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December 27, 2006

Mr. Jeffrey A. Konsella, P.E.
Environmental Engineer II
Division of Environmental Remediation
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Reference: Ekonol Polyester Resins Site (#V00653-9).
2006 Pre-design Activities Data Summary and Preliminary Pilot Test Scope of Work

Dear Mr. Konsella:

Parsons, on behalf of Atlantic Richfield Company, has summarized the Alternative Evaluation Phase 2 activities, and prepared a preliminary pilot test scope of work (SOW) for an *in situ* technology at the above referenced facility. Per Atlantic Richfield's August 11, 2006 correspondence, the activities summarized herein further evaluate specific remedial alternatives, and will lead to the selection of an appropriate remedy for the site.

INTRODUCTION

The purpose of this interim report is to provide results of the recent field activities, and the preliminary design and schedule for a field-scale pilot test, using one or more *in situ* treatment technologies. A final report discussing the results of the bench-scale work and field activities will be provided after the bench-scale test is completed.

The technologies being evaluated include:

- Slow Release Substrate™ (SRS™), bioaugmented and unaugmented varieties – an emulsified soybean oil product to enhance biodegradation. Bioaugmented variation includes the addition of bacteria that may degrade Site Chemical of Concern (COCs).
- Emulsified Zero Valent Iron (micro and nanoscale varieties) – an emulsion of fine grained iron particles in vegetable oil, designed to degrade COCs.
- EHC® – a controlled-release, integrated carbon and zero valent iron product to degrade COCs.

In support of evaluating the technologies, the following field activities were conducted in 2006:

- Sampling and analysis of groundwater for site-specific chlorinated volatile organic compounds (VOCs), and Monitored Natural Attenuation (MNA) Parameters.
- Collection of groundwater and bedrock samples to complete bench-scale testing of remedial technologies.

- Initiation of laboratory bench-scale treatability testing (i.e. microcosms).
- Continuation of monthly monitoring of groundwater levels.

The results of field work were used to refine the understanding of the subsurface conditions, provide samples for laboratory tests, and develop a preliminary scope of work for an *in situ* pilot test. The objective of the pilot test is to determine the field effectiveness of degrading COCs with one or more treatment substrates. The substrate(s) will be applied in a small-scale area, with performance monitored over time. Using the performance monitoring of the substrates applied, the pilot application will be evaluated.

After completion of the treatability testing the data will be evaluated and a full report will be issued to the NYSDEC, detailing the results of the pre-design activities. Based on similar laboratory testing, the schedule has been extended to March, 2007 so that late production of degradation products, in the microcosms, will be captured during the study for Ekonol. The report will be an addendum to the NYSDEC-approved Remedial Alternatives Report (February 2006, revised July 2006), and will contain the recommended final scope of work for pilot testing in deep (bedrock) groundwater. These documents are a continuation of the remedial selection process.

SUMMARY OF COMPLETED TASKS

Well Drilling/Bedrock Coring

<u>Installation:</u> Two bedrock wells (MW-7D and MW-21D) were installed at the locations shown in Figure 1. Boring logs and discontinuity reports for the rock core are included as Attachment 1. Bedrock samples were collected from these two wells for inclusion in the laboratory treatability testing. Groundwater samples collected from these wells as part of the baseline monitoring were used to evaluate the extent of impacts from the COCs, and natural attenuation. The wells were drilled in accordance with the NYSDEC-approved Work Plan for the Phase III Investigation (August 2003), and included pump/packer testing. Enhancements to these procedures were:

- The borings were constructed as open-bedrock bedrock wells.
- Dissolved oxygen and chlorine were removed from the potable drill potable water, in order to preserve the native bacteria existing in the rock, and to prevent bias in the treatability testing. This was accomplished by sparging the drill water with nitrogen prior to coring. Photographic documentation of these procedures will be provided in the addendum to the RAR.

Following installation, the new wells were developed by surging and over-pumping. After an equilibration period of greater than two weeks, wells MW-7D and MW-21D were developed.

<u>Results:</u> Core logs from MW-21D and MW-7D indicated that the bedrock geology at these locations is similar to other areas of the Site. The rock is a dolomitic limestone, a member of the Lockport Group. The top 10 to 15 feet of bedrock is referred to as Zone 1 which consists of gray dolomite, typically laminated, with minor bedding joints, stylolites, corals, and minor vugs. Near the bottom of Zone 1, a large (approximately 0.1-foot) dissolution parting and/or unloading

joint was noted in core from both holes. Loss of drill water was associated with the joint near the bottom of Zone 1 in both borings. Zone 2, underlying Zone 1, is characterized as massive and vuggy, with a few joints, and vertical fractures. Only the upper portion of Zone 2 was penetrated.

Baseline Groundwater Sampling

Sampling: One round of groundwater sampling was completed in a manner consistent with the methodology described in the NYSDEC-approved Work Plan for the Phase III Investigation (August 2003). All existing wells were sampled from September 18 through September 22, 2006. After completion and development, the two new wells were sampled on October 25, 2006. A total of 27 groundwater samples (12 shallow, and 15 deep) were collected and submitted for analysis. All samples were analyzed for volatile organic compounds (VOCs) by method 8260 (see results section for analyte list). Eight samples were analyzed for semi-volatile organic compounds (SVOCs) by method 8270 (see results section for analyte list); 20 samples were analyzed for methane, ethane and ethene; and 17 samples were analyzed for natural attenuation parameters.

The groundwater analytical data has been reviewed for usability. A report describing the QA/QC review and data usability is included as Attachment 2.

Shallow Groundwater Results: Analytical results for the September 2006 groundwater samples collected from overburden monitoring wells are summarized in Table 1. The concentrations of COCs for recent sampling rounds are plotted on Figure 2.

Results from previous rounds and the September 2006 groundwater sampling indicate that natural attenuation is effectively degrading the site COCs in the shallow groundwater. Since 2001, TCE concentrations have shown a decrease in the source area. Concentrations of DCE, VC, and ethene indicate that biodegradation may be part of the of degradation mechanisms. Samples from downgradient shallow wells have decreased or remained consistent, indicating that the degradation rate is sufficient to prevent further migration of the shallow plume.

Deep Groundwater Results: Analytical results for the September/October 2006 groundwater samples collected from bedrock monitoring wells are summarized in Table 2. The concentrations of the COCs are plotted in Figure 3. Based on these results, the extent or degree of impacts from COCs does not appear to have changed from previous sampling events.

As shown on Table 2 and Figure 3, analytical results from MW-7D (a new well) were similar to MW-4D, located approximately 100 feet to the north. Results from MW-21D were similar to MW-20D, located 100 feet to the east.

Results from the previous events and the September/October event indicate that natural attenuation is degrading the COCs in the deep groundwater. Since 2001, TCE concentrations have shown a decrease in the source area. Concentrations of DCE, VC and ethene indicate that biodegradation may be part of the degradation mechanisms. COC concentrations in the downgradient deep wells have decreased or remained consistent through time, indicating that the degradation rate is sufficient to prevent further migration of COCs in bedrock groundwater.

Hydrogeologic Testing

During drilling, after each core run, a packer test was conducted on the 5-foot section of open borehole. Transmissivity values were estimated by matching drawdown curves to a Theis (1935) curve. Due to subsurface conditions, drawdown for the various tests was highly variable as some intervals went dry during pumping, and others showed little response to pumping at the maximum rate. With the low recharge rate in some sections, only short portions of each test could be analyzed. Table 3 summarizes the test results. Because of the variable pumping rates and short test durations, the results are not considered robust; they are reported to only one significant digit, and storage coefficients were not calculated. The data will be further evaluated and, if appropriate, additional details and interpretations will be provided in the addendum to the RAR.

Borehole Geophysics

The results of the borehole geophysics were consistent with geological and hydrogeological findings. Figures 4 and 5 are the borehole logs, including features identified during testing. In both logs, the primary hydraulic feature is the large aperture identified at 22.1 feet below top of inner casing (BTOC) in MW-7D and at 28.3 feet in MW-21D. The full geophysical report is included as Attachment 3.

Treatability Testing

<u>Scope</u>: Two sets of microcosms are being evaluated as part of the treatability program; one for the source area, and one downgradient of the source area. Source zone microcosm tests utilized bedrock from MW-7D and groundwater from MW-4D. Downgradient microcosm tests utilized bedrock from MW-21D and groundwater from MW-20D. Bedrock and groundwater samples were composited separately upon receipt at the laboratory, and initially characterized for VOCs, methane, ethene, ethane, and total organic carbon (TOC). Groundwater samples were analyzed for geochemical parameters including nitrate, sulfate, total and dissolved iron, and alkalinity. Groundwater samples will be submitted to determine the number of Dehalococcoides ethenogenes (the bacteria related to complete degradation of DCE and VC to ethene) in the samples, as well as the presence of TCE and VC reductase genes. The rock sample was analyzed for total iron and TOC.

The following treatments have been prepared in triplicate for the source and downgradient microcosms:

1. Autoclaved control
2. Unamended control
3. SRS™ – an emulsified soybean oil product

4. SRS™ + Bioaugmentation
5. Emulsified Nanoscale Zero Valent Iron
6. Emulsified Microscale Zero Valent Iron
7. EHC® – zero valent iron and carbon

Preliminary Results: The microcosms were sampled at the start of the testing, and four weeks into the study. In both the source area and downgradient microcosms, COCs are decreasing in all treatments. Strong reducing conditions have been established in all tests. Preliminary results indicate that the initial degradation rates in the ZVI treatments are higher than the treatments using EHC® and the SRS™ products. The higher initial degradation rates for ZVI treatments were anticipated.

PRELIMINARY PILOT TEST SCOPE OF WORK

Objectives

This section discusses the focus and preliminary outline for a pilot test to evaluate one or more remedial technologies to address the site conditions. The final scope of work and tasks for the pilot test will be designed at the end of the laboratory testing program.

Shallow Groundwater: Based on site conditions and preliminary review of technologies, a bioreactor will be most effective in addressing the shallow groundwater. Given the size of the bioreactor a pilot field test is not anticipated at this time.

Deep Groundwater: Following completion of the laboratory treatability testing (February 2007), one of the technologies will be selected, and a refined pilot test scope of work will be submitted to the NYSDEC. The design will include specifics regarding the material selected, injection volumes, well spacing, and other design criteria.

The pilot test will be designed for the following primary objectives:

- Determine if the selected technology is suitable to achieve the Site remediation goals.
- Determine design parameters for full-scale implementation, and evaluate the potential adverse secondary effects (if any) to groundwater.

The current laboratory treatment tests are, in part, evaluating the first objective. However, the *in situ* pilot test will evaluate the field effectiveness of the selected treatment. The field pilot test will attempt to quantify the *in situ* degradation rate of COCs, including the preliminary accumulation of degradation COCs.

The second objective includes various aspects of the design such as:

- injection methodology and radius of influence;

- impacts to hydrogeology; and
- potential for solubility of heavy metals, generation of gases (e.g. methane, hydrogen or hydrogen sulfide), and other undesirable effects.

Scope of Work

The pilot test will be comprised of two components: (1) treatment application; and (2) performance monitoring. The treatment application involves all processes and monitoring related to the field application to specific sections of the bedrock groundwater. Performance monitoring includes the methods to assess the remedial technology.

Treatment application

Details of the treatment application design will be presented in the pilot test work plan. The treatment test design is anticipated to include:

- Injection wells/points.
- Monitoring wells placed upgradient, downgradient and side-gradient.
- Application or injection rates will be determined based on a combination of laboratory data and literature design criteria.
- Safety issues such as leaks, pressure build up, injection pressure flow-rates will be incorporated in the design.
- Tracers will be used as appropriate for additional monitoring and treatment evaluation.

Performance Monitoring

Details of the performance monitoring design will be presented in the pilot test work plan. The performance monitoring is anticipated to include:

- Monitoring wells located upgradient, within the treatment zone, and downgradient of the treatment zone. The network may include new wells and the existing monitoring wells (e.g. RMW-1D RMW-2D, RMW-3D RMW-4D, MW-7D and MW-20D).
- Quarterly monitoring will be conducted with geochemical parameters similar to the baseline parameters analyzed in September 2006. Site COCs and degradation parameters will be analyzed during each sampling round.
- Hydraulic parameters will be monitored to determine the effect of the substrate on formation permeability.

- Evaluation of the performance data will include changes in COC mass, geochemical parameters, and calculation of degradation rates.

ANTICIPATED SCHEDULE

An estimated schedule of field activities and report submittals is described below.

Task	Schedule
Completion of Treatability Testing	March 2007
Remedial Alternatives Addendum Report and Recommended Alternative Pilot Test Scope of Work	June 2007
Field Pilot Testing	Commence upon approval of Pilot Scope of Work by NYSDEC.
Completion of Pilot Program	To be determined based on final design program.

If you have any comments, questions, or concerns, please feel free to contact William B. Barber of Atlantic Richfield Company at (216) 271-8038.

Sincerely,

Mark S. Raybuck

Mark S. Raybuck
Project Manager

cc: S. Fiorenza, Atlantic Richfield
W. Hughes, Parsons
G. Hermance, Parsons
File: 442257 No. 2

TABLE 1
SUMMARY OF ANALYTICAL RESULTS
SHALLOW GROUNDWATER SAMPLING

Ekonol Facility		Sample ID:	MW-1S	MW-2S	MW-3S	MW-4S	MW-6S	MW-7S	MW-8S	MW-9S	MW-10S	MW-11S	MW-12S
Groundwater Analytical Results		Lab Sample Id:	6I19002-02	6I19002-04	6I19002-04	6I20016-02	6I22009-01	6I22009-06	6I22009-03	6I21002-07RE1	6I21002-03	6I21002-06	6I22009-02
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006		SDG:	6I19002	6I19002	6I19002	6I20016	6I22009	6I22009	6I22009	6I21002	6I21002	6I21002	6I22009
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/18/06	9/18/06	9/18/06	9/19/06	9/21/06	9/21/06	9/21/06	9/20/06	9/20/06	9/20/06	9/21/06
		Validated:											
CAS NO.	COMPOUND	UNITS:											
	VOLATILES												
75-01-4	vinyl chloride	ug/l	12	116000	ND	1530	267 D	ND	ND	212 D	40	158	136
75-35-4	1,1-dichloroethene	ug/l	ND	1080	ND	54	1	ND	ND	ND	ND	6	21
75-15-0	carbon disulfide	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	ND
75-09-2	methylene chloride	ug/l	ND	2010	ND	124	ND	ND	ND	ND	ND	22 B	ND
156-60-5	trans-1,2-dichloroethene	ug/l	5	3110	ND	50	ND	ND	ND	3	2	11	ND
75-34-3	1,1-dichloroethane	ug/l	ND	ND	ND	ND	11	ND	ND	ND	ND	49	140
156-59-2	cis-1,2-dichloroethene	ug/l	84	343000 D	9	11000 D	58	ND	ND	358 D	355 D	735	2210
71-55-6	1,1,1-trichloroethane	ug/l	ND	ND	ND	70	ND	ND	ND	ND	ND	33	1420
79-01-6	trichloroethene	ug/l	4	2170	ND	932	2	ND	ND	ND	12	31	3050
127-18-4	tetrachloroethene	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
74-82-8	Methane	ug/l	12	147	ND	71.4	185				11.3	85.8	52.2
74-84-0	ethane	ug/l	ND	28	ND	ND	48.3				ND	ND	ND
74-85-1	ethene	ug/l	ND	351	ND	ND	ND				ND	ND	ND
	SEMIVOLATILES												
108-95-2	Phenol	ug/l	ND	67		ND							
106-46-7	1,4-Dichlorobenzene	ug/l	ND	ND		ND							
95-50-1	1,2-Dichlorobenzene	ug/l	ND	ND		ND							
39638-32-9	bis(2-chloroisopropyl)ether	ug/l	ND	382 D		12							
95-48-7	2-Methylphenol	ug/l	ND	43		ND							
120-82-1	1,2,4-Trichlorobenzene	ug/l	ND	ND		ND							
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l	ND	15		ND							
62-53-3	Aniline	ug/l	ND	1420 D		64							
	METALS												
7440-38-2	Arsenic	mg/L	0.009	0.009	0.009	0.009	0.009				0.009	0.009	
7439-89-6	Iron	mg/L	3.1	13.2	3.1	0.278	0.578				3.95	1.83	
7439-96-5	Manganese	mg/L	0.374	2.67	0.416	0.583	0.675				0.153	0.355	
	OTHER												
NA	Total Organic Carbon	mg/L	2.1	11.7	3.5	3.4	3.5				2.4	2.9	
	WASTE CHARACTERISTICS												
NA	Nitrate as N	mg/L	1	1.7	1	1	1				1	1	
NA	Nitrite as N	mg/L	0.8	0.8	0.8	0.8	0.8				0.8	0.8	
NA	Chloride	mg/L	56.9	1280	1160	288	769				163	722	
148-08-798	Sulfate as SO4	mg/L	2580	1330	2590	3410	3700				766	2880	
	FIELD PARAMETERS												
	pH		7.35	6.77	7.1	7.01	7.02	7.01	7.25	6.87	7.42	7.03	6.79
	Spec. Cond.	mS/cm	3.92	5.65	6.15	5.58	0	5.29	7.75	6.33	2.07	5.17	3.41
	Turbidity	NTU	1.1	1.4	5.6	1.2	0	3	0	26.1	7.8	5.2	53.7
	DO	mg/L	0	0	0	0	5.91	0	0	0	0	0	0
	Temp.	^{o}C	17.6	20.8	19.1	16.1	16	17	17.4	15.5	14.5	15.2	15.99
	TDS	g/L	2.5	3.6	3.9	3.5	3.7	3.3	4.9	4	1.3	3.2	2.2
	ORP	mv	-156	-125	-97	-186	-68	-2	-49	-61	-222	-128	-159
	Alkalinity as ($CaCO_3$)	mg/L	280	150	360	75	460				320	300	
	Carbon Dioxide	mg/L	231	570	387	392	374				300	220	
	Ferrous Iron	mg/L	2.4	4.5	3.1	0.5	1				2.8	1.8	
	Manganese	mg/L	0.2	0.6	0.2	0	0				0	0.2	
	Hydrogen Sulfide	mg/L	0.1	0.1	0	1	0				0.3	0.1	

