. Litwin - NYSDOH
C. O'Connor - NYSDOH
D. Flynn - Phillips Lytle
File NFGD3-14852-400

Figure



LEGEND

———	EXISTING STRUCTURE
- - - - -	REMEDIAL CONSTRUCTION
⊕	MONITORING WELLS
APRE	ADDITIONAL PURIFIER RESIDUALS EXCAVATION
B3EAC	BUILDING 3 EAST ASPHALT CAP
B3SAC	BUILDING 3 SOUTH ASPHALT CAP
B10AC	BUILDING 10 ASPHALT CAP
CC	CLAY CAP
CTBE	CENTRAL TAR BOILS EXCAVATION
DPE	DIESEL PAD EXCAVATION
EDD	EASTERN DRAINAGE DITCH
ESHC	EASTERN SWALE HDPE CAP
ESNAC	EASTERN SWALE NORTH ASPHALT CAP
ESSAC	EASTERN SWALE SOUTH ASPHALT CAP
ETBE	EASTERN TAR BOILS EXCAVATION
NTBE	NORTHERN TAR BOILS EXCAVATION
RTW1	RECOVERY TEST WELL AND DNAPL SHED
SETLE	SOUTHEASTERN TAR LENSES EXCAVATION
SPE	SEPARATOR PITS EXCAVATION
SWPRE	SOUTHWEST RESIDUALS EXCAVATION
WTBE	WESTERN TAR BOILS EXCAVATION

0 75 150 225 300

RETEC

Mineral Springs Road MGP Site
NFGD3-14852

As-Built Site Plan
Figure 1-1

DATE: 06/07/02 | DRWN: SLC/MRH | FILE: O&Mfig1.1siteplan | LAYOUT: Layout1

Appendix A

Groundwater and Surface Water Analytical Results

MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07	MW-07
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene	3320	1210	4900		5100	5200	4800	3900	3300	2700	2200	3000	2100	1900
Toluene	389	20	750		2000	2700	2500	3400	1700	1500	1200	1400	1200	930
Ethylbenzene	2400	410	2900		3700	3600	3300	2000	2100	2300	1900	2200	1900	1900
Xylene (sum of isomers)	1038	63	1200		1800	1900	1800	1600	1100	1200	1100	1100	1100	1000
Total BTEX	7147	1703	9750		12600	13400	12400	10900	8200	7700	6400	7700	6300	5730
Naphthalene	3270	3000	2400		4100	5900	3400	3400	3600	2200	2600	5000	3100	3800
Acenaphthylene	nd	nd	nd		nd	nd	nd	2.2	nd	nd	nd	nd	nd	nd
Acenaphthene	240	150	180		180	180	150	140	160	80	120	150	nd	160
Fluorene	nd	28	45		nd	nd	nd	28	nd	nd	nd	33	nd	nd
Phenanthrene	nd	nd	37		nd	nd	nd	32	nd	nd	nd	30	nd	nd
Anthracene	nd	nd	nd		nd	nd	nd	3.6	nd	nd	nd	nd	nd	nd
Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							180	190	200	100	180	230	nd	280
Total PAHs	3510	3178	2662		4280	6080	3730	3795.8	3960	2380	2900	5443	3100	4240
Cyanide, total			189											
Cyanide, free														
Water Elevation (feet)			560.13	581.68	579.84	581.70	581.50	579.98	580.58	582.01	580.96	580.26	581.66	580.31

MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10	MW-10
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	1.2	nd
Toluene	nd	nd	nd		nd	nd	nd	nd	nd	0.89	nd	nd	0.81	nd
Ethylbenzene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	0.9	nd
Xylene (sum of isomers)	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX	0	0	0		0	0	0	0	0	0.89	0	0	2.91	0
Naphthalene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	2.1	nd	nd
Acenaphthylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene	nd	nd	nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs	0	0	0		0	0	0	0	0	0	0	2.1	0	0
Cyanide, total			334											
Cyanide, free														
Water Elevation (feet)			579.87	581.44	579.33	581.19	581.07	579.64	580.10	581.61	580.51	579.51	581.23	579.93

MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11	MW-11A
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			35		nd	nd	nd	nd		nd	nd	nd	nd	350
Toluene			17		nd	nd	nd	68		nd	3.8	nd	nd	230
Ethylbenzene			94		nd	nd	nd	nd		nd	nd	nd	nd	650
Xylene (sum of isomers)			83		7	nd	nd	nd		nd	nd	nd	nd	410
Total BTEX			229		7	0	0	68		0	3.8	0	0	1640
Naphthalene			140		12	nd	nd	nd		nd	nd	nd	nd	150
Acenaphthylene			9		2	nd	nd	nd		nd	nd	nd	nd	12
Acenaphthene			7		nd	nd	nd	nd		nd	nd	nd	nd	4.4
Fluorene			nd		nd	nd	nd	nd		nd	nd	nd	nd	2.2
Phenanthrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	2.7
Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Chrysene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd		nd	nd	nd	nd		nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd		nd	nd	nd	nd	31
Total PAHs			156		14	0	0	0		0	0	0	0	202.3
Cyanide, total			1040						1340					
Cyanide, free									nd					
Water Elevation (feet)			580.28	582.26	579.82	583.55	583.85	579.28	581.30	583.85	581.32	581.03	582.97	580.70

Mineral Springs

All units ug/L

MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12	MW-12
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			17											
Toluene			nd											
Ethylbenzene			nd											
Xylene (sum of isomers)			nd											
Total BTEX			17											
Naphthalene			nd											
Acenaphthylene			nd											
Acenaphthene			nd											
Fluorene			nd											
Phenanthrene			nd											
Anthracene			nd											
Fluoranthene			nd											
Pyrene			nd											
Benzo(a)Anthracene			nd											
Chrysene			nd											
Benzo(b)Fluoranthene			nd											
Benzo(k)Fluoranthene			nd											
Benzo(a)Pyrene			nd											
Indeno(1,2,3-cd)Pyrene			nd											
Dibenzo(a,h)Anthracene			nd											
Benzo(g,h,i)Perylene			nd											
2-Methylnaphthalene														
Total PAHs			0											
Cyanide, total			375		294	380	434	1840	393	522	2020	438	440	384
Cyanide, free						nd	nd	nd	nd	nd	58	7	nd	88
Water Elevation (feet)			579.45	581.07	578.98	580.90	580.72	579.30	579.54	581.40	580.30	579.29	580.82	579.59

MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13	MW-13
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			4	nd								1.8		
Toluene			nd	nd								nd		
Ethylbenzene			nd	nd								nd		
Xylene (sum of isomers)			nd	nd								nd		
Total BTEX			4	0								1.8		
Naphthalene			nd									nd		
Acenaphthylene			nd									nd		
Acenaphthene			nd									nd		
Fluorene			nd									nd		
Phenanthrene			nd									nd		
Anthracene			nd									nd		
Fluoranthene			nd									nd		
Pyrene			nd									nd		
Benzo(a)Anthracene			nd									nd		
Chrysene			nd									nd		
Benzo(b)Fluoranthene			nd									nd		
Benzo(k)Fluoranthene			nd									nd		
Benzo(a)Pyrene			nd									nd		
Indeno(1,2,3-cd)Pyrene			nd									nd		
Dibenzo(a,h)Anthracene			nd									nd		
Benzo(g,h,i)Perylene			nd									nd		
2-Methylnaphthalene												nd		
Total PAHs			0									0		
Cyanide, total			323		356	280	129	465	716	nd	157	399	142	423
Cyanide, free						nd	33	119	nd	nd	96	13	nd	51
Water Elevation (feet)			578.17	579.72	577.70	579.47	579.28	577.91	578.23	579.90	578.80	577.83	579.23	578.13

MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14	MW-14
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			nd											
Toluene			nd											
Ethylbenzene			nd											
Xylene (sum of isomers)			nd											
Total BTEX			0											
Naphthalene			nd											
Acenaphthylene			nd											
Acenaphthene			nd											
Fluorene			nd											
Phenanthrene			nd											
Anthracene			nd											
Fluoranthene			nd											
Pyrene			nd											
Benzo(a)Anthracene			nd											
Chrysene			nd											
Benzo(b)Fluoranthene			nd											
Benzo(k)Fluoranthene			nd											
Benzo(a)Pyrene			nd											
Indeno(1,2,3-cd)Pyrene			nd											
Dibenzo(a,h)Anthracene			nd											
Benzo(g,h,i)Perylene			nd											
2-Methylnaphthalene														
Total PAHs			0											
Cyanide, total			644		427	800	914	378	449	886	416	487	664	962
Cyanide, free						nd	nd	nd	nd	nd	17	12	nd	9
Water Elevation (feet)			577.36	579.19	577.03	578.44	578.21	577.21	577.31	578.56	577.61	576.76	577.92	577.23

MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15	MW-15
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			nd											
Toluene			nd											
Ethylbenzene			nd											
Xylene (sum of isomers)			nd											
Total BTEX			0											
Naphthalene			nd											
Acenaphthylene			nd											
Acenaphthene			nd											
Fluorene			nd											
Phenanthrene			nd											
Anthracene			nd											
Fluoranthene			nd											
Pyrene			nd											
Benzo(a)Anthracene			nd											
Chrysene			nd											
Benzo(b)Fluoranthene			nd											
Benzo(k)Fluoranthene			nd											
Benzo(a)Pyrene			nd											
Indeno(1,2,3-cd)Pyrene			nd											
Dibenzo(a,h)Anthracene			nd											
Benzo(g,h,i)Perylene			nd											
2-Methylnaphthalene														
Total PAHs			0											
Cyanide, total			78.8											
Cyanide, free														
Water Elevation (feet)			579.11	579.81	578.70	580.15	580.55	578.98	579.49	580.98	579.48	578.88	580.40	579.11

MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16	MW-16
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			nd											
Toluene			nd											
Ethylbenzene			nd											
Xylene (sum of isomers)			nd											
Total BTEX			0											
Naphthalene			nd											
Acenaphthylene			nd											
Acenaphthene			nd											
Fluorene			nd											
Phenanthrene			nd											
Anthracene			nd											
Fluoranthene			nd											
Pyrene			nd											
Benzo(a)Anthracene			nd											
Chrysene			nd											
Benzo(b)Fluoranthene			nd											
Benzo(k)Fluoranthene			nd											
Benzo(a)Pyrene			nd											
Indeno(1,2,3-cd)Pyrene			nd											
Dibenzo(a,h)Anthracene			nd											
Benzo(g,h,i)Perylene			nd											
2-Methylnaphthalene														
Total PAHs			0											
Cyanide, total			346		459	360	214	214	138	174	23	187	203	130
Cyanide, free						nd	nd	147	nd	nd	17	13	nd	89
Water Elevation (feet)			580.17	581.49	579.66	581.81	581.59	580.06	580.77	582.08	580.23	580.34	581.92	580.42

MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17	MW-17
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Toluene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Ethylbenzene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX				0	0	0	0	0	0	0	0	0	0	0
Naphthalene				nd	nd	nd	nd	3	nd	nd	nd	nd	nd	nd
Acenaphthylene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene				nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs				0	0	0	0	3	0	0	0	0	0	0
Cyanide, total				34	nd	27	65	38	74	185	127	108	185	50
Cyanide, free						nd	13	nd	nd	nd	nd	nd	nd	16
Water Elevation (feet)				582.36	579.73	581.90	581.96	580.12	580.88	582.38	579.86	580.48	582.01	580.46

MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18	MW-18
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03
Benzene				nd	nd	nd	nd	nd	nd	nd			
Toluene				nd	nd	nd	nd	1.1	nd	nd			
Ethylbenzene				nd	nd	nd	nd	nd	nd	nd			
Xylene (sum of isomers)				nd	nd	nd	nd	nd	nd	nd			
Total BTEX				0	0	0	0	1.1	0	0			
Naphthalene				nd	nd	nd	nd	nd	nd	nd			
Acenaphthylene				nd	nd	nd	nd	nd	nd	nd			
Acenaphthene				nd	nd	nd	nd	nd	nd	nd			
Fluorene				nd	nd	nd	nd	nd	nd	nd			
Phenanthrene				nd	nd	nd	nd	nd	nd	nd			
Anthracene				nd	nd	nd	nd	nd	nd	nd			
Fluoranthene				nd	nd	nd	nd	nd	nd	nd			
Pyrene				nd	nd	nd	nd	nd	nd	nd			
Benzo(a)Anthracene				nd	nd	nd	nd	nd	nd	nd			
Chrysene				nd	nd	nd	nd	nd	nd	nd			
Benzo(b)Fluoranthene				nd	nd	nd	nd	nd	nd	nd			
Benzo(k)Fluoranthene				nd	nd	nd	nd	nd	nd	nd			
Benzo(a)Pyrene				nd	nd	nd	nd	nd	nd	nd			
Indeno(1,2,3-cd)Pyrene				nd	nd	nd	nd	nd	nd	nd			
Dibenzo(a,h)Anthracene				nd	nd	nd	nd	nd	nd	nd			
Benzo(g,h,i)Perylene				nd	nd	nd	nd	nd	nd	nd			
2-Methylnaphthalene							nd	nd	nd	nd			
Total PAHs				0	0	0	0	0	0	0			
Cyanide, total				nd	nd	nd	13	nd	nd	nd			
Cyanide, free						nd	nd	24	nd	nd			
Water Elevation (feet)				585.46	582.65	585.06	585.40	583.84	583.84	582.74			

MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19	MW-19
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene					4700	5700	6000	4600	4700	4800	3800	4200	4600	
Toluene					nd	nd	nd	160	nd	nd	nd	nd	nd	
Ethylbenzene					nd	280	260	nd	nd	160	150	140	170	
Xylene (sum of isomers)					1500	2200	1500	930	660	580	470	540	560	
Total BTEX					6200	8180	7760	5690	5360	5540	4420	4880	5330	
Naphthalene					1900	2200	2200	2000	2100	2300	2000	2100	2400	2100
Acenaphthylene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene					nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	0.82	nd	nd	nd	nd	nd	nd
Total PAHs					1900	2200	2200	2000.82	2100	2300	2000	2100	2400	2100
Cyanide, total					1100									
Cyanide, free														
Water Elevation (feet)					577.43	581.36	581.13	579.63	580.12	581.73	579.73	579.63	581.24	580.01

MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20	MW-20
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene					nd									
Toluene					nd									
Ethylbenzene					nd									
Xylene (sum of isomers)					nd									
Total BTEX					0									
Naphthalene					nd									
Acenaphthylene					nd									
Acenaphthene					nd									
Fluorene					nd									
Phenanthrene					nd									
Anthracene					nd									
Fluoranthene					nd									
Pyrene					nd									
Benzo(a)Anthracene					nd									
Chrysene					nd									
Benzo(b)Fluoranthene					nd									
Benzo(k)Fluoranthene					nd									
Benzo(a)Pyrene					nd									
Indeno(1,2,3-cd)Pyrene					nd									
Dibenzo(a,h)Anthracene					nd									
Benzo(g,h,i)Perylene					nd									
2-Methylnaphthalene														
Total PAHs					0									
Cyanide, total					344	450	295	439	46	455	361	8	506	399
Cyanide, free						nd	13	nd	nd	nd	10	9	nd	44
Water Elevation (feet)					576.67	579.24	578.86	576.76	577.15	579.20	577.49	576.60	578.34	576.90

MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21	MW-21
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene					nd									
Toluene					nd									
Ethylbenzene					nd									
Xylene (sum of isomers)					nd									
Total BTEX					0									
Naphthalene					nd									
Acenaphthylene					nd									
Acenaphthene					nd									
Fluorene					nd									
Phenanthrene					nd									
Anthracene					nd									
Fluoranthene					nd									
Pyrene					nd									
Benzo(a)Anthracene					nd									
Chrysene					nd									
Benzo(b)Fluoranthene					nd									
Benzo(k)Fluoranthene					nd									
Benzo(a)Pyrene					nd									
Indeno(1,2,3-cd)Pyrene					nd									
Dibenzo(a,h)Anthracene					nd									
Benzo(g,h,i)Perylene					nd									
2-Methylnaphthalene														
Total PAHs					0									
Cyanide, total					511	560	898	558	535	756	674	670	637	708
Cyanide, free						nd	14	nd	nd	24	12	13	nd	11
Water Elevation (feet)					576.51	578.08	577.68	576.55	576.58	578.03	578.87	576.28	575.32	576.55

MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22	MW-22
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene					6									
Toluene					nd									
Ethylbenzene					nd									
Xylene (sum of isomers)					nd									
Total BTEX					6									
Naphthalene					nd									
Acenaphthylene					nd									
Acenaphthene					nd									
Fluorene					nd									
Phenanthrene					nd									
Anthracene					nd									
Fluoranthene					nd									
Pyrene					nd									
Benzo(a)Anthracene					nd									
Chrysene					nd									
Benzo(b)Fluoranthene					nd									
Benzo(k)Fluoranthene					nd									
Benzo(a)Pyrene					nd									
Indeno(1,2,3-cd)Pyrene					nd									
Dibenzo(a,h)Anthracene					nd									
Benzo(g,h,i)Perylene					nd									
2-Methylnaphthalene														
Total PAHs					0									
Cyanide, total					487	600	1010	734	460	703	1570	467	604	560
Cyanide, free						nd	nd	201	nd	nd	49	231	267	88
Water Elevation (feet)					578.80	580.70	580.51	579.09	579.50	581.25	580.05	579.10	580.62	579.42

All units ug/L

MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23	MW-23
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene						nd						nd		
Toluene						nd						nd		
Ethylbenzene						nd						nd		
Xylene (sum of isomers)						nd						nd		
Total BTEX						0						0		
Naphthalene						nd						nd		
Acenaphthylene						nd						nd		
Acenaphthene						nd						nd		
Fluorene						nd						nd		
Phenanthrene						nd						nd		
Anthracene						nd						nd		
Fluoranthene						nd						nd		
Pyrene						nd						nd		
Benzo(a)Anthracene						nd						nd		
Chrysene						nd						nd		
Benzo(b)Fluoranthene						nd						nd		
Benzo(k)Fluoranthene						nd						nd		
Benzo(a)Pyrene						nd						nd		
Indeno(1,2,3-cd)Pyrene						nd						nd		
Dibenzo(a,h)Anthracene						nd						nd		
Benzo(g,h,i)Perylene						nd						nd		
2-Methylnaphthalene												nd		
Total PAHs						0						0		
Cyanide, total						480	658	469	654	480	425	728	356	620
Cyanide, free						nd	nd	nd	nd	nd	12	10	nd	15
Water Elevation (feet)						578.66	578.30	577.40	577.58	578.69	577.83	577.18	578.11	577.40

SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01	SW-01
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Toluene			nd				nd	nd	nd	nd	2	nd	nd	nd
Ethylbenzene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)			nd				nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX			0				0	0	0	0	2	0	0	0
Naphthalene			nd				nd	2.9	nd	nd	nd	1.6	nd	nd
Acenaphthylene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthene			nd				nd	1.1	nd	nd	nd	nd	nd	nd
Fluorene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Chrysene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd				nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd				nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs			0				0	4	0	0	0	1.6	0	0
Cyanide, total			12.2				21	55	35	8	405	21	13	88
Cyanide, free							nd	16	nd	nd	29	6	nd	10
Water Elevation (feet)					579.60	580.40	580.10	580.00	580.10	581.00	579.60	579.80	580.70	581.40

SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02	SW-02
DATE	Aug-95	May-96	Jul-97	Feb-98	Jun-99	Apr-00	Apr-01	Jul-01	Nov-01	Apr-02	Jun-02	Nov-02	Apr-03	Jul-03
Benzene			nd		nd	6	2	nd	nd	1.2	nd	nd	nd	nd
Toluene			nd		nd	8	2	nd	nd	0.25	nd	nd	nd	nd
Ethylbenzene			nd		nd	15	nd	nd	nd	nd	nd	nd	nd	nd
Xylene (sum of isomers)			nd		nd	24	nd	nd	nd	nd	nd	nd	nd	nd
Total BTEX			0		0	53	4	0	0	1.45	0	0	0	0
Naphthalene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthylene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Acenaphthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluorene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Phenanthrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Pyrene			nd		nd	nd	nd	0.77	nd	nd	nd	nd	nd	nd
Benzo(a)Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Chrysene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(b)Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(k)Fluoranthene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(a)Pyrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Indeno(1,2,3-cd)Pyrene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Dibenzo(a,h)Anthracene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Benzo(g,h,i)Perylene			nd		nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2-Methylnaphthalene							nd	nd	nd	nd	nd	nd	nd	nd
Total PAHs			0		0	0	0	0.77	0	0	0	0	0	0
Cyanide, total			77.5		nd	380	121	nd	7	130	nd	1440	17	30
Cyanide, free						111	nd	nd	nd	16	nd	42	nd	nd
Water Elevation (feet, approximate)					580.3	580.9	580.6	580.5	580.6	581.5	580.1	580.3	581.1	581.8