TABLE 2
SUMMARY ANALYTICAL RESULTS
DEEP GROUNDWATER SAMPLING

PRELIMINARY

Ekonol Facility		Sample ID:	RMW-1D	RMW-2D	RMW-3D	RMW-4D	MW-7D	MW-10D	MW-11D	MW-12D	MW-13D	MW-14D
Groundwater Analytical Results		Lab Sample Id:	6I19002-01	6I19002-03	6I20016-04	6I20016-01	6I22009-06	6I22009-04	6I21002-05	6I21002-08RE1	6I22009-07	6I21002-04
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006		SDG:	6I19002	6I19002	6I20016	6I20016	6I22009	6I22009	6I21002	6I21002	6I22009	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/18/06	9/18/06	9/19/06	9/19/06	10/25/06	9/21/06	9/20/06	9/20/06	9/21/06	9/20/06
		Validated:										
CAS NO.	COMPOUND	UNITS:										
	VOLATILES											
75-01-4	vinyl chloride	ug/l	ND	688	ND	526	96	111	ND	ND	261 D	ND
75-35-4	1,1-dichloroethene	ug/l	ND	65	22	88	24	9	ND	ND	2	ND
75-15-0	carbon disulfide	ug/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
75-09-2	methylene chloride	ug/l	ND	ND	ND	309	ND	19	32 B	ND	ND	ND
156-60-5	trans-1,2-dichloroethene	ug/l	ND	ND	ND	68	ND	ND	ND	ND	4	ND
75-34-3	1,1-dichloroethane	ug/l	ND	112	34	105	39	11	9	ND	26	ND
156-59-2	cis-1,2-dichloroethene	ug/l	6	8660	281	17400 D	7480	1320 D	257	ND	658 D	ND
71-55-6	1,1,1-trichloroethane	ug/l	ND	355	2500 D	308	309	28	315	ND	ND	ND
79-01-6	trichloroethene	ug/l	ND	10900	117	20800 D	18300	37	69	ND	9	ND
127-18-4	tetrachloroethene	ug/l	ND	159	28	514	501	ND	ND	ND	ND	ND
74-82-8	Methane	ug/l	204	111	31.3	65.9	15.7	49.9	24.3		17.7	
74-84-0	ethane	ug/l	69.9	20.5	ND	ND	ND	ND	ND		ND	
74-85-1	ethene	ug/l	ND	38.4	ND	25.3	ND	ND	ND		ND	
	SEMIVOLATILES											
108-95-2	Phenol	ug/l	ND	ND		ND						ND
106-46-7	1,4-Dichlorobenzene	ug/l	ND	ND		3						ND
95-50-1	1,2-Dichlorobenzene	ug/l	ND	ND		4						ND
39638-32-9	bis(2-chloroisopropyl)ether	ug/l	ND	15		30						ND
95-48-7	2-Methylphenol	ug/l	ND	3		5						ND
120-82-1	1,2,4-Trichlorobenzene	ug/l	ND	8		21						ND
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l	ND	2		ND						ND
62-53-3	Aniline	ug/l	ND	124		233 D						ND
	METALS											
7440-38-2	Arsenic	mg/L	0.009	0.009	0.009	0.009	ND	0.009	0.009		0.009	
7439-89-6	Iron	mg/L	0.083	0.162	0.437	0.083	3.61	0.63	0.147		0.37	
7439-96-5	Manganese	mg/L	0.096	0.219	0.279	0.217	0.247	0.259	0.227		0.135	
	OTHER											
NA	Total Organic Carbon	mg/L	1.3	2.6	2.8	3.2	3.3	2.4	3.8		3.5	
	WASTE CHARACTERISTICS											
NA	Nitrate as N	mg/L	1	1	1	1	ND	1	1		2.18	
NA	Nitrite as N	mg/L	0.8	0.8	0.8	0.8	ND	0.8	0.8		ND	
NA	Chloride	mg/L	250	251	201	218	182	203	173		543	
148-08-798	Sulfate as SO4	mg/L	1570	1500	1220	1210	857	1060	1660		1160	
	FIELD PARAMETERS											
	pH		6.95	7	7.03	6.9	7.13	6.89	6.96	6.9	6.71	6.98
	Spec. Cond.	mS/cm	3.3	2.74	2.57	2.72	2.14	2.27	2.87	0	3.53	273
	Turbidity	NTU	20.1	29.5	37.5	93	5	1.3	4.3	13.2	18.3	3.9
	DO	mg/L	0	0	0	0	0	0	0	0	0	0
	Temp.	^oC	16.45	17.01	15.12	15.22	14.44	15.55	13.07	15.48	12.96	13.61
	TDS	g/L	2.1	1.8	1.6	1.7	--	1.5	1.8	2	2.3	1.8
	ORP	mv	-354	-331	-269	-302	-170	-272	-266	-312	-261	-275
	Alkalinity as ($CaCO_3$)	mg/L	14	289	323	272	321	300	306		408	
	Carbon Dioxide	mg/L	185	515	209	266	90	148	258		240	
	Ferrous Iron	mg/L	0	0	0.25	0	0.3	0.9	0.1		0.25	
	Manganese	mg/L	0	0	0	0	0	0	0		0	
	Hydrogen Sulfide	mg/L	4	4	0.5	4	0.05	1.5	2		1.5	

TABLE 2
SUMMARY ANALYTICAL RESULTS
DEEP GROUNDWATER SAMPLING

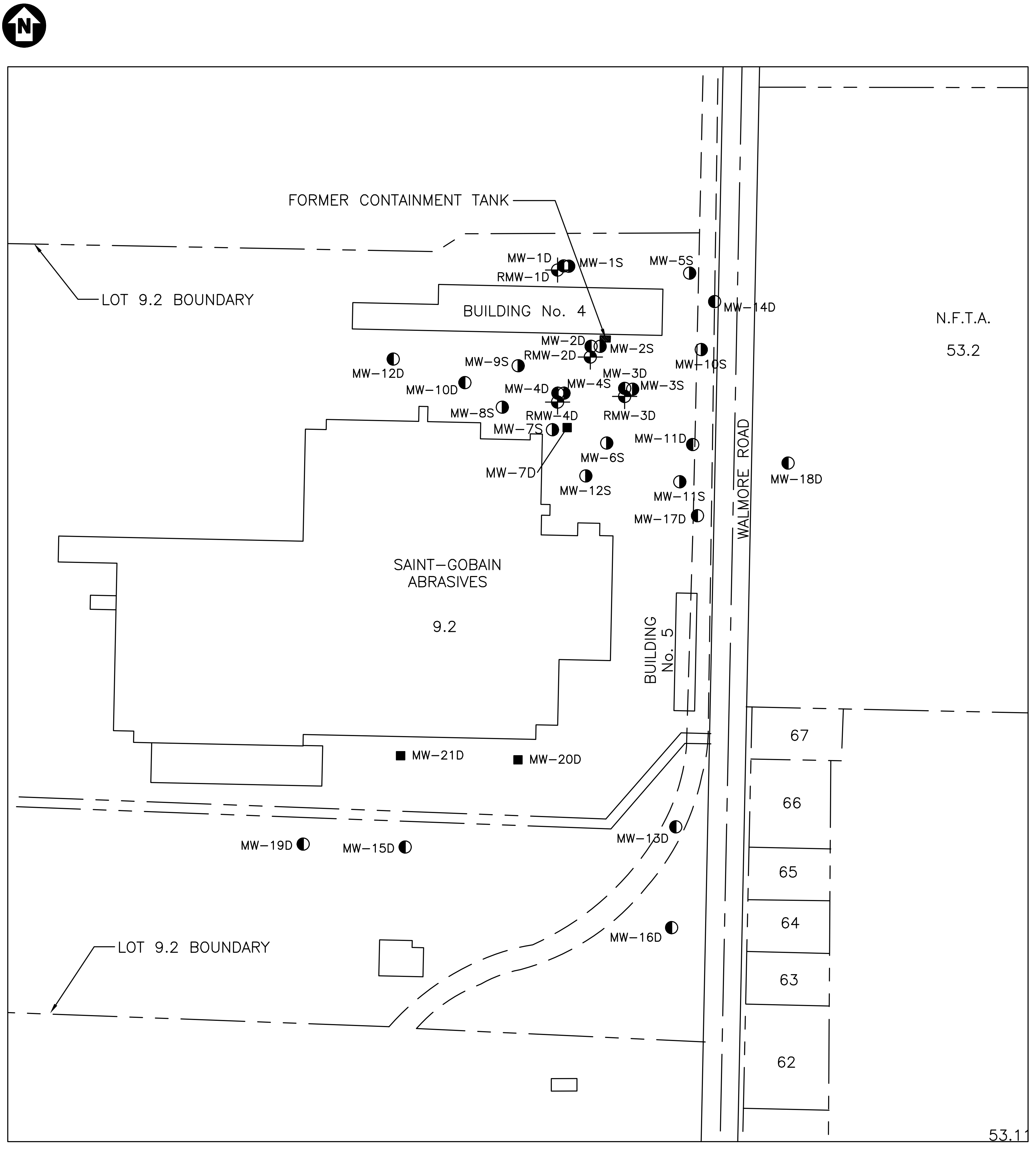
PRELIMINARY

Ekonol Facility		Sample ID:	MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D
Groundwater Analytical Results		Lab Sample Id:	6I21002-02	6I22016-04	6I22016-02	6I22016-03	6I22016-01	6I21002-01	6I21002-01
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006		SDG:	6I21002	6I22016	6I22016	6I22016	6I22016	6I21002	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/20/06	9/22/06	9/22/06	9/22/06	9/22/06	9/20/06	10/25/06
		Validated:							
CAS NO.	COMPOUND	UNITS:							
	VOLATILES								
75-01-4	vinyl chloride	ug/l	233	95	ND	ND	14	648	242
75-35-4	1,1-dichloroethene	ug/l	18	2	ND	ND	ND	108	24
75-15-0	carbon disulfide	ug/l	ND	ND	1	3	ND	ND	ND
75-09-2	methylene chloride	ug/l	ND	ND	ND	ND	ND	125	ND
156-60-5	trans-1,2-dichloroethene	ug/l	11	3	ND	ND	ND	ND	ND
75-34-3	1,1-dichloroethane	ug/l	38	6	ND	ND	1	177	22
156-59-2	cis-1,2-dichloroethene	ug/l	3000 D	545 D	4	ND	23	14800 D	3860
71-55-6	1,1,1-trichloroethane	ug/l	92	ND	4	ND	ND	885	30
79-01-6	trichloroethene	ug/l	ND	3	ND	ND	ND	ND	ND
127-18-4	tetrachloroethene	ug/l	ND	ND	ND	ND	ND	ND	ND
74-82-8	Methane	ug/l	10	11.2			ND	27.5	16.7
74-84-0	ethane	ug/l	ND	ND			ND	ND	ND
74-85-1	ethene	ug/l	ND	ND			ND	ND	ND
	SEMIVOLATILES								
108-95-2	Phenol	ug/l	ND					ND	
106-46-7	1,4-Dichlorobenzene	ug/l	ND					ND	
95-50-1	1,2-Dichlorobenzene	ug/l	ND					ND	
39638-32-9	bis(2-chloroisopropyl)ether	ug/l	ND					8	
95-48-7	2-Methylphenol	ug/l	ND					ND	
120-82-1	1,2,4-Trichlorobenzene	ug/l	ND					ND	
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l	ND					ND	
62-53-3	Aniline	ug/l	ND					ND	
	METALS								
7440-38-2	Arsenic	mg/L	0.009					0.009	ND
7439-89-6	Iron	mg/L	0.376					0.273	2.62
7439-96-5	Manganese	mg/L	0.149					0.282	0.284
	OTHER								
NA	Total Organic Carbon	mg/L	3					2.8	2.6
	WASTE CHARACTERISTICS								
NA	Nitrate as N	mg/L	1					1	ND
NA	Nitrite as N	mg/L	0.8					0.8	ND
NA	Chloride	mg/L	110					235	170
148-08-798	Sulfate as SO4	mg/L	924					1200	904
	FIELD PARAMETERS								
	pH		7.28	6.86	6.92	7.15	6.74	6.84	7.12
	Spec. Cond.	mS/cm	2.13	3.27	3.09	2.96	5.34	2.62	2.2
	Turbidity	NTU	3.2	20	12.1	55.2	37.1	7.2	7.6
	DO	mg/L	0	0	0	0	0	0	0
	Temp.	^oC	15.6	11.81	12.5	11.1	16.2	16.5	18.1
	TDS	g/L	1.4	2.1	2	1.7	3.4	1.7	--
	ORP	mv	-183	-222	-277	-206	-67	-101	-153
	Alkalinity as ($CaCO_3$)	mg/L	200					272	340
	Carbon Dioxide	mg/L	201					148	137
	Ferrous Iron	mg/L	0.5					0.2	1.8
	Manganese	mg/L	0					0	0
	Hydrogen Sulfide	mg/L	0.1					0.2-0.3	0.1

TABLE 3

SUMMARY OF HYDRAULIC TEST RESULTS

Well ID	Run	Depth Interval - Below Top of Rock	Pumping Rate (gpm)	Maximum Drawdown (feet)	Transmissivity (T) (ft^2/day)	Analytical Method
MW-7D	1	2' - 7'	0.19	14.6	0.2	Theis, 1935
MW-7D	2	7' - 12'	3.5	0.5	1000	Theis, 1935
MW-7D	3	12' - 17'	0.01	4	<1	see text
MW-21D	1	2' - 7'	0.13	14	0.5	Theis, 1935
MW-21D	2	7' - 12'	0.05	4	<1	see text
MW-21D	3	12' - 17'	2.8	0.1	200	Theis, 1935



LEGEND:

MW-1D	BEDROCK MONITORING WELL
MW-1S	OVERBURDEN MONITORING WELL
MW-21D	RECENT BEDROCK MONITORING WELL
RMW-1D	REPLACEMENT BEDROCK MONITORING WELL
	PROPERTY LINE
	RIGHT-OF-WAY

NOTE: LOCATIONS OF MW-7D AND MW-21D ARE APPROXIMATE

FIGURE 1

EKONOL POLYESTER
RESINS FACILITY
WHEATFIELD, NEW YORK

SITE PLAN AND
2006 WELL INSTALLATIONS

PARSONS
180 LAWRENCE BELL DRIVE, SUITE 104, WILLIAMSVILLE, N.Y. 14221, PHONE: 716-633-7074

PRELIMINARY

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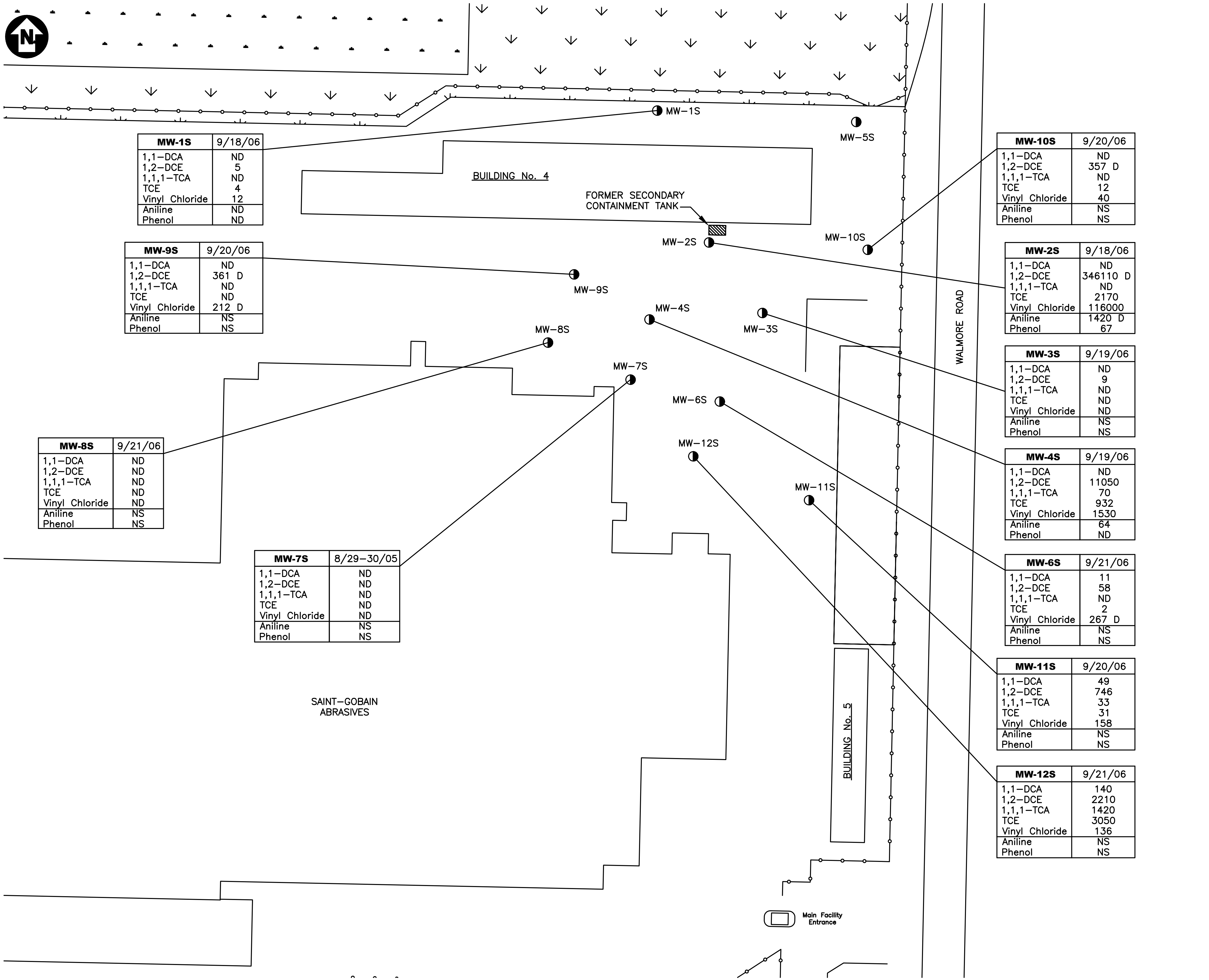

MW-1S	9/18/06
1,1-DCA	ND
1,2-DCE	5
1,1,1-TCA	ND
TCE	4
Vinyl Chloride	12
Aniline	ND
Phenol	ND

MW-9S	9/20/06
1,1-DCA	ND
1,2-DCE	361 D
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	212 D
Aniline	NS
Phenol	NS

MW-8S	9/21/06
1,1-DCA	ND
1,2-DCE	ND
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-7S	8/29-30/05
1,1-DCA	ND
1,2-DCE	ND
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-10S	9/20/06
1,1-DCA	ND
1,2-DCE	357 D
1,1,1-TCA	ND
TCE	12
Vinyl Chloride	40
Aniline	NS
Phenol	NS

MW-2S	9/18/06
1,1-DCA	ND
1,2-DCE	346110 D
1,1,1-TCA	ND
TCE	2170
Vinyl Chloride	116000
Aniline	1420 D
Phenol	67

MW-3S	9/19/06
1,1-DCA	ND
1,2-DCE	9
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-4S	9/19/06
1,1-DCA	ND
1,2-DCE	11050
1,1,1-TCA	70
TCE	932
Vinyl Chloride	1530
Aniline	64
Phenol	ND

MW-6S	9/21/06
1,1-DCA	11
1,2-DCE	58
1,1,1-TCA	ND
TCE	2
Vinyl Chloride	267 D
Aniline	NS
Phenol	NS

MW-11S	9/20/06
1,1-DCA	49
1,2-DCE	746
1,1,1-TCA	33
TCE	31
Vinyl Chloride	158
Aniline	NS
Phenol	NS

MW-12S	9/21/06
1,1-DCA	140
1,2-DCE	2210
1,1,1-TCA	1420
TCE	3050
Vinyl Chloride	136
Aniline	NS
Phenol	NS

LEGEND:

FENCE LINE

MW-1S EXISTING OVERBURDEN MONITORING WELL (SHALLOW)

GROUNDWATER DATA LEGEND:

1,1-Dichloroethane (1,1-DCA)	7.2 µg/L
Total 1,2-Dichloroethene (1,2-DCE)	18,000 µg/L
1,1,1-Trichloroethane (1,1,1-TCA)	13 µg/L
Trichloroethene (TCE)	110,000 µg/L
Vinyl Chloride	12,000 µg/L
Aniline	1,400 µg/L
Phenol	660 µg/L

"ND"= COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED
"J"= INDICATES AN ESTIMATED VALUE
"E"= CONCENTRATION EXCEEDED THE CALIBRATION RANGE
"D"= COMPOUND WAS IDENTIFIED IN AN ANALYSIS AT THE SECONDARY DILUTION FACTOR

120 60 0 120 240

FEET

FIGURE 2

EKONOL POLYESTER RESINS FACILITY
WHEATFIELD, NEW YORK

SHALLOW GROUNDWATER RESULTS – COCs (FALL 2006)

PARSONS

180 LAWRENCE BELL DRIVE, SUITE 104, WILLIAMSVILLE, N.Y. 14221, PHONE: 716-633-7074

PRELIMINARY

P:\442257\CAD\SK-442257-RAR2-SH_TAGS.dwg, 12/18/06, JWS
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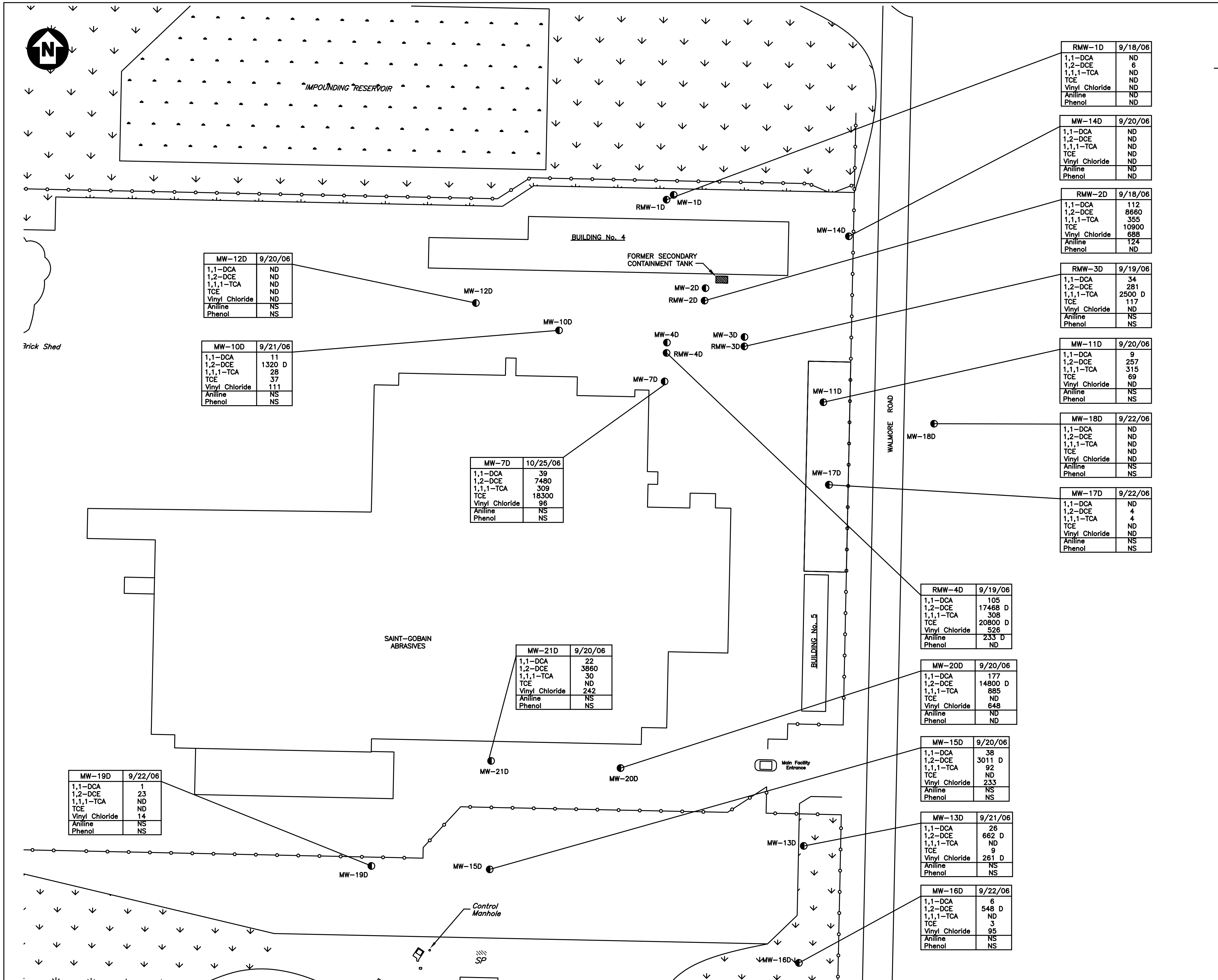

RMW-1D	9/18/06
1,1-DCA	ND
1,2-DCE	6
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	ND
Phenol	ND

MW-14D	9/20/06
1,1-DCA	ND
1,2-DCE	ND
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	ND
Phenol	ND

RMW-2D	9/18/06
1,1-DCA	112
1,2-DCE	8660
1,1,1-TCA	355
TCE	10900
Vinyl Chloride	688
Aniline	124
Phenol	ND

RMW-3D	9/19/06
1,1-DCA	34
1,2-DCE	281
1,1,1-TCA	2500 D
TCE	117
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-11D	9/20/06
1,1-DCA	9
1,2-DCE	257
1,1,1-TCA	315
TCE	69
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-18D	9/22/06
1,1-DCA	ND
1,2-DCE	ND
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-17D	9/22/06
1,1-DCA	ND
1,2-DCE	4
1,1,1-TCA	4
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-12D	9/20/06
1,1-DCA	ND
1,2-DCE	ND
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	ND
Aniline	NS
Phenol	NS

MW-10D	9/21/06
1,1-DCA	11
1,2-DCE	1320 D
1,1,1-TCA	28
TCE	37
Vinyl Chloride	111
Aniline	NS
Phenol	NS

MW-7D	10/25/06
1,1-DCA	39
1,2-DCE	7480
1,1,1-TCA	309
TCE	18300
Vinyl Chloride	96
Aniline	NS
Phenol	NS

MW-21D	9/20/06
1,1-DCA	22
1,2-DCE	3860
1,1,1-TCA	30
TCE	ND
Vinyl Chloride	242
Aniline	NS
Phenol	NS

MW-19D	9/22/06
1,1-DCA	1
1,2-DCE	23
1,1,1-TCA	ND
TCE	ND
Vinyl Chloride	14
Aniline	NS
Phenol	NS

RMW-4D	9/19/06
1,1-DCA	105
1,2-DCE	17468 D
1,1,1-TCA	308
TCE	20800 D
Vinyl Chloride	526
Aniline	233 D
Phenol	ND

MW-20D	9/20/06
1,1-DCA	177
1,2-DCE	14800 D
1,1,1-TCA	885
TCE	ND
Vinyl Chloride	648
Aniline	ND
Phenol	ND

MW-15D	9/20/06
1,1-DCA	38
1,2-DCE	3011 D
1,1,1-TCA	92
TCE	ND
Vinyl Chloride	233
Aniline	NS
Phenol	NS

MW-13D	9/21/06
1,1-DCA	26
1,2-DCE	662 D
1,1,1-TCA	ND
TCE	9
Vinyl Chloride	261 D
Aniline	NS
Phenol	NS

MW-16D	9/22/06
1,1-DCA	6
1,2-DCE	548 D
1,1,1-TCA	ND
TCE	3
Vinyl Chloride	95
Aniline	NS
Phenol	NS

LEGEND:

FENCE LINE

MW-1D EXISTING BEDROCK MONITORING WELL (DEEP)

GROUNDWATER DATA LEGEND:

1,1-Dichloroethane (1,1-DCA)	7.2 µg/L
Total 1,2-Dichloroethene (1,2-DCE)	18,000 µg/L
1,1,1-Trichloroethane (1,1,1-TCA)	13 µg/L
Trichloroethene (TCE)	110,000 µg/L
Vinyl Chloride	21 µg/L
Aniline	1,400 µg/L
Phenol	660 µg/L
Lead	0.15 mg/L
Zinc	0.12 mg/L

"ND"= COMPOUND WAS ANALYZED FOR, BUT NOT DETECTED
"J"= INDICATES AN ESTIMATED VALUE
"E"= CONCENTRATION EXCEEDED THE CALIBRATION RANGE
"D"= COMPOUND WAS IDENTIFIED IN AN ANALYSIS AT THE SECONDARY DILUTION FACTOR
"B"= THE ANALYTE WAS FOUND IN THE ASSOCIATED BLANK, AS WELL AS IN THE SAMPLE
* = DISSOLVED CONCENTRATION STANDARD
"NS"= COMPOUND WAS NOT SAMPLED FOR

NOTE: LOCATIONS OF MW-7D AND MW-21D ARE APPROXIMATE

140 70 0 140 280

FEET

PRELIMINARY

FIGURE 3

EKONOL POLYESTER RESINS FACILITY
WHEATFIELD, NEW YORK

BEDROCK GROUNDWATER RESULTS – COCs (FALL 2006)

PARSONS
180 LAWRENCE BELL DRIVE, SUITE 104, WILLIAMSVILLE, N.Y. 14221, PHONE: 716-633-7074

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No XREFs

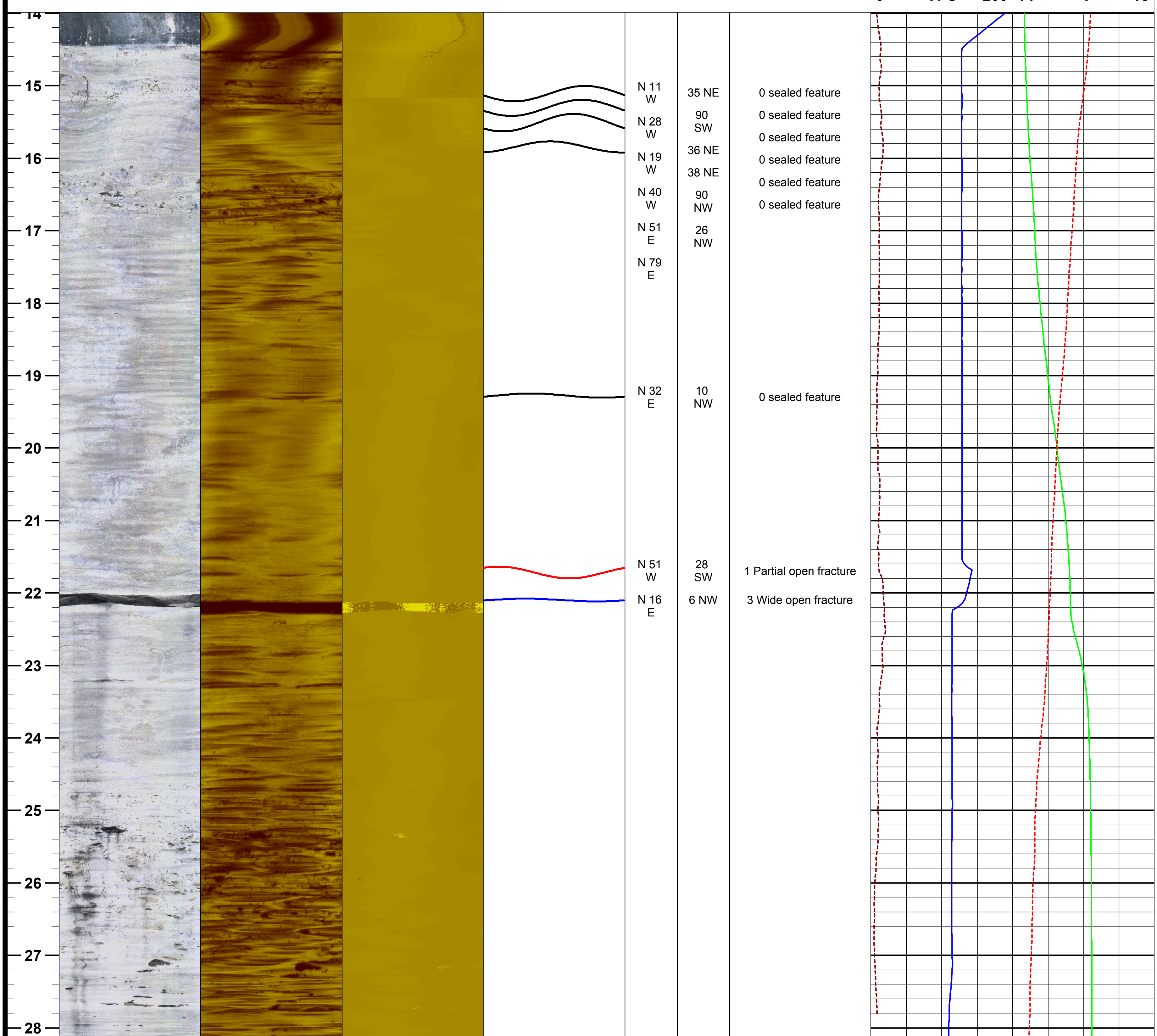
Mid-Atlantic Geosciences	WELL ID	Logging Date: 10-24-2006
Title: 080613-MW7D	MW-7D	Logging Datum: TOC
		BOC: 14.4' DTW: 5.53' TD: 28.25

Site Name:
Location: Niagara Falls, NY

Client: Parsons
Project No.: 080613

Revision Date: 10-25-2006

Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Feature	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° 0 255	0° 90° 180° 270° 0° 0 100 ns 3000	0° 90° 180° 270° 0°				3 INCH 4	0 uS/cm 4000
								Natural Gamma	Fluid Temperature
								0 CPS 200	14 °C 18



								Natural Gamma	Fluid Temperature
								0 CPS 200	14 °C 18
Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Feature	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° 0 255	0° 90° 180° 270° 0° 0 100 ns 3000	0° 90° 180° 270° 0°				3 INCH 4	0 uS/cm 4000

FIGURE 4

EKONOL POLYESTER RESINS FACILITY
WHEATFIELD, NEW YORK

BORHOLE GEOPHYSICAL LOG
MW-7D

PARSONS
180 Lawrence Bell Drive Suite 104, Willimasville, NY 14221

Mid-Atlantic Geosciences

Title: *080613-MW21D*

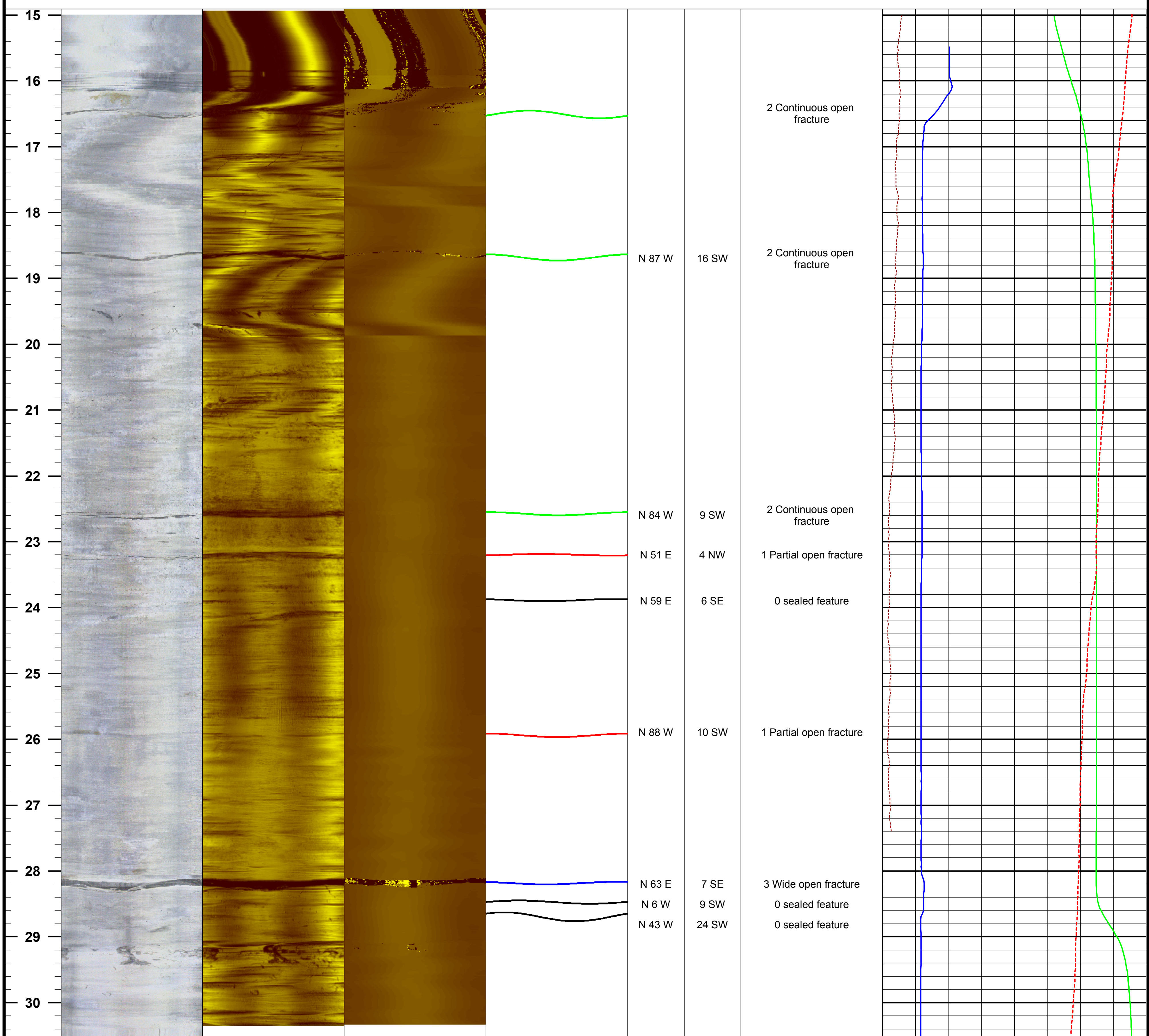
WELL ID *MW-21D*

Logging Date: *10-24-2006*
Logging Datum: *TOC*
BOC: *16.1'* **DTW:** *5.65'* **TD:** *30.5*

Site Name:
Location: *Niagara Falls, NY*

Client: *Parsons*
Project No.: *080613*
Revision Date: *10-25-2006*

Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° 0 188	0° 90° 180° 270° 0° 1255 100 ns 2550	0° 90° 180° 270° 0°				3 INCH 5	0 uS/cm 3000
								Natural Gamma	Fluid Temperature
								0 CPS 200	17 °C 19



Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
								Natural Gamma	Fluid Temperature
								0 CPS 200	17 °C 19
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° 0 188	0° 90° 180° 270° 0° 1255 100 ns 2550	0° 90° 180° 270° 0°				3 INCH 5	0 uS/cm 3000

FIGURE 5

EKONOL POLYESTER RESINS FACILITY
WHEATFIELD, NEW YORK

BORHOLE GEOPHYSICAL LOG
MW-21D

PARSONS
180 Lawrence Bell Drive Suite 104, Willimasville, NY 14221

ATTACHMENT 1

PARSONS
DRILLING RECORD

BORING NO. MW-7D

Contractor: GeoLogic, NY (Northstar Drilling)
Driller: S. Breeds
Inspector: J. Schuetz
Rig Type: CME-55
Method: 6.25 HSA and HQ core

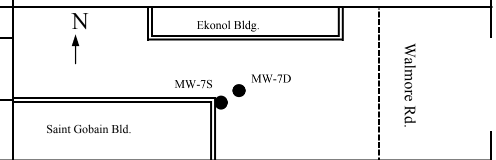
PROJECT NAME BP/Ekonol Facility
PROJECT NUMBER 442257

Location: Near MW-7s and RMW-4D
Elevation:

Weather Variable

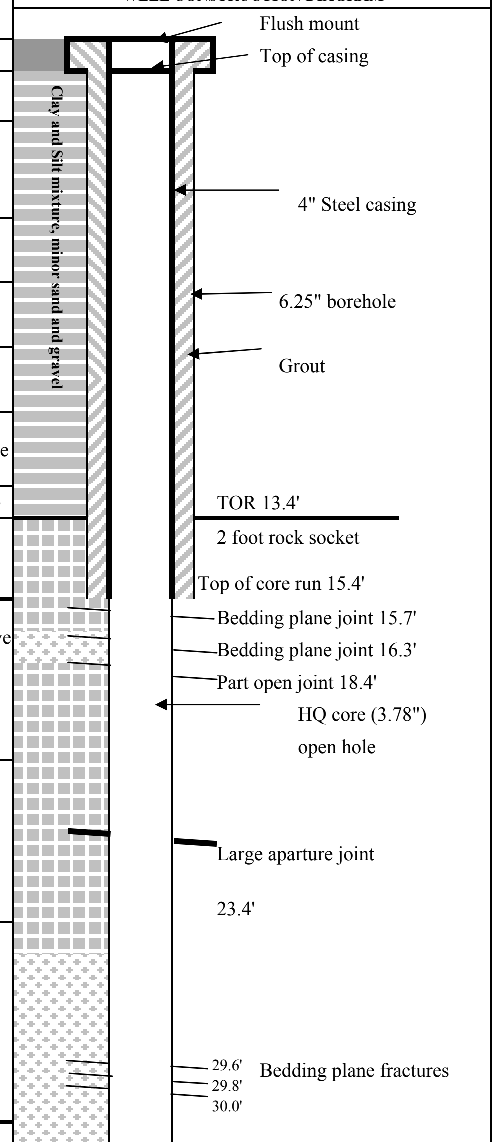
Date/Time Start Boring 9/23/06 1200

Date/Time Finish Coring 10/3/06 14:00



FID Reading	Sample Interval (ft)	Depth ft	Rec. (%)	SPT	FIELD IDENTIFICATION OF MATERIAL
0.0		1			0 - 0.9: Pavement and concrete
		2			0.9 - 1.8: Moist, stiff, brown, red-brown slightly mottled. CLAY and Silt, trace Sand (coarse) CL/OL
		3			1.8 - 2.3: Moist, dark gray, dark green gray, Clay and Silt, organic. OL
0.0		4			2.3 - 5.5: Moist, stiff (very) Brown, red brown green-gray mottled Clay and Silt, trace Gravel (fine to coarse). CL
		5			
0.0	5-7	6	6.5	4/5	Moist, stiff, mottled, brown, red-brown, green-gray CLAY, some Silt. CL
		7		7/7	
0.0	7-9	8	100	14/12	Same as above - CL
		9		14/12	
0.0	9-11	10	100	2/3	Dry-moist, medium stiff, red-brown, brown (mottled) CLAY little Silt, trace Gravel (fine to coarse) laminated. CL
		11		3/4	
0.0	11-13	12	80	9/7	Upper 1 foot: Same as above.
		13		11/12	Lower 1 foot: wet, stiff, red brown, Clay and Silt, trace Sand (fine to coarse), trace Gravel (fine - coarse). CL
0.0	13-15	14	100	50/.4	Moist, hard, red, red-brown, gray Clay and Silt, trace Gravel (coarse). Rock chips
		15			
HQ Core	**Range (ft)**	**Depth (ft)**	**Rec. (%)**	**RQD (%)**	
1	15.4-20.4	16	100	94	Gray, dolomite. joint at 0.3' and 0.9, upper 0.0-1.0' vugged, 1-5mm (crystalized) calcite dolomite vugs. Bedding planes and stylolitic joints at ~ 15 degree. Massive sections, laminated, fine grained, small vugged porosity. Vugged zone 1.8-2.3. Packer test went dry formation will not sustain 0.25 GPM Bedding plane joints are: rough, undulating, tight.
		17			
		18			
		19			
		20			
2	20.4-25.4	21	NS	NS	20.4-25.4': No log due to sampling for treatabiltiy testing. 6" section recovered is: gray dolomite, fine grained, crystaline at drilling breaks, minor stylolitic horizons. Cost circulation at 23.4', Drill rods dropped 0.1', rough drilling. joint at 23.4' looked similar in size as the joint at MW-21D. Large apperature fracturing. Formation sustained 5 GPM during packer testing.
		22			
		23			
		24			
3	25.4-30.4	25	100	78	25.4 - 26.1': Dolomite, very small vugs causing a fine porosity (although it may not contribute to effective porosity), crystalized, some vugs. One larger vug infilled w/ gypsum. 26.1 - 29.3': increasing vugs in size and accurance, dolomite crystals 3-5 mm diameter. 27.01 - 28.4': Dolomite with coral fossils and small vugs. 29.3 - 30.4': massive gray dolomite, 3 natural breaks, tight, slightly undulating, fairly smooth. Formation went dry during packer testing at < 1 GPM.
		26			
		27			
		28			
		29			
		30			
					Total Depth 30.4'