Appendix B

Annual Site Inspection Form

Annual Site Inspection Form

Mineral Springs Road Former MGP

Inspection by: Mark Hofferbert Affiliation: RETEC

Signature: [signature] Date: 4/10/03

ASPHALT CAP SOUTH OF BUILDING #3

Cracks or ruts ? (Yes) No

Erosion at edges ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

Some long expansion/shrinkage cracks in seams. Recommend monitor for continuing degredation

ASPHALT CAP EAST OF BUILDING #3

Cracks or ruts ? Yes (No)

Erosion at edges ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

ASPHALT CAP NORTH OF EASTERN SWALE

Cracks or ruts ? Yes (No)

Erosion at edges ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

ASPHALT CAP SOUTH OF EASTERN SWALE

Cracks or ruts ? Yes (No)

Erosion at edges ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

HDPE/SOIL CAP IN EASTERN SWALE

Cracks or ruts ? Yes (No)

Erosion at edges ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

Some seasonal wet spots

CLAY CAP BEHIND BUILDING #14

Animal dens ? Yes (No)

Erosion ? Yes (No)

Trees ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

No Woodchucks

EASTERN DRAINAGE DITCH

Animal dens ? Yes (No)

Erosion ? Yes (No)

Trees ? Yes (No)

Blue-stained soil ? Yes (No)

Hydrocarbon sheen ? Yes (No)

Inadequate Signage ? Yes (No)

Trash / Debris ? Yes (None Significant)

Comments:

BACKFILLED EXCAVATIONS

Excessive settlement ? Yes (No)

Ponding of surface water ? Yes (No)

Tar boils ? Yes (No)

Blue-stained soil ? Yes (No)

Comments:

CLASS D STREAM

Hydrocarbon sheen ? Yes (No)

Comments:

SITE FENCE

Damage / Holes ? Yes (No)

Comments:

Gate over Class D stream is sagging

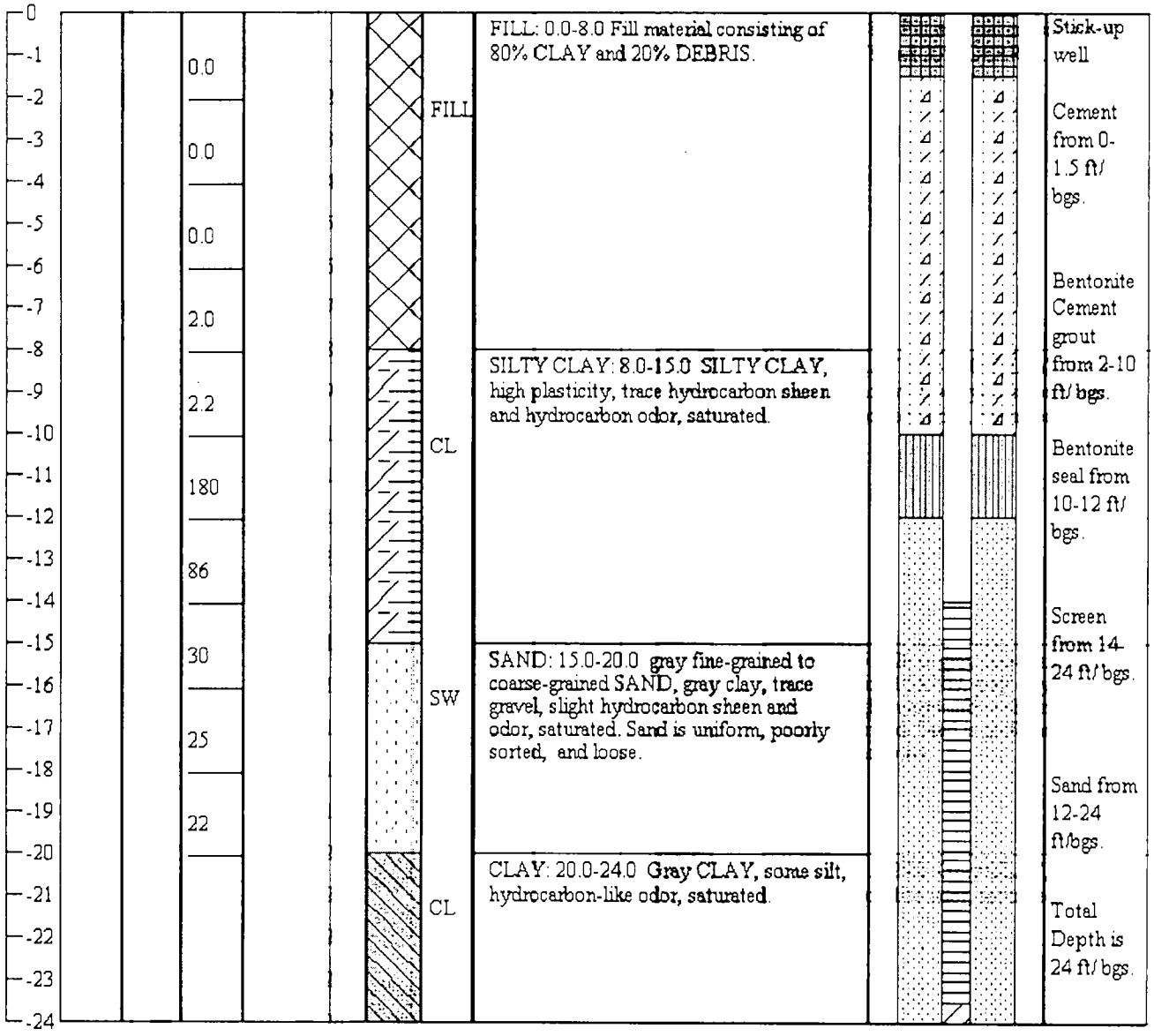
Appendix C

Boring Log MW-11A

RETEC
2550 Eisenhower Avenue
Eagleville, Pennsylvania 19403

Well ID: MW-11A

Project Name:	Mineral Springs	**Boring Location:**	NA
Location:	NA	**PVC Elevation (ft/msl):**	589.78
Project Number:	NFG03-14852-300	**Total Depth (ft):**	24 ft/bgs
Date Started:	7/14/03	**Boring Diameter Outer/Inner (in):**	8 1/4 OD
Date Finished:	7/14/03	**Water Level During Drilling (ft/bgs):**	7 ft/bgs
Drilling Company:	SLC	**Logged By:**	Jerry Jones/SLC
Drilling Method:	HSA		
Sampling Method:	Split Spoon		



Notes: Lithology, description and PID readings 0-20 ft/bgs is based on a previous boring MW-11.

Appendix D

Revised Groundwater Benchmark Elevations

Mineral Springs Road Former MGP Site
National Fuel Gas Distribution

GROUNDWATER BENCHMARK ELEVATIONS

* Revised July 2003

Location	Benchmark	
	Top of PVC	
MW07	587.01	*
MW10	587.61	
MW11	---	*
MW11A	589.78	*
MW12	591.40	
MW13	591.85	
MW14	589.64	*
MW15	590.93	
MW16	588.99	
MW17	587.28	
MW18	591.64	
MW19	589.83	
MW20	587.30	
MW21	587.88	
MW22	592.50	
MW23	589.28	
RTW01	591.49	
	Top of Headwall	
SW01	587.0	

Appendix E

Certification of Institutional/Engineering Controls

RECD OCT 3 2003

Annual Certification of Institutional/Engineering Controls at Voluntary Clean-Up Program Site

Site Number: V00195-9
Site Name: National Fuel Gas - Mineral Springs Road Maintenance Facility
Site Address: 365 Mineral Springs Road, West Seneca (T), Erie County, New York

County: Erie County
Town: Town of West Seneca
Property ID: 123.16 - 2 - 8

I James D. Ramsden, residing at 10 Lafayette Sq Buffalo, NY as owner, or a duly authorized representative, of the property(ies) listed above which are located wholly or partially within the boundaries of the Voluntary Cleanup Site named above; do certify that the engineering and/or institutional controls, as specified in the Restrictive Covenant for the Voluntary Cleanup Site are in-place and functioning as designed within the property(ies) listed above.

Signature: J. D. R.

(This area for notary public)

Eileen D. Guerra
10/6/03

EILEEN D. GUERRA
Notary Public, State of New York
Qualified in Erie County
My Commission Expires Aug. 23, 2005