WELL CONSTRUCTION DIAGRAM



STANDARD PENETRATION

TOR= TOP OF ROCK

SUMMARY:

TOR was determined at HSA auger refusal.
NS: not sampled (or calculated) due to sampling of core for treatabilty testing.
SAA: Same as above
HAS Hollow stem auger

C:\projects\ekonol\WP\rarp2\pdf\mw7d and 21d drill logs.xls

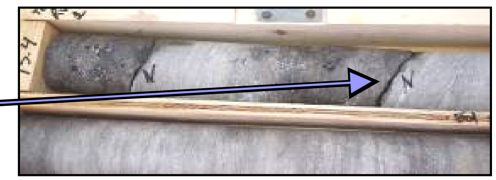
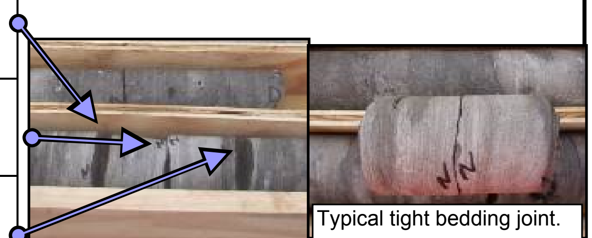
PARSONS

DISCONTINUITY REPORT

PRELIMINARY

CLIENT BP
PROJECT EKONOL
Rock type Dolomite - Lockport group (possibly Lower Guelph and upper Eramosa members)

JOB NO. 442257
HOLE NO. MW-7D
SHEET NO. 1 OF 1

DEPTH (FT.)	CORE RUN #	DISCONTINUITY				DESCRIPTION																						MUTUAL ANGLE	PHOTOGRAPHS
		JOINT	FRACTURE	BEDDING PLANE	DISSOLUTION JOINT		TIGHT	PART OPEN	OPEN	RE-HEALED		SLT. WEATH'D	MOD. WEATH'D	HIGH WEATH'D		SMOOTH	ROUGH	PLANAR	UNDULATING	IRREGULAR	FILLING	STAINING	BLEACHING	STYLOLITE (litic)					
15.7	1	√		√			√										√		√									~15°	
16.3	1	√		√				√									√		√									~15°	
18.4	1	√		√			√										√			√								NA	
23.4	2	√		√	√				√					√		√			√									NA	No photo due to sampling for treatability testing.
29.6	3	√		√			√										√			√								< 5°	 Typical tight bedding joint.
29.8	3	√		√			√										√			√								< 5°	
30	3	√		√			√										√			√								< 5°	

Comments:
Due to sampling procedures, accurate discontinuity description not attainable for Run 2
In photographs: D = drilling break, N = natural break

NA - Not applicable, due to size of joint or sampling procedures

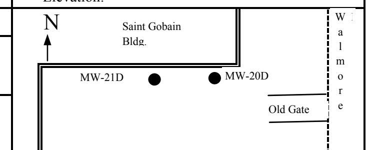
PARSONS
DRILLING RECORD

BORING NO. MW-21D

Contractor: GeoLogic, NY (Northstar Drilling)
Driller: S. Breeds
Inspector: J. Schuetz
Rig Type: CME-55
Method: 6.24 HSA and HQ Core

PROJECT NAME BP/Ekonol Facility
PROJECT NUMBER 442257

Location: Southside Saint G.
Elevation:



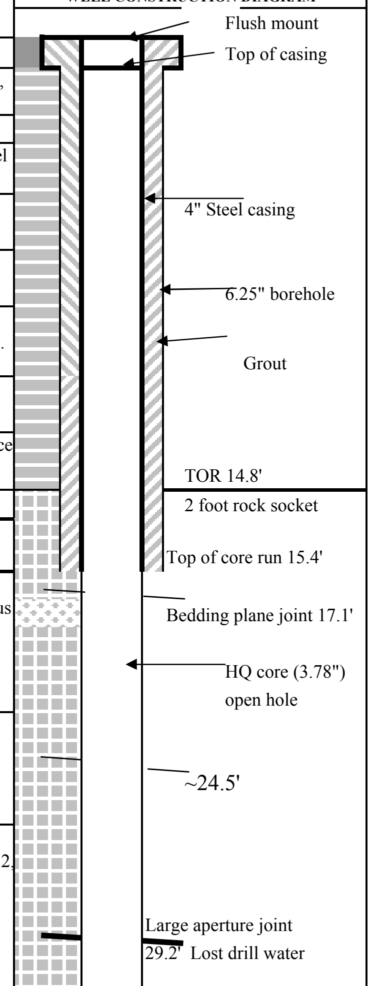
Weather Variable

Date/Time Start Coring 9/26/06 8:15

Date/Time Finish Coring 10/3/2006 13:45

FID Reading	Sample Interval (ft)	Depth (ft)	Rec. (%)	SPT	FIELD IDENTIFICATION OF MATERIAL
0.0		1			0.5' concrete
		2			Moist, stiff, brown-gray CLAY and Silt, trace Gravel, trace Sand (coarse) lenses of organics, drop stones.
1.1		3			Moist, stiff, mottled dark gray, green gray, CLAY and Silt, organics, fine roots. OL
1.1		4			2.3 - 5.5': Moist, stiff (very) brown, red brown green-gray mottled Clay and Silt, trace Gravel (fine to coarse). CL
0.0	5-7	5	80%	5/5	Moist, very stiff, mottled brown, gray Clay and Silt, trace Gravel (drop stones). CL
		6		6/7	
0.0	7-9	7	95%	11/8	Moist, same as above. Potential vadose zone clay joints, sand mixed with clay in shoe. ML
		8		8/11	
0.0	9-11	9	100%	5/5	Upper 0.8': Dry, stiff, gray brown, red, Clay and Silt, trace Coarse Sand. ML
		10		6/6	Lower 1.1': Moist, stiff, red brown, Silt, little Sand (fince to coarse), little Clay, trace Gravel. ML
0.0	11-13	11	90%	5/5	Wet, stiff, red brown, Silt, little Sand (fine-coarse), little Clay, trace Gravel. ML
		12		5/7	
0.0	13-15	13	65%	15/14	Moist-wet, very stiff, brown-red, Silt some Gravel (fine-coarse) little Sand (fine-coarse), trace Clay. ML
		14		10/50/.3	
		15			Spoon refusal at 14.8'
HQ Core	**Range (ft)**	**Depth (ft)**	**Rec. (%)**	**RQD (%)**	
1	16.8-21.8	17	100	41	Lockport dolomite, light gray, gray, fine texture, irregular bedding planes (styololitic-like), discontinities along bedding planes. 10-20% dip to bedding planes, 1.1 ft section of numerous vugs (<1 mm-5mm). Few veritcal joints, infilled, non-continuous. Bedding joints are rough and undulating with surficial mineralization.
		18			
		19			
		20			
		21			
2	21.8-26.8	22	100	NA	All core except 5" sent for treatability testing. Lockport dolomite, light gray, fine texture, massive, fine porosity (<0.5 mm). One tight joint w/ calcite or dolomite crystalization.
		23			
		24			
		25			
3	26.8-31.8	26	100	100	26.8 - 28.8': Lockport dolomite, masive, fine grained fine porosity, no natural breaks.
		27			28.8 - 29.9': dolomite, gray, stylolitic horizons, minor vugs near bottom, nature joint at ~ 29.2, slightly undulating, smooth presumably large apperature.
		28			29.7 - 31.8': dolomite, gray, fine grained, minor bedding planes, vug partially filled and completely filled with dolomite, calcite and gypsum.
		29			5-10 cm to <1 mm in size
		30			
		31			
		32			
					Total depth 31.8'

WELL CONSTRUCTION DIAGRAM



STANDARD PENETRATION

TOR= TOP OF ROCK

SUMMARY:

TOR was determined at HSA auger refusal.

NS: not sampled (or calculated) due to sampling of core for treatabilty testing.

SAA: Same as above

HAS Hollow stem auger

PARSONS

DISCONTINUITY REPORT

PRELIMINARY

CLIENT BP

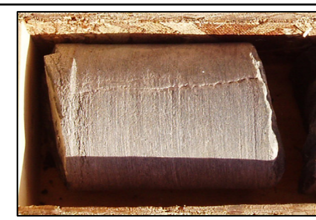
PROJECT EKONOL

Rock type Dolomite - Lockport group (possibly Lower Guelph and upper Eramosa members)

JOB NO. 442257

HOLE NO. MW-21D

SHEET NO. 1 OF 1

DEPTH (FT.)	CORE RUN #	DISCONTINUITY					DESCRIPTION																						MUTUAL ANGLE	PHOTOGRAPHS
		JOINT	FRACTURE	BEDDING PL	DISSOLUTION JOINT	VERTICAL		TIGHT	PART OPEN	OPEN	REHEALED		SLT. WEATH'D	MOD. WEATH'D	HIGH WEATH'D		SMOOTH	ROUGH	PLANAR	UNDULATING	IRREGULAR	FILLING	STAINING	BLEACHING	STYLOLITE (litic)					
17.5, 19.0	1	√		√				√					√					√											~15°	 Several joints identified, but not formally logged due to rock sampling procedures. Picture is of a "typical" joint of this type.
	2	√				√		√			√						√					√							85	 Specific depth unknown due to sampling procedures
23.5	2	√		√	√			√										√		√									NA	No photograph, "typical" photograph above.
29.2	3	√		√	√					√					√		√		√										~15°	

Comments:
Do to sampling procedures accurate discontinuity description not attainable for Run 2
In photographs: D = drilling break, N = natural break

NA - Not applicable, due to size of joint or sampling procedures

ATTACHMENT 2

DATA USABILITY SUMMARY REPORT

EKONOL FACILITY

Prepared For:

Group Environmental Management Company

4850 East 49th Street
MBC 3-147
Cuyahoga Heights, Ohio 44125

Prepared By:

PARSONS

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Williamsville, New York 14221
Phone: (716) 633-7074
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DECEMBER 2006

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SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected from the Ekonol site in Wheatfield, New York from September 18, 2006 through October 25, 2006. Analytical results from these samples were reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs).

The analytical laboratory for this project was Waste Stream Technology.

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 53 days on average for the Ekonol samples. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, properly preserved, shipped under a COC record, and received at the laboratory within one day of sampling. All samples were received intact and in good condition.

1.3 LABORATORY ANALYTICAL METHODS

The groundwater samples collected from the Ekonol site were analyzed for volatile organic compounds (VOCs) including methane, ethane, and ethene, semivolatile organic compounds (SVOCs), arsenic, iron, manganese, chloride, nitrate, nitrite, sulfate, and total organic carbon (TOC). Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1 through 1.3.4. The data qualifications resulting from the data review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 Volatile Organic Analysis

The groundwater samples collected from the Ekonol site were analyzed for VOCs using the NYSDEC ASP 8260B analytical method. In addition, the groundwater samples were analyzed for methane, ethane, and ethene using the USEPA approved RSK-174 analytical method. Certain reported results for the VOC samples were considered estimated due to noncompliant laboratory control sample recoveries and field duplicate precision. Therefore, the reported VOC and methane, ethane, and ethene analytical results were 100% complete (i.e., usable) based upon the groundwater data presented. PARCC requirements were met overall.

1.3.2 Semivolatile Organic Analysis

The groundwater samples collected from the Ekonol site were analyzed for SVOCs using the NYSDEC ASP 8270C analytical method. Certain reported SVOC results were considered estimated due to noncompliant laboratory control sample recoveries and matrix spike/matrix spike duplicate recoveries. Certain reported SVOC results were considered unusable and qualified "R" due to noncompliant laboratory control sample recoveries and matrix spike/matrix spike duplicate recoveries. Therefore, the reported SVOC analytical results were 98.4% complete (i.e., usable) based upon the groundwater data presented. PARCC requirements were met overall.

1.3.3 Arsenic, Iron, and Manganese Analysis

The groundwater samples collected from the Ekonol site were analyzed for arsenic, iron, and manganese using the NYSDEC ASP 200.7 analytical method. Certain reported metals results were considered estimated due to field duplicate precision. Therefore, the reported metals analytical results were 100% complete (i.e., usable) based upon the groundwater data presented. PARCC requirements were met overall.

1.3.4 Other Parameters

The groundwater samples collected from the Ekonol site were analyzed for chloride, nitrate, nitrite, sulfate, and TOC using the NYSDEC ASP 300.1 and 415.1 analytical methods. Holding times, laboratory blanks, matrix spike/matrix spike duplicate, laboratory duplicate precision, laboratory control samples, and field duplicate precision were reviewed for compliance. The reported results for these parameters did not require qualification resulting from data validation. Therefore, the reported analytical results for these parameters were 100% complete (i.e., usable) based upon the groundwater data presented. PARCC requirements were met overall.

SECTION 2

DATA VALIDATION REPORT

2.1 GROUNDWATER

Data review has been completed for data packages generated by Waste Stream Technology containing groundwater samples collected from the Ekonol site. The specific samples contained in these data packages, the analyses performed, and a usability summary are presented in Table 2.1-1. All of these samples were properly preserved, shipped under a COC record, and received intact by the analytical laboratory. The validated laboratory data are presented in Attachment A.

Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs and the NYSDEC ASP for organic and inorganic data review. This data validation and usability report is presented by analysis type.

2.1.1 Volatiles Including Methane, Ethane, and Ethene

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and trip blank contamination
- Field duplicate precision
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of LCS recoveries, blank contamination, and field duplicate precision.

<u>LCS Recoveries</u>

All LCS recoveries were compliant and within QC acceptance limits with the exception of the low vinyl acetate recoveries in the LCSs associated with samples RMW-1D, MW-1S, TRIP BLANK (9/18/06), RMW-3S, TRIP BLANK (9/19/06), RMW-4D, RMW-401, RMW-3D, MW-4S, samples collected on 9/20/06, MW-19D, MW-18D, MW-17D, and samples collected on 10/25/06. Therefore, the vinyl acetate results for these samples which were nondetects, were considered estimated, possibly biased low, and qualified "UJ".

Blank Contamination

The field QC TRIP BLANK (9/18/06) associated with samples collected on 9/18/06 contains methylene chloride at 2 μg/L; the laboratory blank AI62204-BLK1 contains methylene chloride at a concentration of 4.9 μg/L associated with samples TRIP BLANK (9/18/06), RMW-1D, MW-1S, RMW-3S, and TRIP BLANK (9/19/06); the laboratory blank AI62505-BLK1 contains methylene chloride at a concentration of 4.8 μg/L associated with samples RMW-2D, MW-2S, RMW-4D, MW-4S, RMW-3D, MW-20D, MW-14D, MW-11D, MW-11S, and TRIP BLANK (9/20/06); and the laboratory blank AI62802-BLK1 contains methylene chloride at a concentration of 3.2 μg/L associated with samples collected on 9/21/06 and MW-16D. Therefore, all methylene chloride results less than validation action concentrations associated with these samples were considered not detected and qualified "U".

Field Duplicate Precision

All field duplicate results were considered acceptable with the exception of the trans-1,2-dichloroethene results for the field duplicate pair RMW-4D (68 μg/L) and RMW-401 (nondetect). Therefore, these results were considered estimated with the positive result qualified "J" and the nondetected result qualified "UJ".

Usability

All volatile groundwater sample results including methane, ethane, and ethene were considered usable following data review.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile groundwater data presented were 100% (i.e., usable) based upon the data package provided. It was noted that calibrations, instrumentation performance, internal standard responses, quantitation limits, and sample results were not verified. The validated volatile laboratory data are tabulated and presented in Attachment A.

2.1.2 Semivolatiles

The following items were reviewed for compliancy in the semivolatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- MS/MSD precision and accuracy
- LCS recoveries
- Laboratory method blank contamination
- Field duplicate precision

- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy and LCS recoveries.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were compliant and within QC acceptance limits with the exception of the low accuracy results for bis(2-chloroisopropyl)ether (7.92%R/13.2%R; QC limit 64-115%R), benzidine (0%/0%), and 2-chloronaphthalene (62.5%R/63.9%R; QC limit 65-110%R) during the spiked analyses of RMW-4D. Therefore, the results for bis(2-chloroisopropyl)ether and 2-chloronaphthalene for this sample were considered biased low with the positive result qualified "J" and the nondetected result qualified "UJ". However, the nondetected benzidine result was considered unusable and qualified "R" for the unspiked sample RMW-4D due to an extremely low recovery for this compound.

LCS Recoveries

All LCS recoveries were compliant and within QC acceptance limits with the exception of the LCS recoveries for benzoic acid (0%R), indeno(1,2,3-cd)pyrene (116%R; QC limit 67-106%R), dibenz(a,h)anthracene (119%R; QC limit 67-107%R), and benzo(g,h,i)perylene (116%R; QC limit 62-110%R) associated with all samples. Validation qualification was not warranted for indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene since these compounds were not detected. However, the nondetected benzoic acid results for all samples were considered unusable and qualified "R since benzoic acid was not recovered in the LCS.

It was noted that aniline was not spiked in the LCS. Therefore, all aniline results were considered estimated with positive results qualified "J" and nondetected results qualified "UJ".

Usability

All semivolatile groundwater sample results were considered usable following data review with the exception of certain nondetected results due to poor MS/MSD recoveries and LCS recoveries.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The semivolatile groundwater data presented were 98.4% complete (i.e., usable) based upon the groundwater data package provided. It was noted that calibrations, instrument performance, internal standard responses, quantitation limits, and sample results were not verified. The validated semivolatile laboratory data are tabulated and presented in Attachment A.

2.1.3 Arsenic, Iron, and Manganese

The following items were reviewed for compliancy in the metals analysis:

- Custody documentation
- Holding times
- Laboratory preparation blank contamination
- Matrix spike recoveries
- Laboratory duplicate precision
- Field duplicate precision
- Laboratory control sample
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of field duplicate precision.

Field Duplicate Precision

All field duplicate results were considered acceptable with the exception of the iron results for the field duplicate pair RMW-4D (nondetect) and RMW-401 (0.098 mg/L). Therefore, these results were considered estimated with the positive result qualified "J" and the nondetected result qualified "UJ".

Usability

All metals sample results were considered usable following data review.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The metals data presented were 100% complete (i.e., usable) based upon the data package provided. It was noted that calibrations, instrument performance, quantitation limits, and sample results were not verified. The validated groundwater laboratory data are tabulated and presented in Attachment A.

TABLE 2.1-1

SUMMARY OF SAMPLE ANALYSES AND USABILITY
EKONOL - GROUNDWATER

SAMPLE ID	MATRIX	SAMPLE DATE	VOCs	METHANE, ETHANE, ETHENE	SVOCs	METALS	OTHER	FOOTNOTES
MW-1S	WATER	9/18/06	OK	OK	NO	OK	OK	1
MW-2S	WATER	9/18/06	OK	OK	NO	OK	OK	1
TRIP BLANK	WATER	9/18/06	OK					
RMW-1D	WATER	9/18/06	OK	OK	NO	OK	OK	1
RMW-2D	WATER	9/18/06	OK	OK	NO	OK	OK	1
MW-4S	WATER	9/19/06	OK	OK	NO	OK	OK	1
RMW-401	WATER	9/19/06	OK	OK	NO	OK	OK	1
RMW-4D	WATER	9/19/06	OK	OK	NO	OK	OK	1
RMW-3D	WATER	9/19/06	OK	OK		OK	OK	
TRIP BLANK	WATER	9/19/06	OK					
RMW-3S	WATER	9/19/06	OK	OK		OK	OK	
MW-20D	WATER	9/20/06	OK	OK	NO	OK	OK	1
MW-15D	WATER	9/20/06	OK	OK	NO	OK	OK	1
MW-10S	WATER	9/20/06	OK	OK		OK	OK	
MW-14D	WATER	9/20/06	OK		NO			1
MW-11D	WATER	9/20/06	OK	OK		OK	OK	
MW-11S	WATER	9/20/06	OK	OK		OK	OK	
MW-9S	WATER	9/20/06	OK					
MW-12D	WATER	9/20/06	OK					
TRIP BLANK	WATER	9/20/06	OK					
MW-6S	WATER	9/21/06	OK	OK		OK	OK	
MW-12S	WATER	9/21/06	OK	OK				
MW-8S	WATER	9/21/06	OK					
MW-10D	WATER	9/21/06	OK	OK		OK	OK	
MW-100D	WATER	9/21/06	OK	OK		OK	OK	
MW-7S	WATER	9/21/06	OK					
MW-13D	WATER	9/21/06	OK	OK		OK		
TRIP BLANK	WATER	9/21/06	OK					
MW-19D	WATER	9/22/06	OK	OK				
MW-18D	WATER	9/22/06	OK					
MW-17D	WATER	9/22/06	OK					

TABLE 2.1-1 - CONTINUED

SUMMARY OF SAMPLE ANALYSES AND USABILITY
EKONOL - GROUNDWATER

SAMPLE ID	MATRIX	SAMPLE DATE	VOCs	METHANE, ETHANE, ETHENE	SVOCs	METALS	OTHER	FOOTNOTES
MW-16D	WATER	9/22/06	OK	OK				
MW-21D	WATER	10/25/06	OK	OK		OK	OK	
MW-13D	WATER	10/25/06					OK	
MW-7D	WATER	10/25/06	OK	OK		OK	OK	
TOTAL SAMPLES			34	23	10	20	20	

NOTES: OK - Sample analysis considered valid and usable.
NO - Sample analysis has noncompliances resulting in unusable data. See appropriate footnote.

FOOTNOTES: 1 - Poor semivolatile LCS and/or MS/MSD recoveries for certain compounds.

ATTACHMENT A

VALIDATED LABORATORY DATA

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York September 2006 and October 2006											
		Sample ID:	MW- 1S	MW- 2S	MW- 4S	MW- 6S	MW- 7S	MW- 7D	MW- 8S	MW- 9S	MW-10S
		Lab Sample Id	6I19002-02	6I19002-04	6I20016-02	6I22009-01	6I22009-06	6J25030-03	6I22009-03	6I21002-07RE1	6I21002-03
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I19002	6I19002	6I20016	6I22009	6I22009	6J25030	6I22009	6I21002	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/18/06	9/18/06	9/19/06	9/21/06	9/21/06	10/25/06	9/21/06	9/20/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	VOLATILES										
74-87-3	chloromethane	ug/l	2 U	2000 U	100 U	2 U	2 U	40 U	2 U	2 U	2 U
75-01-4	vinyl chloride	ug/l	12	116000	1530	267	1 U	96	1 U	212	40
74-83-9	bromomethane	ug/l	2 U	2000 U	100 U	2 U	2 U	40 U	2 U	2 U	2 U
75-00-3	chloroethane	ug/l	2 U	2000 U	100 U	2 U	2 U	40 U	2 U	2 U	2 U
75-35-4	1,1-dichloroethene	ug/l	1 U	1080	54	1	1 U	24	1 U	1 U	1 U
67-64-1	acetone	ug/l	10 U	10000 U	500 U	10 U	10 U	200 U	10 U	10 U	10 U
75-15-0	carbon disulfide	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
75-09-2	methylene chloride	ug/l	2 U	2010 U	124 U	2 U	2 U	40 U	2 U	2 U	2 U
156-60-5	trans-1,2-dichloroethene	ug/l	5	3110	50	1 U	1 U	20 U	1 U	3	2
75-34-3	1,1-dichloroethane	ug/l	1 U	1000 U	50 U	11	1 U	39	1 U	1 U	1 U
108-05-4	vinyl acetate	ug/l	10 UJ	10000 U	500 UJ	10 U	10 U	200 UJ	10 U	10 UJ	10 UJ
78-93-3	2-butanone	ug/l	10 U	10000 U	500 U	10 U	10 U	200 U	10 U	10 U	10 U
156-59-2	cis-1,2-dichloroethene	ug/l	84	343000	11000	58	1 U	7480	1 U	358	355
67-66-3	chloroform	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
71-55-6	1,1,1-trichloroethane	ug/l	1 U	1000 U	70	1 U	1 U	309	1 U	1 U	1 U
56-23-5	carbon tetrachloride	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
71-43-2	benzene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
107-06-2	1,2-dichloroethane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
79-01-6	trichloroethene	ug/l	4	2170	932	2	1 U	18300	1 U	1 U	12
78-87-5	1,2-dichloropropane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
75-27-4	bromodichloromethane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
108-10-1	4-Methyl-2-pentanone (MIBK)	ug/l	10 U	10000 U	500 U	10 U	10 U	200 U	10 U	10 U	10 U
10061-01-5	cis-1,3-dichloropropene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
108-88-3	toluene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
10061-02-6	trans-1,3-dichloropropene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
79-00-5	1,1,2-trichloroethane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
591-78-6	2-hexanone	ug/l	10 U	10000 U	500 U	10 U	10 U	200 U	10 U	10 U	10 U
127-18-4	tetrachloroethene	ug/l	1 U	1000 U	50 U	1 U	1 U	501	1 U	1 U	1 U
124-48-1	dibromochloromethane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
108-90-7	chlorobenzene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
100-41-4	ethylbenzene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
100-01-6	m,p-xylene	ug/l	2 U	2000 U	100 U	2 U	2 U	40 U	2 U	2 U	2 U
95-47-6	o-xylene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
100-42-5	styrene	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
75-25-2	bromoform	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
79-34-5	1,1,2,2-tetrachloroethane	ug/l	1 U	1000 U	50 U	1 U	1 U	20 U	1 U	1 U	1 U
74-82-8	Methane	ug/l	12	147	71.4	185		15.7			11.3
74-84-0	ethane	ug/l	12 U	28	12 U	48.3		12 U			12 U
74-85-1	ethene	ug/l	17 U	351	17 U	17 U		17 U			17 U

Ekonol Facility		Sample ID:	MW- 1S	MW- 2S	MW- 4S	MW- 6S	MW- 7S	MW- 7D	MW- 8S	MW- 9S	MW-10S
Validated Groundwater Analytical Results		Lab Sample Id	6I19002-02	6I19002-04	6I20016-02	6I22009-01	6I22009-06	6J25030-03	6I22009-03	6I21002-07RE1	6I21002-03
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I19002	6I19002	6I20016	6I22009	6I22009	6J25030	6I22009	6I21002	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/18/06	9/18/06	9/19/06	9/21/06	9/21/06	10/25/06	9/21/06	9/20/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
62-75-9	n-nitrosodimethylamine	ug/l	2 U	2 U	2 U						
111-44-4	bis(2-Chloroethyl)ether	ug/l	2 U	2 U	2 U						
108-95-2	Phenol	ug/l	4 U	67	4 U						
95-57-8	2-Chlorophenol	ug/l	4 U	4 U	4 U						
541-73-1	1,3-Dichlorobenzene	ug/l	2 U	2 U	2 U						
106-46-7	1,4-Dichlorobenzene	ug/l	2 U	2 U	2 U						
95-50-1	1,2-Dichlorobenzene	ug/l	2 U	2 U	2 U						
100-51-6	Benzyl alcohol	ug/l	2 U	2 U	2 U						
39638-32-9	bis(2-chloroisopropyl)ether	ug/l	2 U	382	12						
95-48-7	2-Methylphenol	ug/l	2 U	43	2 U						
67-72-1	Hexachloroethane	ug/l	2 U	2 U	2 U						
621-64-7	N-Nitrosodi-n-propylamine	ug/l	2 U	2 U	2 U						
106-44-5	3 & 4-methylphenol	ug/l	4 U	4 U	4 U						
98-95-3	Nitrobenzene	ug/l	2 U	2 U	2 U						
78-59-1	Isophorone	ug/l	2 U	2 U	2 U						
88-75-5	2-Nitrophenol	ug/l	4 U	4 U	4 U						
105-67-9	2,4-Dimethylphenol	ug/l	4 U	4 U	4 U						
111-91-1	Bis(2-chloroethoxy)methane	ug/l	2 U	2 U	2 U						
65-85-0	Benzoic acid	ug/l	R	R	R						
120-83-2	2,4-Dichlorophenol	ug/l	4 U	4 U	4 U						
120-82-1	1,2,4-Trichlorobenzene	ug/l	2 U	2 U	2 U						
91-20-3	Naphthalene	ug/l	2 U	2 U	2 U						
91-94-1	3,3'-Dichlorobenzidine	ug/l	2 U	2 U	2 U						
106-47-8	4-Chloroaniline	ug/l	2 U	2 U	2 U						
87-68-3	Hexachlorobutadiene	ug/l	2 U	2 U	2 U						
59-50-7	4-Chloro-3-methylphenol	ug/l	4 U	4 U	4 U						
91-57-6	2-Methylnaphthalene	ug/l	2 U	2 U	2 U						
77-47-4	Hexachlorocyclopentadiene	ug/l	4 U	4 U	4 U						
88-06-2	2,4,6-Trichlorophenol	ug/l	4 U	4 U	4 U						
95-95-4	2,4,5-Trichlorophenol	ug/l	2 U	2 U	2 U						
91-58-7	2-Chloronaphthalene	ug/l	2 U	2 U	2 U						
88-74-4	2-Nitroaniline	ug/l	2 U	2 U	2 U						
208-96-8	Acenaphthylene	ug/l	2 U	2 U	2 U						
131-11-3	Dimethyl phthalate	ug/l	2 U	2 U	2 U						
606-20-2	2,6-Dinitrotoluene	ug/l	2 U	2 U	2 U						

Ekonol Facility
Validated Groundwater Analytical Results
Wheatfield, New York
September 2006 and October 2006

		Sample ID:	MW- 1S	MW- 2S	MW- 4S	MW- 6S	MW- 7S	MW- 7D	MW- 8S	MW- 9S	MW-10S
		Lab Sample Id	6I19002-02	6I19002-04	6I20016-02	6I22009-01	6I22009-06	6J25030-03	6I22009-03	6I21002-07RE1	6I21002-03
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I19002	6I19002	6I20016	6I22009	6I22009	6J25030	6I22009	6I21002	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/18/06	9/18/06	9/19/06	9/21/06	9/21/06	10/25/06	9/21/06	9/20/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
83-32-9	Acenaphthene	ug/l	2 U	2 U	2 U						
99-09-2	3-Nitroaniline	ug/l	2 U	2 U	2 U						
51-28-5	2,4-Dinitrophenol	ug/l	4 U	4 U	4 U						
132-64-9	Dibenzofuran	ug/l	2 U	2 U	2 U						
121-14-2	2,4-Dinitrotoluene	ug/l	2 U	2 U	2 U						
100-02-7	4-Nitrophenol	ug/l	4 U	4 U	4 U						
86-73-7	Fluorene	ug/l	2 U	2 U	2 U						
7005-72-3	4-Chlorophenyl phenyl ether	ug/l	2 U	2 U	2 U						
84-66-2	Diethyl phthalate	ug/l	2 U	2 U	2 U						
100-01-6	4-Nitroaniline	ug/l	2 U	2 U	2 U						
534-52-1	4,6-Dinitro-2-methylphenol	ug/l	4 U	4 U	4 U						
86-30-6	n-Nitrosodiphenylamine	ug/l	2 U	2 U	2 U						
101-55-3	4-bromophenylphenylether	ug/l	2 U	2 U	2 U						
118-74-1	Hexachlorobenzene	ug/l	2 U	2 U	2 U						
87-86-5	Pentachlorophenol	ug/l	4 U	4 U	4 U						
85-01-8	Phenanthrene	ug/l	2 U	2 U	2 U						
120-12-7	Anthracene	ug/l	2 U	2 U	2 U						
86-74-8	Carbazole	ug/l	2 U	2 U	2 U						
84-74-2	Di-n-butyl phthalate	ug/l	2 U	2 U	2 U						
92-87-5	Benzidine	ug/l	10 U	10 U	10 U						
206-44-0	Fluoranthene	ug/l	2 U	2 U	2 U						
129-00-0	Pyrene	ug/l	2 U	2 U	2 U						
85-68-7	Butyl benzyl phthalate	ug/l	2 U	2 U	2 U						
56-55-3	Benzo (a) anthracene	ug/l	2 U	2 U	2 U						
218-01-9	Chrysene	ug/l	2 U	2 U	2 U						
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l	2 U	15	2 U						
117-84-0	Di-n-octyl phthalate	ug/l	2 U	2 U	2 U						
205-99-2	Benzo (b) fluoranthene	ug/l	2 U	2 U	2 U						
207-08-9	Benzo (k) fluoranthene	ug/l	2 U	2 U	2 U						
50-32-8	Benzo (a) pyrene	ug/l	2 U	2 U	2 U						
193-39-5	Indeno (1,2,3-cd) pyrene	ug/l	2 U	2 U	2 U						
53-70-3	Dibenz (a,h) anthracene	ug/l	2 U	2 U	2 U						
191-24-2	Benzo (g,h,i) perylene	ug/l	2 U	2 U	2 U						
62-53-3	Aniline	ug/l	2 UJ	1420 J	64 J						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York September 2006 and October 2006		Sample ID: Lab Sample Id Source: SDG: Matrix: Sampled: Validated:	MW- 1S 6I19002-02 Waste Streams 6I19002 Water 9/18/06 11/30/2006	MW- 2S 6I19002-04 Waste Streams 6I19002 Water 9/18/06 11/30/2006	MW- 4S 6I20016-02 Waste Streams 6I20016 Water 9/19/06 11/30/2006	MW- 6S 6I22009-01 Waste Streams 6I22009 Water 9/21/06 11/30/2006	MW- 7S 6I22009-06 Waste Streams 6I22009 Water 9/21/06 11/30/2006	MW- 7D 6J25030-03 Waste Streams 6J25030 Water 10/25/06 11/30/2006	MW- 8S 6I22009-03 Waste Streams 6I22009 Water 9/21/06 11/30/2006	MW- 9S 6I21002-07RE1 Waste Streams 6I21002 Water 9/20/06 11/30/2006	MW-10S 6I21002-03 Waste Streams 6I21002 Water 9/20/06 11/30/2006
CAS NO.	COMPOUND	UNITS:									
	METALS										
7440-38-2	Arsenic	mg/L	0.009 U	0.009 U	0.009 U	0.009 U		0.009 U			0.009 U
7439-89-6	Iron	mg/L	3.1	13.2	0.278	0.578		3.61			3.95
7439-96-5	Manganese	mg/L	0.374	2.67	0.583	0.675		0.247			0.153
	OTHER										
NA	Total Organic Carbon	mg/L	2.1	11.7	3.4	3.5		3.3			2.4
	WASTE CHARACTERISTICS										
NA	Nitrate as N	mg/L	1 U	1.7	1 U	1 U		2 U			1 U
NA	Nitrite as N	mg/L	0.8 U	0.8 U	0.8 U	0.8 U		1.6 U			0.8 U
NA	Chloride	mg/L	56.9	1280	288	769		182			163
148-08-798	Sulfate as SO4	mg/L	2580	1330	3410	3700		857			766

Ekonol Facility		Sample ID:	MW-10D	MW-100D	MW-11S	MW-11D	MW-12S	MW-12D	MW-13D	MW-13D	MW-14D
				Dup of MW-10D							
Validated Groundwater Analytical Results		Lab Sample Id	6I22009-04	6I22009-05	6I21002-06	6I21002-05	6I22009-02	6I21002-08RE1	6I22009-07	6J25030-02	6I21002-04
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I22009	6I22009	6I21002	6I21002	6I22009	6I21002	6I22009	6J25030	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/21/06	9/21/06	9/20/06	9/20/06	9/21/06	9/20/06	9/21/06	10/25/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	VOLATILES										
74-87-3	chloromethane	ug/l	10 U	10 U	10 U	10 U	40 U	2 U	2 U		2 U
75-01-4	vinyl chloride	ug/l	111	117	158	5 U	136	1 U	261		1 U
74-83-9	bromomethane	ug/l	10 U	10 U	10 U	10 U	40 U	2 U	2 U		2 U
75-00-3	chloroethane	ug/l	10 U	10 U	10 U	10 U	40 U	2 U	2 U		2 U
75-35-4	1,1-dichloroethene	ug/l	9	9	6	5 U	21	1 U	2		1 U
67-64-1	acetone	ug/l	50 U	50 U	50 U	50 U	200 U	10 U	10 U		10 U
75-15-0	carbon disulfide	ug/l	5 U	5 U	7	5 U	20 U	1 U	1 U		1 U
75-09-2	methylene chloride	ug/l	19 U	12 U	22 U	32 U	40 U	2 U	2 U		2 U
156-60-5	trans-1,2-dichloroethene	ug/l	5 U	5 U	11	5 U	20 U	1 U	4		1 U
75-34-3	1,1-dichloroethane	ug/l	11	12	49	9	140	1 U	26		1 U
108-05-4	vinyl acetate	ug/l	50 U	50 U	50 UJ	50 UJ	200 U	10 UJ	10 U		10 UJ
78-93-3	2-butanone	ug/l	50 U	50 U	50 U	50 U	200 U	10 U	10 U		10 U
156-59-2	cis-1,2-dichloroethene	ug/l	1320	1380	735	257	2210	1 U	658		1 U
67-66-3	chloroform	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
71-55-6	1,1,1-trichloroethane	ug/l	28	28	33	315	1420	1 U	1 U		1 U
56-23-5	carbon tetrachloride	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
71-43-2	benzene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
107-06-2	1,2-dichloroethane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
79-01-6	trichloroethene	ug/l	37	40	31	69	3050	1 U	9		1 U
78-87-5	1,2-dichloropropane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
75-27-4	bromodichloromethane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
108-10-1	4-Methyl-2-pentanone (MIBK)	ug/l	50 U	50 U	50 U	50 U	200 U	10 U	10 U		10 U
10061-01-5	cis-1,3-dichloropropene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
108-88-3	toluene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
10061-02-6	trans-1,3-dichloropropene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
79-00-5	1,1,2-trichloroethane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
591-78-6	2-hexanone	ug/l	50 U	50 U	50 U	50 U	200 U	10 U	10 U		10 U
127-18-4	tetrachloroethene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
124-48-1	dibromochloromethane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
108-90-7	chlorobenzene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
100-41-4	ethylbenzene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
100-01-6	m,p-xylene	ug/l	10 U	10 U	10 U	10 U	40 U	2 U	2 U		2 U
95-47-6	o-xylene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
100-42-5	styrene	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
75-25-2	bromoform	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
79-34-5	1,1,2,2-tetrachloroethane	ug/l	5 U	5 U	5 U	5 U	20 U	1 U	1 U		1 U
74-82-8	Methane	ug/l	49.9	53.7	85.8	24.3	52.2		17.7		
74-84-0	ethane	ug/l	12 U	12 U	12 U	12 U	12 U		12 U		
74-85-1	ethene	ug/l	17 U	17 U	17 U	17 U	17 U		17 U		

				Dup of MW-10D							
Ekonol Facility		Sample ID:	MW-10D	MW-100D	MW-11S	MW-11D	MW-12S	MW-12D	MW-13D	MW-13D	MW-14D
Validated Groundwater Analytical Results		Lab Sample Id	6I22009-04	6I22009-05	6I21002-06	6I21002-05	6I22009-02	6I21002-08RE1	6I22009-07	6J25030-02	6I21002-04
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I22009	6I22009	6I21002	6I21002	6I22009	6I21002	6I22009	6J25030	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/21/06	9/21/06	9/20/06	9/20/06	9/21/06	9/20/06	9/21/06	10/25/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
62-75-9	n-nitrosodimethylamine	ug/l									2 U
111-44-4	bis(2-Chloroethyl)ether	ug/l									2 U
108-95-2	Phenol	ug/l									4 U
95-57-8	2-Chlorophenol	ug/l									4 U
541-73-1	1,3-Dichlorobenzene	ug/l									2 U
106-46-7	1,4-Dichlorobenzene	ug/l									2 U
95-50-1	1,2-Dichlorobenzene	ug/l									2 U
100-51-6	Benzyl alcohol	ug/l									2 U
39638-32-9	bis(2-chloroisopropyl)ether	ug/l									2 U
95-48-7	2-Methylphenol	ug/l									2 U
67-72-1	Hexachloroethane	ug/l									2 U
621-64-7	N-Nitrosodi-n-propylamine	ug/l									2 U
106-44-5	3 & 4-methylphenol	ug/l									4 U
98-95-3	Nitrobenzene	ug/l									2 U
78-59-1	Isophorone	ug/l									2 U
88-75-5	2-Nitrophenol	ug/l									4 U
105-67-9	2,4-Dimethylphenol	ug/l									4 U
111-91-1	Bis(2-chloroethoxy)methane	ug/l									2 U
65-85-0	Benzoic acid	ug/l									R
120-83-2	2,4-Dichlorophenol	ug/l									4 U
120-82-1	1,2,4-Trichlorobenzene	ug/l									2 U
91-20-3	Naphthalene	ug/l									2 U
91-94-1	3,3'-Dichlorobenzidine	ug/l									2 U
106-47-8	4-Chloroaniline	ug/l									2 U
87-68-3	Hexachlorobutadiene	ug/l									2 U
59-50-7	4-Chloro-3-methylphenol	ug/l									4 U
91-57-6	2-Methylnaphthalene	ug/l									2 U
77-47-4	Hexachlorocyclopentadiene	ug/l									4 U
88-06-2	2,4,6-Trichlorophenol	ug/l									4 U
95-95-4	2,4,5-Trichlorophenol	ug/l									2 U
91-58-7	2-Chloronaphthalene	ug/l									2 U
88-74-4	2-Nitroaniline	ug/l									2 U
208-96-8	Acenaphthylene	ug/l									2 U
131-11-3	Dimethyl phthalate	ug/l									2 U
606-20-2	2,6-Dinitrotoluene	ug/l									2 U

				Dup of MW-10D							
Ekonol Facility		Sample ID:	MW-10D	MW-100D	MW-11S	MW-11D	MW-12S	MW-12D	MW-13D	MW-13D	MW-14D
Validated Groundwater Analytical Results		Lab Sample Id	6I22009-04	6I22009-05	6I21002-06	6I21002-05	6I22009-02	6I21002-08RE1	6I22009-07	6J25030-02	6I21002-04
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I22009	6I22009	6I21002	6I21002	6I22009	6I21002	6I22009	6J25030	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/21/06	9/21/06	9/20/06	9/20/06	9/21/06	9/20/06	9/21/06	10/25/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
83-32-9	Acenaphthene	ug/l									2 U
99-09-2	3-Nitroaniline	ug/l									2 U
51-28-5	2,4-Dinitrophenol	ug/l									4 U
132-64-9	Dibenzofuran	ug/l									2 U
121-14-2	2,4-Dinitrotoluene	ug/l									2 U
100-02-7	4-Nitrophenol	ug/l									4 U
86-73-7	Fluorene	ug/l									2 U
7005-72-3	4-Chlorophenyl phenyl ether	ug/l									2 U
84-66-2	Diethyl phthalate	ug/l									2 U
100-01-6	4-Nitroaniline	ug/l									2 U
534-52-1	4,6-Dinitro-2-methylphenol	ug/l									4 U
86-30-6	n-Nitrosodiphenylamine	ug/l									2 U
101-55-3	4-bromophenylphenylether	ug/l									2 U
118-74-1	Hexachlorobenzene	ug/l									2 U
87-86-5	Pentachlorophenol	ug/l									4 U
85-01-8	Phenanthrene	ug/l									2 U
120-12-7	Anthracene	ug/l									2 U
86-74-8	Carbazole	ug/l									2 U
84-74-2	Di-n-butyl phthalate	ug/l									2 U
92-87-5	Benzidine	ug/l									10 U
206-44-0	Fluoranthene	ug/l									2 U
129-00-0	Pyrene	ug/l									2 U
85-68-7	Butyl benzyl phthalate	ug/l									2 U
56-55-3	Benzo (a) anthracene	ug/l									2 U
218-01-9	Chrysene	ug/l									2 U
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l									2 U
117-84-0	Di-n-octyl phthalate	ug/l									2 U
205-99-2	Benzo (b) fluoranthene	ug/l									2 U
207-08-9	Benzo (k) fluoranthene	ug/l									2 U
50-32-8	Benzo (a) pyrene	ug/l									2 U
193-39-5	Indeno (1,2,3-cd) pyrene	ug/l									2 U
53-70-3	Dibenz (a,h) anthracene	ug/l									2 U
191-24-2	Benzo (g,h,i) perylene	ug/l									2 U
62-53-3	Aniline	ug/l									2 UJ

				Dup of MW-10D							
Ekonol Facility		Sample ID:	MW-10D	MW-100D	MW-11S	MW-11D	MW-12S	MW-12D	MW-13D	MW-13D	MW-14D
Validated Groundwater Analytical Results		Lab Sample Id	6I22009-04	6I22009-05	6I21002-06	6I21002-05	6I22009-02	6I21002-08RE1	6I22009-07	6J25030-02	6I21002-04
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I22009	6I22009	6I21002	6I21002	6I22009	6I21002	6I22009	6J25030	6I21002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/21/06	9/21/06	9/20/06	9/20/06	9/21/06	9/20/06	9/21/06	10/25/06	9/20/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	METALS										
7440-38-2	Arsenic	mg/L	0.009 U	0.009 U	0.009 U	0.009 U			0.009 U		
7439-89-6	Iron	mg/L	0.63	0.581	1.83	0.147			0.37		
7439-96-5	Manganese	mg/L	0.259	0.248	0.355	0.227			0.135		
	OTHER										
NA	Total Organic Carbon	mg/L	2.4	2.5	2.9	3.8			3.5		
	WASTE CHARACTERISTICS										
NA	Nitrate as N	mg/L	1 U	1 U	1 U	1 U				2.18	
NA	Nitrite as N	mg/L	0.8 U	0.8 U	0.8 U	0.8 U				1.6 U	
NA	Chloride	mg/L	203	192	722	173				543	
148-08-798	Sulfate as SO4	mg/L	1060	1050	2880	1660				1160	

Ekonol Facility
Validated Groundwater Analytical Results
Wheatfield, New York
September 2006 and October 2006

CAS NO.	COMPOUND		MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D	RMW- 1D	RMW- 2D
		Sample ID:	MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D	RMW- 1D	RMW- 2D
		Lab Sample Id	6I21002-02	6I22016-04	6I22016-02	6I22016-03	6I22016-01	6I21002-01	6J25030-01	6I19002-01	6I19002-03
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I21002	6I22016	6I22016	6I22016	6I22016	6I21002	6J25030	6I19002	6I19002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/20/06	9/22/06	9/22/06	9/22/06	9/22/06	9/20/06	10/25/06	9/18/06	9/18/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
		UNITS:									
	VOLATILES										
74-87-3	chloromethane	ug/l	20 U	2 U	2 U	2 U	2 U	100 U	40 U	2 U	100 U
75-01-4	vinyl chloride	ug/l	233	95	1 U	1 U	14	648	242	1 U	688
74-83-9	bromomethane	ug/l	20 U	2 U	2 U	2 U	2 U	100 U	40 U	2 U	100 U
75-00-3	chloroethane	ug/l	20 U	2 U	2 U	2 U	2 U	100 U	40 U	2 U	100 U
75-35-4	1,1-dichloroethene	ug/l	18	2	1 U	1 U	1 U	108	20 U	1 U	65
67-64-1	acetone	ug/l	100 U	10 U	10 U	10 U	10 U	500 U	200 U	10 U	500 U
75-15-0	carbon disulfide	ug/l	10 U	1 U	1	3	1 U	50 U	20 U	1 U	50 U
75-09-2	methylene chloride	ug/l	20 U	2 U	2 U	2 U	2 U	125 U	40 U	2 U	100 U
156-60-5	trans-1,2-dichloroethene	ug/l	11	3	1 U	1 U	1 U	50 U	20 U	1 U	50 U
75-34-3	1,1-dichloroethane	ug/l	38	6	1 U	1 U	1	177	22	1 U	112
108-05-4	vinyl acetate	ug/l	100 UJ	10 U	10 UJ	10 UJ	10 UJ	500 UJ	200 UJ	10 UJ	500 U
78-93-3	2-butanone	ug/l	100 U	10 U	10 U	10 U	10 U	500 U	200 U	10 U	500 U
156-59-2	cis-1,2-dichloroethene	ug/l	3000	545	4	1 U	23	14800	3860	6	8660
67-66-3	chloroform	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
71-55-6	1,1,1-trichloroethane	ug/l	92	1 U	4	1 U	1 U	885	30	1 U	355
56-23-5	carbon tetrachloride	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
71-43-2	benzene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
107-06-2	1,2-dichloroethane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
79-01-6	trichloroethene	ug/l	10 U	3	1 U	1 U	1 U	50 U	20 U	1 U	10900
78-87-5	1,2-dichloropropane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
75-27-4	bromodichloromethane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
108-10-1	4-Methyl-2-pentanone (MIBK)	ug/l	100 U	10 U	10 U	10 U	10 U	500 U	200 U	10 U	500 U
10061-01-5	cis-1,3-dichloropropene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
108-88-3	toluene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
10061-02-6	trans-1,3-dichloropropene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
79-00-5	1,1,2-trichloroethane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
591-78-6	2-hexanone	ug/l	100 U	10 U	10 U	10 U	10 U	500 U	200 U	10 U	500 U
127-18-4	tetrachloroethene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	159
124-48-1	dibromochloromethane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
108-90-7	chlorobenzene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
100-41-4	ethylbenzene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
100-01-6	m,p-xylene	ug/l	20 U	2 U	2 U	2 U	2 U	100 U	40 U	2 U	100 U
95-47-6	o-xylene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
100-42-5	styrene	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
75-25-2	bromoform	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
79-34-5	1,1,2,2-tetrachloroethane	ug/l	10 U	1 U	1 U	1 U	1 U	50 U	20 U	1 U	50 U
74-82-8	Methane	ug/l	10	11.2			10 U	27.5	16.7	204	111
74-84-0	ethane	ug/l	12 U	12 U			12 U	12 U	12 U	69.9	20.5
74-85-1	ethene	ug/l	17 U	17 U			17 U	17 U	17 U	17 U	38.4

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York September 2006 and October 2006											
		Sample ID:	MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D	RMW- 1D	RMW- 2D
		Lab Sample Id	6I21002-02	6I22016-04	6I22016-02	6I22016-03	6I22016-01	6I21002-01	6J25030-01	6I19002-01	6I19002-03
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I21002	6I22016	6I22016	6I22016	6I22016	6I21002	6J25030	6I19002	6I19002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/20/06	9/22/06	9/22/06	9/22/06	9/22/06	9/20/06	10/25/06	9/18/06	9/18/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
62-75-9	n-nitrosodimethylamine	ug/l	2 U					2 U		2 U	2 U
111-44-4	bis(2-Chloroethyl)ether	ug/l	2 U					2 U		2 U	2 U
108-95-2	Phenol	ug/l	4 U					4 U		4 U	4 U
95-57-8	2-Chlorophenol	ug/l	4 U					4 U		4 U	4 U
541-73-1	1,3-Dichlorobenzene	ug/l	2 U					2 U		2 U	2 U
106-46-7	1,4-Dichlorobenzene	ug/l	2 U					2 U		2 U	2 U
95-50-1	1,2-Dichlorobenzene	ug/l	2 U					2 U		2 U	2 U
100-51-6	Benzyl alcohol	ug/l	2 U					2 U		2 U	2 U
39638-32-9	bis(2-chloroisopropyl)ether	ug/l	2 U					8		2 U	15
95-48-7	2-Methylphenol	ug/l	2 U					2 U		2 U	3
67-72-1	Hexachloroethane	ug/l	2 U					2 U		2 U	2 U
621-64-7	N-Nitrosodi-n-propylamine	ug/l	2 U					2 U		2 U	2 U
106-44-5	3 & 4-methylphenol	ug/l	4 U					4 U		4 U	4 U
98-95-3	Nitrobenzene	ug/l	2 U					2 U		2 U	2 U
78-59-1	Isophorone	ug/l	2 U					2 U		2 U	2 U
88-75-5	2-Nitrophenol	ug/l	4 U					4 U		4 U	4 U
105-67-9	2,4-Dimethylphenol	ug/l	4 U					4 U		4 U	4 U
111-91-1	Bis(2-chloroethoxy)methane	ug/l	2 U					2 U		2 U	2 U
65-85-0	Benzoic acid	ug/l	R					R		R	R
120-83-2	2,4-Dichlorophenol	ug/l	4 U					4 U		4 U	4 U
120-82-1	1,2,4-Trichlorobenzene	ug/l	2 U					2 U		2 U	8
91-20-3	Naphthalene	ug/l	2 U					2 U		2 U	2 U
91-94-1	3,3'-Dichlorobenzidine	ug/l	2 U					2 U		2 U	2 U
106-47-8	4-Chloroaniline	ug/l	2 U					2 U		2 U	2 U
87-68-3	Hexachlorobutadiene	ug/l	2 U					2 U		2 U	2 U
59-50-7	4-Chloro-3-methylphenol	ug/l	4 U					4 U		4 U	4 U
91-57-6	2-Methylnaphthalene	ug/l	2 U					2 U		2 U	2 U
77-47-4	Hexachlorocyclopentadiene	ug/l	4 U					4 U		4 U	4 U
88-06-2	2,4,6-Trichlorophenol	ug/l	4 U					4 U		4 U	4 U
95-95-4	2,4,5-Trichlorophenol	ug/l	2 U					2 U		2 U	2 U
91-58-7	2-Chloronaphthalene	ug/l	2 U					2 U		2 U	2 U
88-74-4	2-Nitroaniline	ug/l	2 U					2 U		2 U	2 U
208-96-8	Acenaphthylene	ug/l	2 U					2 U		2 U	2 U
131-11-3	Dimethyl phthalate	ug/l	2 U					2 U		2 U	2 U
606-20-2	2,6-Dinitrotoluene	ug/l	2 U					2 U		2 U	2 U

Ekonol Facility		Sample ID:	MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D	RMW- 1D	RMW- 2D
Validated Groundwater Analytical Results		Lab Sample Id	6I21002-02	6I22016-04	6I22016-02	6I22016-03	6I22016-01	6I21002-01	6J25030-01	6I19002-01	6I19002-03
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I21002	6I22016	6I22016	6I22016	6I22016	6I21002	6J25030	6I19002	6I19002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/20/06	9/22/06	9/22/06	9/22/06	9/22/06	9/20/06	10/25/06	9/18/06	9/18/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	SEMIVOLATILES										
83-32-9	Acenaphthene	ug/l	2 U					2 U		2 U	2 U
99-09-2	3-Nitroaniline	ug/l	2 U					2 U		2 U	2 U
51-28-5	2,4-Dinitrophenol	ug/l	4 U					4 U		4 U	4 U
132-64-9	Dibenzofuran	ug/l	2 U					2 U		2 U	2 U
121-14-2	2,4-Dinitrotoluene	ug/l	2 U					2 U		2 U	2 U
100-02-7	4-Nitrophenol	ug/l	4 U					4 U		4 U	4 U
86-73-7	Fluorene	ug/l	2 U					2 U		2 U	2 U
7005-72-3	4-Chlorophenyl phenyl ether	ug/l	2 U					2 U		2 U	2 U
84-66-2	Diethyl phthalate	ug/l	2 U					2 U		2 U	2 U
100-01-6	4-Nitroaniline	ug/l	2 U					2 U		2 U	2 U
534-52-1	4,6-Dinitro-2-methylphenol	ug/l	4 U					4 U		4 U	4 U
86-30-6	n-Nitrosodiphenylamine	ug/l	2 U					2 U		2 U	2 U
101-55-3	4-bromophenylphenylether	ug/l	2 U					2 U		2 U	2 U
118-74-1	Hexachlorobenzene	ug/l	2 U					2 U		2 U	2 U
87-86-5	Pentachlorophenol	ug/l	4 U					4 U		4 U	4 U
85-01-8	Phenanthrene	ug/l	2 U					2 U		2 U	2 U
120-12-7	Anthracene	ug/l	2 U					2 U		2 U	2 U
86-74-8	Carbazole	ug/l	2 U					2 U		2 U	2 U
84-74-2	Di-n-butyl phthalate	ug/l	2 U					2 U		2 U	2 U
92-87-5	Benzidine	ug/l	10 U					10 U		10 U	10 U
206-44-0	Fluoranthene	ug/l	2 U					2 U		2 U	2 U
129-00-0	Pyrene	ug/l	2 U					2 U		2 U	2 U
85-68-7	Butyl benzyl phthalate	ug/l	2 U					2 U		2 U	2 U
56-55-3	Benzo (a) anthracene	ug/l	2 U					2 U		2 U	2 U
218-01-9	Chrysene	ug/l	2 U					2 U		2 U	2 U
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l	2 U					2 U		2 U	2
117-84-0	Di-n-octyl phthalate	ug/l	2 U					2 U		2 U	2 U
205-99-2	Benzo (b) fluoranthene	ug/l	2 U					2 U		2 U	2 U
207-08-9	Benzo (k) fluoranthene	ug/l	2 U					2 U		2 U	2 U
50-32-8	Benzo (a) pyrene	ug/l	2 U					2 U		2 U	2 U
193-39-5	Indeno (1,2,3-cd) pyrene	ug/l	2 U					2 U		2 U	2 U
53-70-3	Dibenz (a,h) anthracene	ug/l	2 U					2 U		2 U	2 U
191-24-2	Benzo (g,h,i) perylene	ug/l	2 U					2 U		2 U	2 U
62-53-3	Aniline	ug/l	2 UJ					2 UJ		2 UJ	124 J

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York September 2006 and October 2006		Sample ID:	MW-15D	MW-16D	MW-17D	MW-18D	MW-19D	MW-20D	MW-21D	RMW- 1D	RMW- 2D
		Lab Sample Id	6I21002-02	6I22016-04	6I22016-02	6I22016-03	6I22016-01	6I21002-01	6J25030-01	6I19002-01	6I19002-03
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I21002	6I22016	6I22016	6I22016	6I22016	6I21002	6J25030	6I19002	6I19002
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/20/06	9/22/06	9/22/06	9/22/06	9/22/06	9/20/06	10/25/06	9/18/06	9/18/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:									
	METALS										
7440-38-2	Arsenic	mg/L	0.009 U					0.009 U	0.009 U	0.009 U	0.009 U
7439-89-6	Iron	mg/L	0.376					0.273	2.62	0.083 U	0.162
7439-96-5	Manganese	mg/L	0.149					0.282	0.284	0.096	0.219
	OTHER										
NA	Total Organic Carbon	mg/L	3					2.8	2.6	1.3	2.6
	WASTE CHARACTERISTICS										
NA	Nitrate as N	mg/L	1 U					1 U	2 U	1 U	1 U
NA	Nitrite as N	mg/L	0.8 U					0.8 U	1.6 U	0.8 U	0.8 U
NA	Chloride	mg/L	110					235	170	250	251
148-08-798	Sulfate as SO4	mg/L	924					1200	904	1570	1500

						Dup of RMW- 4D				
Ekonol Facility		Sample ID:	RMW- 3S	RMW- 3D	RMW- 4D	RMW-401	Trip Blank-1	Trip Blank-2	Trip Blank-3	Trip Blank-4
Validated Groundwater Analytical Results		Lab Sample Id	6I20016-05	6I20016-04	6I20016-01	6I20016-03	6I19002-05	6I20016-06	6I21002-09	6I22009-08
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I20016	6I20016	6I20016	6I20016	6I19002	6I20016	6I21002	6I22009
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/19/06	9/19/06	9/19/06	9/19/06	9/18/06	9/19/06	9/20/06	9/21/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:								
	VOLATILES									
74-87-3	chloromethane	ug/l	2 U	20 U	100 U	100 U	2 U	2 U	2 U	2 U
75-01-4	vinyl chloride	ug/l	1 U	10 U	526	504	1 U	1 U	1 U	1 U
74-83-9	bromomethane	ug/l	2 U	20 U	100 U	100 U	2 U	2 U	2 U	2 U
75-00-3	chloroethane	ug/l	2 U	20 U	100 U	100 U	2 U	2 U	2 U	2 U
75-35-4	1,1-dichloroethene	ug/l	1 U	22	88	70	1 U	1 U	1 U	1 U
67-64-1	acetone	ug/l	10 U	100 U	500 U	500 U	10 U	10 U	10 U	10 U
75-15-0	carbon disulfide	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
75-09-2	methylene chloride	ug/l	2 U	20 U	309 U	100 U	2 U	2 U	2 U	2 U
156-60-5	trans-1,2-dichloroethene	ug/l	1 U	10 U	68 J	50 UJ	1 U	1 U	1 U	1 U
75-34-3	1,1-dichloroethane	ug/l	1 U	34	105	110	1 U	1 U	1 U	1 U
108-05-4	vinyl acetate	ug/l	10 UJ	100 UJ	500 UJ	500 UJ	10 UJ	10 UJ	10 UJ	10 U
78-93-3	2-butanone	ug/l	10 U	100 U	500 U	500 U	10 U	10 U	10 U	10 U
156-59-2	cis-1,2-dichloroethene	ug/l	9	281	17400	17600	1 U	1 U	1 U	1 U
67-66-3	chloroform	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
71-55-6	1,1,1-trichloroethane	ug/l	1 U	2500	308	305	1 U	1 U	1 U	1 U
56-23-5	carbon tetrachloride	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
71-43-2	benzene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
107-06-2	1,2-dichloroethane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
79-01-6	trichloroethene	ug/l	1 U	117	20800	20400	1 U	1 U	1 U	1 U
78-87-5	1,2-dichloropropane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
75-27-4	bromodichloromethane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
108-10-1	4-Methyl-2-pentanone (MIBK)	ug/l	10 U	100 U	500 U	500 U	10 U	10 U	10 U	10 U
10061-01-5	cis-1,3-dichloropropene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
108-88-3	toluene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
10061-02-6	trans-1,3-dichloropropene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
79-00-5	1,1,2-trichloroethane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
591-78-6	2-hexanone	ug/l	10 U	100 U	500 U	500 U	10 U	10 U	10 U	10 U
127-18-4	tetrachloroethene	ug/l	1 U	28	514	518	1 U	1 U	1 U	1 U
124-48-1	dibromochloromethane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
108-90-7	chlorobenzene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
100-41-4	ethylbenzene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
100-01-6	m,p-xylene	ug/l	2 U	20 U	100 U	100 U	2 U	2 U	2 U	2 U
95-47-6	o-xylene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
100-42-5	styrene	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
75-25-2	bromoform	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
79-34-5	1,1,2,2-tetrachloroethane	ug/l	1 U	10 U	50 U	50 U	1 U	1 U	1 U	1 U
74-82-8	Methane	ug/l	10 U	31.3	65.9	68.6				
74-84-0	ethane	ug/l	12 U	12 U	12 U	12 U				
74-85-1	ethene	ug/l	17 U	17 U	25.3	25.9				

						Dup of RMW- 4D				
Ekonol Facility		Sample ID:	RMW- 3S	RMW- 3D	RMW- 4D	RMW-401	Trip Blank-1	Trip Blank-2	Trip Blank-3	Trip Blank-4
Validated Groundwater Analytical Results		Lab Sample Id	6I20016-05	6I20016-04	6I20016-01	6I20016-03	6I19002-05	6I20016-06	6I21002-09	6I22009-08
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I20016	6I20016	6I20016	6I20016	6I19002	6I20016	6I21002	6I22009
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/19/06	9/19/06	9/19/06	9/19/06	9/18/06	9/19/06	9/20/06	9/21/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:								
	SEMIVOLATILES									
62-75-9	n-nitrosodimethylamine	ug/l			2 U	2 U				
111-44-4	bis(2-Chloroethyl)ether	ug/l			2 U	2 U				
108-95-2	Phenol	ug/l			4 U	4 U				
95-57-8	2-Chlorophenol	ug/l			4 U	4 U				
541-73-1	1,3-Dichlorobenzene	ug/l			2 U	2 U				
106-46-7	1,4-Dichlorobenzene	ug/l			3	3				
95-50-1	1,2-Dichlorobenzene	ug/l			4	6				
100-51-6	Benzyl alcohol	ug/l			2 U	2 U				
39638-32-9	bis(2-chloroisopropyl)ether	ug/l			30 J	35				
95-48-7	2-Methylphenol	ug/l			5	6				
67-72-1	Hexachloroethane	ug/l			2 U	2 U				
621-64-7	N-Nitrosodi-n-propylamine	ug/l			2 U	2 U				
106-44-5	3 & 4-methylphenol	ug/l			4 U	4 U				
98-95-3	Nitrobenzene	ug/l			2 U	2 U				
78-59-1	Isophorone	ug/l			2 U	2 U				
88-75-5	2-Nitrophenol	ug/l			4 U	4 U				
105-67-9	2,4-Dimethylphenol	ug/l			4 U	4 U				
111-91-1	Bis(2-chloroethoxy)methane	ug/l			2 U	2 U				
65-85-0	Benzoic acid	ug/l			R	R				
120-83-2	2,4-Dichlorophenol	ug/l			4 U	4 U				
120-82-1	1,2,4-Trichlorobenzene	ug/l			21	25				
91-20-3	Naphthalene	ug/l			2 U	2 U				
91-94-1	3,3'-Dichlorobenzidine	ug/l			2 U	2 U				
106-47-8	4-Chloroaniline	ug/l			2 U	2 U				
87-68-3	Hexachlorobutadiene	ug/l			2 U	2 U				
59-50-7	4-Chloro-3-methylphenol	ug/l			4 U	4 U				
91-57-6	2-Methylnaphthalene	ug/l			2 U	2 U				
77-47-4	Hexachlorocyclopentadiene	ug/l			4 U	4 U				
88-06-2	2,4,6-Trichlorophenol	ug/l			4 U	4 U				
95-95-4	2,4,5-Trichlorophenol	ug/l			2 U	2 U				
91-58-7	2-Chloronaphthalene	ug/l			2 UJ	2 U				
88-74-4	2-Nitroaniline	ug/l			2 U	2 U				
208-96-8	Acenaphthylene	ug/l			2 U	2 U				
131-11-3	Dimethyl phthalate	ug/l			2 U	2 U				
606-20-2	2,6-Dinitrotoluene	ug/l			2 U	2 U				

Ekonol Facility		Sample ID:	RMW- 3S	RMW- 3D	RMW- 4D	Dup of RMW- 4D RMW-401	Trip Blank-1	Trip Blank-2	Trip Blank-3	Trip Blank-4
Validated Groundwater Analytical Results		Lab Sample Id	6I20016-05	6I20016-04	6I20016-01	6I20016-03	6I19002-05	6I20016-06	6I21002-09	6I22009-08
Wheatfield, New York		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
September 2006 and October 2006		SDG:	6I20016	6I20016	6I20016	6I20016	6I19002	6I20016	6I21002	6I22009
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/19/06	9/19/06	9/19/06	9/19/06	9/18/06	9/19/06	9/20/06	9/21/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:								
	SEMIVOLATILES									
83-32-9	Acenaphthene	ug/l			2 U	2 U				
99-09-2	3-Nitroaniline	ug/l			2 U	2 U				
51-28-5	2,4-Dinitrophenol	ug/l			4 U	4 U				
132-64-9	Dibenzofuran	ug/l			2 U	2 U				
121-14-2	2,4-Dinitrotoluene	ug/l			2 U	2 U				
100-02-7	4-Nitrophenol	ug/l			4 U	4 U				
86-73-7	Fluorene	ug/l			2 U	2 U				
7005-72-3	4-Chlorophenyl phenyl ether	ug/l			2 U	2 U				
84-66-2	Diethyl phthalate	ug/l			2 U	2 U				
100-01-6	4-Nitroaniline	ug/l			2 U	2 U				
534-52-1	4,6-Dinitro-2-methylphenol	ug/l			4 U	4 U				
86-30-6	n-Nitrosodiphenylamine	ug/l			2 U	2 U				
101-55-3	4-bromophenylphenylether	ug/l			2 U	2 U				
118-74-1	Hexachlorobenzene	ug/l			2 U	2 U				
87-86-5	Pentachlorophenol	ug/l			4 U	4 U				
85-01-8	Phenanthrene	ug/l			2 U	2 U				
120-12-7	Anthracene	ug/l			2 U	2 U				
86-74-8	Carbazole	ug/l			2 U	2 U				
84-74-2	Di-n-butyl phthalate	ug/l			2 U	2 U				
92-87-5	Benzidine	ug/l			R	10 U				
206-44-0	Fluoranthene	ug/l			2 U	2 U				
129-00-0	Pyrene	ug/l			2 U	2 U				
85-68-7	Butyl benzyl phthalate	ug/l			2 U	2 U				
56-55-3	Benzo (a) anthracene	ug/l			2 U	2 U				
218-01-9	Chrysene	ug/l			2 U	2 U				
117-81-7	bis(2-Ethylhexyl)phthalate	ug/l			2 U	2 U				
117-84-0	Di-n-octyl phthalate	ug/l			2 U	2 U				
205-99-2	Benzo (b) fluoranthene	ug/l			2 U	2 U				
207-08-9	Benzo (k) fluoranthene	ug/l			2 U	2 U				
50-32-8	Benzo (a) pyrene	ug/l			2 U	2 U				
193-39-5	Indeno (1,2,3-cd) pyrene	ug/l			2 U	2 U				
53-70-3	Dibenz (a,h) anthracene	ug/l			2 U	2 U				
191-24-2	Benzo (g,h,i) perylene	ug/l			2 U	2 U				
62-53-3	Aniline	ug/l			233 J	246 J				

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York September 2006 and October 2006		Sample ID:	RMW- 3S	RMW- 3D	RMW- 4D	Dup of RMW- 4D RMW-401	Trip Blank-1	Trip Blank-2	Trip Blank-3	Trip Blank-4
		Lab Sample Id	6I20016-05	6I20016-04	6I20016-01	6I20016-03	6I19002-05	6I20016-06	6I21002-09	6I22009-08
		Source:	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams	Waste Streams
		SDG:	6I20016	6I20016	6I20016	6I20016	6I19002	6I20016	6I21002	6I22009
		Matrix:	Water	Water	Water	Water	Water	Water	Water	Water
		Sampled:	9/19/06	9/19/06	9/19/06	9/19/06	9/18/06	9/19/06	9/20/06	9/21/06
		Validated:	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006	11/30/2006
CAS NO.	COMPOUND	UNITS:								
	METALS									
7440-38-2	Arsenic	mg/L	0.009 U	0.009 U	0.009 U	0.009 U				
7439-89-6	Iron	mg/L	3.1	0.437	0.083 UJ	0.098 J				
7439-96-5	Manganese	mg/L	0.416	0.279	0.217	0.221				
	OTHER									
NA	Total Organic Carbon	mg/L	3.5	2.8	3.2	3.3				
	WASTE CHARACTERISTICS									
NA	Nitrate as N	mg/L	1 U	1 U	1 U	1 U				
NA	Nitrite as N	mg/L	0.8 U	0.8 U	0.8 U	0.8 U				
NA	Chloride	mg/L	1160	201	218	233				
148-08-798	Sulfate as SO4	mg/L	2590	1220	1210	1230				

ATTACHMENT 3

Final Report
Downhole Geophysical and Televiewer Logging Surveys
Wells MW21D, and MW7D
Niagara Falls, NY
MAG Project Number 080613

Prepared For: Parsons
Prepared By: Mid-Atlantic Geosciences
October 27, 2006

October 27, 2006

Mr. James Schuetz
Parsons
180 Lawrence Bell Drive
Suite 104
Williamsville, NY 14221

RE: Downhole Geophysical and Televiewer Logging Surveys
Wells MW21D, and MW7D
Niagara Falls, NY
MAG Project Number 080613

Dear Mr. Schuetz:

Pursuant to our proposal dated August 5, 2006, Mid-Atlantic Geosciences (MAG – the borehole logging division of Enviroscan, Inc.) completed the above-referenced survey on October 24, 2006. The objective of the survey was to provide a full logging suite to better characterize wells MW7D, and MW21D. To accomplish the survey objective, MAG conducted Optical Televiewer (OPTV), High Resolution Acoustic Televiewer (HRAT), Temperature, Conductivity, Natural Gamma, and 3-Arm Caliper logging surveys at the well. Note that a video log of MW7D was also created.

Logging Equipment

Mid-Atlantic Geosciences conducts borehole geophysics, televiewer, and video logging using a Robertson Geologging, Ltd. Videologger 2000. The unit is capable of capturing data in a digital format for on-site log playback, reproduction, and field interpretation. The system operates in a Windows 98 environment under four data capture and processing programs: RG-Winlogger, RG-Viewlog, HRAT (for ***H***igh-***R***esolution ***A***coustic ***T***eleviewer), and OPTV (for ***OPT***ical ***T***ele***V***iewer). The software provides a comprehensive library of programs for field operations including logging data acquisition, log replay, probe control, probe calibration, and logging environment compensation. Video data are burned in real time to the hard drive of a DVD player/recorder, and often burned in the field to a DVD that is left with the client's on-site representative.

All of the logging instruments are permanently mounted in a dedicated Ford E-250 van or Dodge RAM2500 enclosed-bed truck, each with a self-contained power supply, and support and decontamination equipment. The downhole probes or sondes are connected to either a 200-meter capacity Smartwinch with approximately 600 feet of 0.375-inch coaxial cable, or a 2000m winch with approximately 1700 feet of 0.25-inch coaxial cable – depending on the depth of the wells logged.

Logging Parameters and Methodology

Geophysical well logging in general involves lowering sondes in a borehole and recording parameters that may be interpreted in terms of the soil or rock, the fluids contained in the soil or rock, and/or construction details of the well. There are many tools and techniques that have been developed to provide specific information in different environments and constructions of drilled holes. The data collected can define the nature and extent of geologic formations and formation fluids, and can be used to provide correlation between holes.

MAG operates a wireline logger that transmits data from the downhole sondes to a surface acquisition system where it is recorded in a digital format. Many logs can be produced on-site, and all logs can be processed, formatted, reprinted, manipulated, and interpreted later, as necessary.

Before tools are put into service for a particular job, MAG personnel test them for proper function and recalibrate as necessary. This is essential to the proper acquisition of downhole data and the ability to relate the data from one borehole to another.

Video

MAG operates the most sophisticated borehole camera on the market today. The unit has integrated lights that can illuminate a borehole up to 24 inches in diameter without the problems associated with an external lighthead obstructing the view downhole. Using keyboard controls, the unit is capable of tilting the lens from 0 to 90 degrees off of the axis of the borehole, and panning a full 360 degrees to provide complete visual coverage of the borehole. The video signal is acquired through the same system as the borehole geophysical equipment, except that the video signal is also directed to a DVD player/recorder with an internal hard drive that captures the signal.

Before lowering the video sonde into a well, a phosphate-free soap (liquinox) is applied to the camera lens to prevent floating films or particles from obstructing the view upon contact with the water. Upon penetrating the water, the camera is stopped briefly, and the soap rinses free to provide a clear picture. The speed of a video log depends on the presence or absence of noteworthy features in the borehole and is usually dictated by the client's interests. The depth of the camera lens is tracked by a digital encoder on the winch, and displayed in the upper left corner of the video frame. Upon completion of the video log, a copy is burned from the hard drive to a DVD, and presented to the client in the field.

Optical Televiewer

The borehole optical televiewer (OPTV) is a logging sonde that provides a high-resolution scan and digitization of the interior of a borehole using visible wavelength light. The accurately-scaled continuous image provides the location and character of features such as fractures and solution openings. It can also provide the strike and dip of planar features. The OPTV operates by using a high-resolution color downhole camera which views a reflection of the borehole walls in a hyperbolic correction mirror. At successive depth increments (normally 0.5 mm), rings of pixels corresponding to scans of the borehole wall are acquired from the probe and stacked into a continuous image. The image is rectangular – representing the interior of a cylinder that has been sliced open and rolled-out flat. The image is oriented to north based on data from magnetometers in the sonde (note that this leads to image distortion in steel-cased holes, and within several feet of the base of steel casing in open holes.) All OPTV sondes require an open borehole, or one filled with a clear fluid. As with the video sonde, before lowering the OPTV sonde into a well, a phosphate-free soap (liquinox) is applied to the camera window to prevent floating films or particles from obstructing the view upon contact with the water.

Planar features intersecting a cylindrical borehole appear sinusoidal on the flattened cylindrical image. The azimuth of the peak/trough of the sinusoid, and the amplitude of the sinusoid can be measured and used to calculate the strike and dip (see Appendix A) of such features.

Features observed in the borehole on an OPTV log can be characterized based on the Paillet Ranking System developed by the US Geological Survey, Water Resources Division, Borehole Geophysics Research Project. This system is a semi-subjective evaluation of permeability potential. The ranking system assigns a number value from zero to five to observed features. A rank of zero indicates a feature that appears sealed – with no water likely passing through it. Note that the geologic classification of features (e.g. bedding plane, lithologic contact, joint, fracture, foliation, etc.) is not specified since only water-bearing potential is considered. A rank of five corresponds to a grossly porous zone with large openings (e.g. a major fracture, fault or solution cavity). The ranking system, with examples, is provided in Appendix B.

Note that an OPTV image log is both accurately scaled, and accurately oriented. The accurate orientation is possible because the orientation of the sonde is tracked by three internal magnetometers and three internal accelerometers. In addition to orienting the image, the magnetic and accelerometer data can be used to calculate the exact borehole track in three dimensions. Since most boreholes do not maintain perfectly true verticality, such a plot is called a deviation plot.

Acoustic Televiewer

The high-resolution acoustic televiewer (HRAT) is similar to the OPTV, but it provides an image that is created not by reflected visible wavelength light, but by reflected ultrasound. Since ultrasonic pulses are used, it is possible to record both the amplitude and travel time of each pulse, and construct two separate images. The amplitude log is analogous to the visual OPTV log described above, while the travel time data are affected primarily by the local diameter of the borehole (i.e. the larger the bore, the later the arrival of the reflected pulse), and therefore supplement the caliper log (described below). The main advantage of the HRAT probe is that it can be used in larger boreholes than the OPTV, and in holes with turbid or particle-loaded fluids without compromising the quality of the image.

The HRAT operates by using a fixed acoustic transducer and a rotating acoustic mirror capable of focusing in borehole sizes from the probe diameter upwards. The acoustic transducer is focused based on the borehole diameter, and impedance-matched to the borehole fluid to provide optimum image resolution and reflected amplitude. Mirror rotation speed (i.e. circumferential resolution), sampling rate (i.e. depth resolution), signal gain (i.e. amplitude image contrast), and recording time gate (i.e. travel time image contrast) are all variable and under operator control to provide the best image possible under borehole-specific conditions.

As with OPTV logs, HRAT logs are presented as accurately-scaled and accurately-oriented cylindrical images that are sliced open and laid flat. Therefore, planar dipping features appear as sinusoids. Also, as with the OPTV, the magnetometer and accelerometer data that orient the image can be used to provide borehole deviation plots (which were not applicable in this survey due to the shallow depth of both wells).

Fluid Temperature

Fluid temperature logs provide the temperature of the air or fluid in a borehole as a function of depth. Temperature logs can indicate where water is entering or leaving a borehole – and thereby disturbing the normal geothermal gradient. Changes in the slope of the temperature log can be used to locate zones of water movement within the borehole. Temperature logs must be run in wells that have been allowed to fully equilibrate to the local geothermal gradient following any prior drilling, construction, pumping or sampling. During a temperature survey, data accuracy is ensured by maintaining a downward logging speed of approximately 8 to 12 feet per minute (fpm). This provides an adequate time buffer to allow sensors to respond to minor temperature changes.

Fluid Conductivity

Fluid conductivity logs provide a continuous measurement of the electrical conductivity of the borehole fluid – i.e. zero in air or hydrocarbons, greater than zero in water. In water, electrical conductivity is mostly a function of electrolytic content. Water with very low dissolved solid concentrations will yield low fluid conductivity, while water containing a high level of dissolved solids will be proportionally more conductive. Fluid conductivity logs often deflect where water-producing features are transmitting water into or out of the well (since the well water may have a differing electrolytic chemistry than the formation water). The fluid conductivity log is usually collected simultaneously with the temperature log – since for both, data from a fully equilibrated water column is required.

Natural Gamma

Gamma logs are one of the most widely used geophysical logs in groundwater applications. They are used primarily to identify changes in lithology – specifically the relative amounts of clay in various sedimentary units.

A gamma log provides a record of the total natural gamma radiation detected within a given energy range. In water-bearing rocks and sediments that are not contaminated by artificial radioisotopes, the most significant naturally-occurring, gamma-emitting radioisotopes are potassium-40 and the daughter products of the uranium and thorium decay series. If gamma-emitting artificial radioisotopes have been introduced by humans into the groundwater system, they will also produce part of the radiation measured.

The amplitude of gamma-log deflections is affected by any borehole condition that alters the density of the material through which gamma photons must pass or the length of the travel path. The bedding of a gamma-emitting formation must be thick to obtain a quantitative value since the detector will be affected by the radiation from the formation as the tool approaches and passes the bed. Although increases in borehole diameter or the presence of steel casing will decrease the recorded gamma count, it is possible to collect usable information in both cased and open portions of the borehole using the gamma sonde. The presence of potassium-rich (and therefore gamma-emitting) bentonite clay commonly used in well construction will generally produce high gamma count peaks on a natural gamma log. MAG has natural gamma detectors on many sondes, and comparison of the multiple gamma logs collected for any given well logging program are used to ensure that the depths of differing logs are not erroneously shifted. Therefore, the gamma log presented for any well may have been collected simultaneously with any of the other logs from the same well.

Caliper

Caliper measurements represent the average diameter of the borehole or well at a given depth. The caliper tool collects and transmits the data from three spring-loaded arms as the tool is lifted upwards in the borehole. The caliper tool is used to locate solution openings or fractures (where the borehole is typically enlarged due either to the presence of natural openings, or to plucking of broken rock by the drill bit), and to determine the length of casing intervals (as evident from small changes in casing diameter, or the small enlargements at threaded junctions, or narrowing due to the bead at welded junctions).

Caliper logs are collected by calibrating the downhole tool with a measuring template, lowering the tool to the desired depth, remotely opening the arms, and then logging the open borehole and casing diameter in an upward direction. Caliper logs are acquired with a logging speed of no more than 18 feet per minute.

Logging Results

Wells MW7D and MW21D were logged on October 24, 2006. As requested in the proposal, MAG logged the boreholes with the Optical Televiewer (OPTV) High Resolution Acoustic Televiewer (HRAT), Temperature, Conductivity, Natural Gamma, 3-Arm Caliper, sondes in each well. In addition, a Video log was recorded for MW7D and a DVD copy of the log was provided on-site (and is therefore not included in the presentation of this report).

Note that although proposed as part of the initial scope of work, the Electric (E-log) logging sonde (Long Normal Resistivity, Short Normal Resistivity, Single Point Resistance, and Spontaneous Potential) was not utilized due to the shallow depth of the boreholes and the limited amount of uncased borehole. In addition, the Heat Pulse Flowmeter logging survey was not performed, at the client's request.

The results of the televiewer and geologic logs are presented together on the enclosed hard-copy logs and digital logs (on CD), as are the flowmeter and fluid logs. The digital logs (on CD) can be opened using WellCAD Reader (also on the CD). The reader allows logs to be viewed at different scales (using the View>Depth Scale menu item), and plotted using the File menu items. The actual data can be seen in tabular form from the Tools>Tabular Editor menu.

Note that since analysis of borehole geophysical logs can be quite subjective, and the level of detail is dependent upon the specific goals of the geologist, the analysis by MAG below covers the major features of each log, as well as some possibly minor features to serve as examples or guides for further interpretation by geologists familiar with the site, local geology, and/or project goals. In general, logs may display spikes (i.e. deviations and returns to "background" levels), offsets (changes in background level), or slope changes. Any of these could be considered significant in certain situations, or when compared to correlating features at the same depth on other logs. If there are any questions about the features discussed (or not discussed) below, please do not hesitate to contact MAG.

MW7D

Noted Features

- The total depth (TD) of the well is approximately 28.25 feet below top of casing (TOC).
- The depth to water (DTW) was measured at 5.53 feet Below (TOC) at the time of the survey on October 24, 2006.
- The casing at the surface has an inner diameter of four inches, and extends to the bottom of casing (BOC) at 14.4 feet.
- The caliper (borehole diameter) log reveals only one interval of borehole enlargement, located from approximately 21.5-22.25 feet Below TOC.
- The fluid temperature log shows a slight step-like deviation at approximately 23 feet below TOC.
- The fluid conductivity log shows a step-like deviation at 22.5 feet Below TOC.
- The natural gamma log shows a deviation at 22 feet below TOC.
- Numerous planar features were recognizable on the televiewer logs. The strike, dip and Paillet Rank of these are listed on the log, as well as on the accompanying table (see Appendix C).

MW21D

Noted Features

- The total depth (TD) of the well is approximately 30.5 feet below top of casing (TOC).
- The depth to water (DTW) was measured at 5.65 feet Below (TOC) at the time of the survey on October 24, 2006.
- The casing at the surface has an inner diameter of four inches, and extends to the bottom of casing (BOC) at 16.1 feet.
- The caliper (borehole diameter) log reveals two intervals of borehole enlargement, located at approximately 28-29 feet below TOC.
- The fluid conductivity logs shows a slight step-like deviation at approximately 28.5 feet below TOC.
- The fluid temperature log shows no significant deviations or changes in slope.
- The natural gamma log shows no significant deviations or changes in slope.
- Numerous planar features were recognizable on the televiewer logs. The strike, dip and Paillet Rank of these are listed on the log, as well as on the accompanying table (see Appendix C).

Limitations

In making verbal or written interpretation of logs, MAG personnel give the client the benefit of their best professional judgment. However, since all interpretations are based on inference from electrical, magnetic, or other indirect measurements, MAG does not, and cannot, guarantee the accuracy or the correctness of any such interpretations. MAG shall not be liable for any loss, damages, or expenses resulting from reliance on such interpretations. MAG does not warrant the accuracy of log data transmitted by any electronic process and will not be responsible for intentional interpretation of log data by others. MAG makes no warranties – neither explicit nor implied. Under no circumstances shall MAG, its parent company Enviroscan, Inc., or their personnel be liable for consequential damages.

We appreciate this opportunity to have worked with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Mid-Atlantic Geosciences

Steven R. Snyder, P.G.
Geophysics Project Manager

Technical Review By:
Mid-Atlantic Geosciences

Felicia Kegel Bechtel, M.Sc., P.G.
President

enc. MW-7D and MW-21D Televiewer and Geologic Logs
Appendix A: The Terminology of Planar Geologic Features
Appendix B: The Paillet Ranking System
Appendix C: MW-7D and MW21D Planar Feature Characterization Tables
Digital Report and Logs on CD (see ReadMe file for instructions)

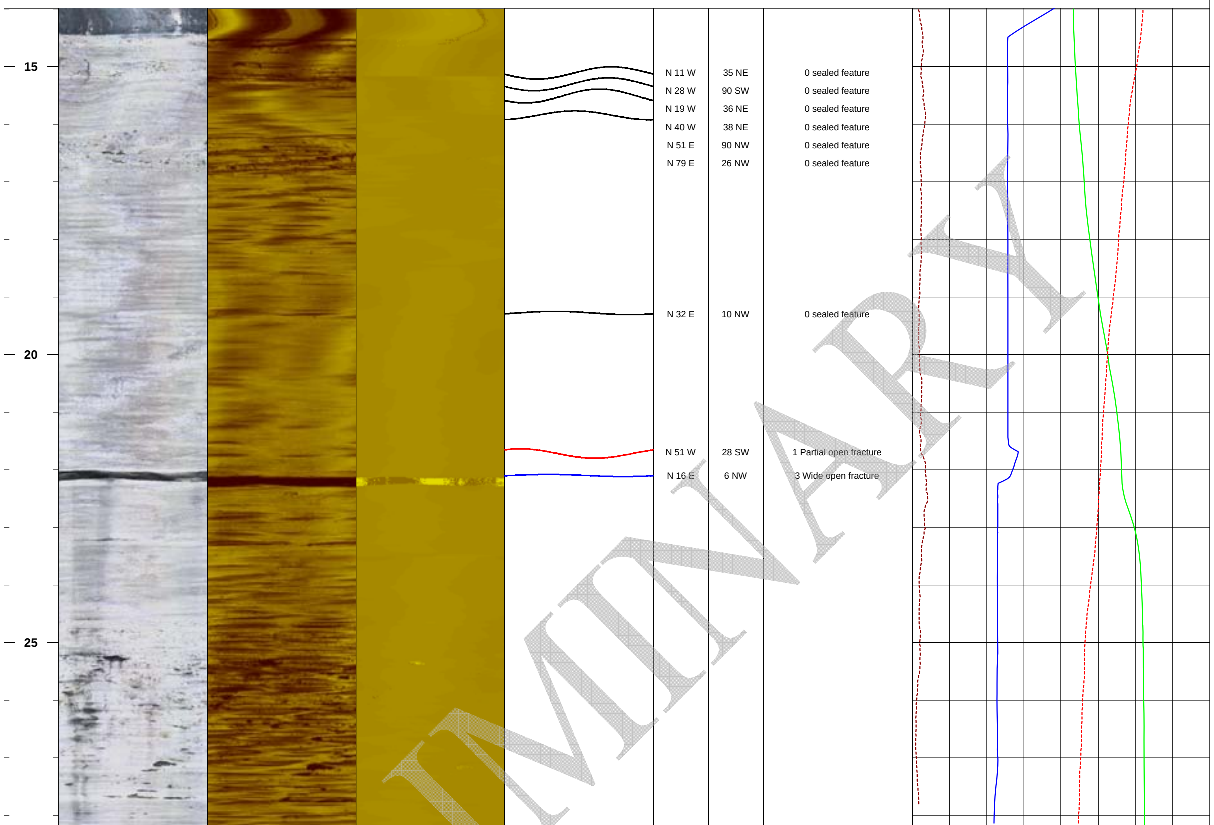
Mid-Atlantic Geosciences	**WELL ID**	**Logging Date:** 10-24-2006
Title: 080613-MW7D	MW-7D	**Logging Datum:** TOC
		BOC: 14.4' **DTW:** 5.53' **TD:** 28.25

Site Name: **Client:** Parsons

Location: Niagara Falls, NY **Project No.:** 080613

Revision Date: 10-25-2006

Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° (0 – 255)	0° 90° 180° 270° 0° (100 ns 0 – 3000)	0° 90° 180° 270° 0°				3 INCH 4	0 uS/cm 4000
								Natural Gamma: 0 CPS 200	Fluid Temperature: 14 °C 18



								Natural Gamma: 0 CPS 200	Fluid Temperature: 14 °C 18
Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:20ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° (0 – 255)	0° 90° 180° 270° 0° (100 ns 0 – 3000)	0° 90° 180° 270° 0°				3 INCH 4	0 uS/cm 4000

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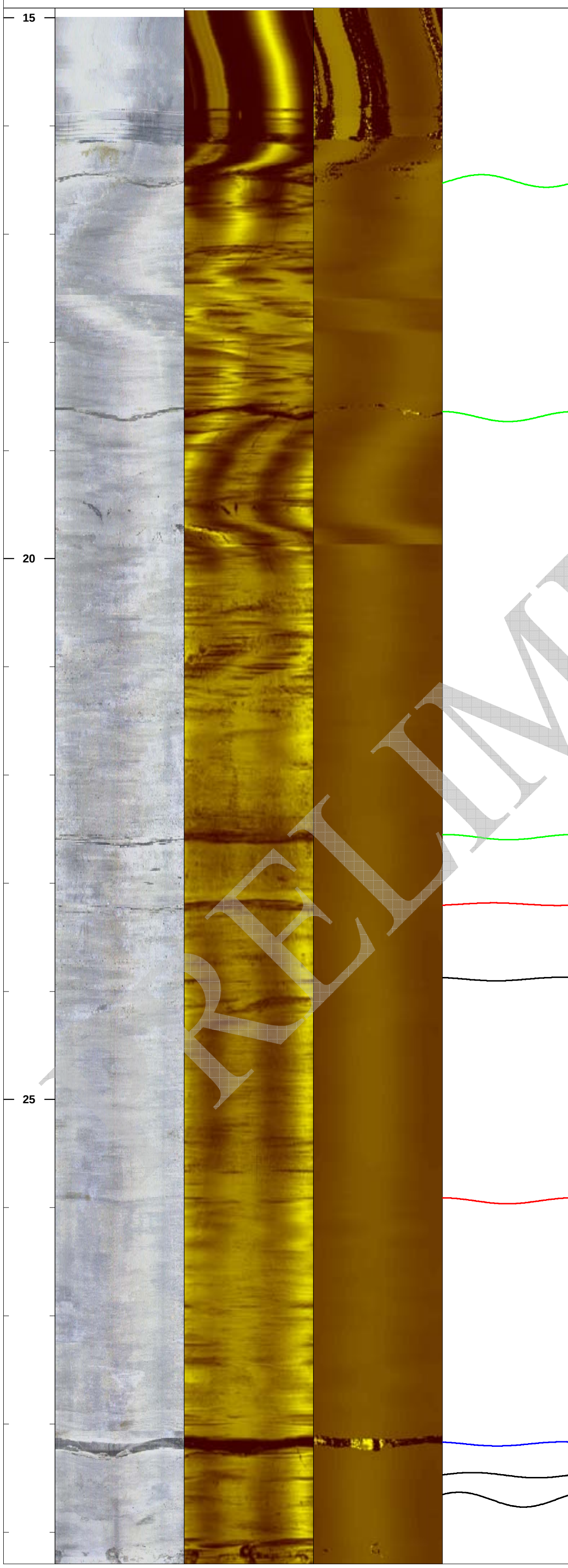
Mid-Atlantic Geosciences

Title: 080613-MW21D

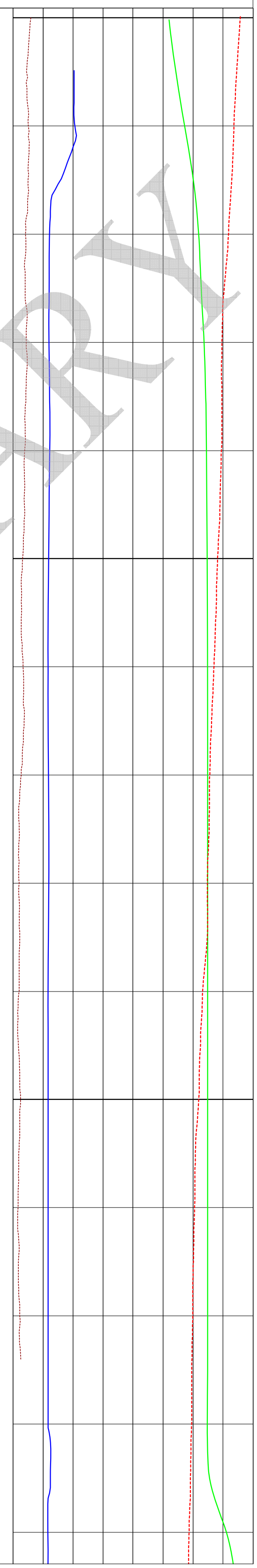
WELL ID	Logging Date: 10-24-2006
MW-21D	Logging Datum: TOC
	BOC: 16.1' DTW: 5.65' TD: 30.5

Site Name:
Location: Niagara Falls, NY
Client: Parsons
Project No.: 080613
Revision Date: 10-25-2006

Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Borehole Diameter	Fluid Conductivity
1ft:10ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° (0 – 188)	0° 90° 180° 270° 0° (1255 – 100 ns – 2550)	0° 90° 180° 270° 0°				3 INCH 5	0 uS/cm 3000
								Natural Gamma: 0 CPS 200	Fluid Temperature: 17 °C 19



Strike	Dip	Paillet Rank
		2 Continuous open fracture
N 87 W	16 SW	2 Continuous open fracture
N 84 W	9 SW	2 Continuous open fracture
N 51 E	4 NW	1 Partial open fracture
N 59 E	6 SE	0 sealed feature
N 88 W	10 SW	1 Partial open fracture
N 63 E	7 SE	3 Wide open fracture
N 6 W	9 SW	0 sealed feature
N 43 W	24 SW	0 sealed feature



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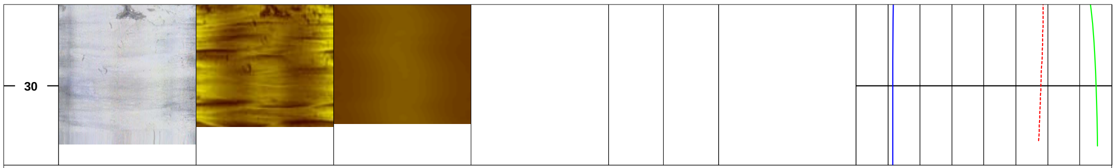

Depth	Optical Televiewer	HRAT Amplitude	HRAT Travel Time	Televiewer Features	Strike	Dip	Paillet Rank	Natural Gamma	Fluid Temperature
								0 CPS 200	17 °C 19
								Borehole Diameter	Fluid Conductivity
1ft:10ft	0° 90° 180° 270° 0°	0° 90° 180° 270° 0° 0 188	0° 90° 180° 270° 0° 1255 100 ns 2550	0° 90° 180° 270° 0°				3 INCH 5	0 uS/cm 3000

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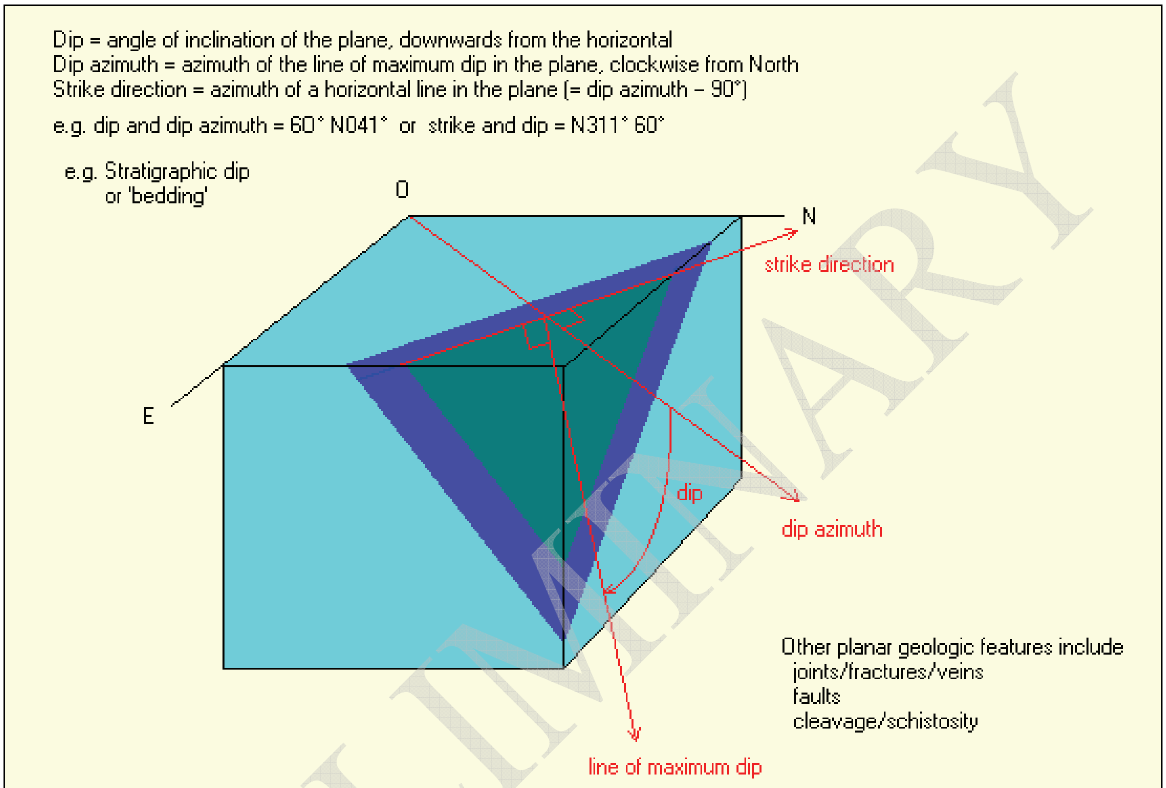
Appendix A

Geometry of a Planar Feature Intersecting a Borehole

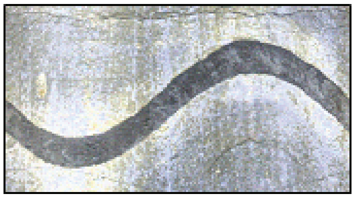
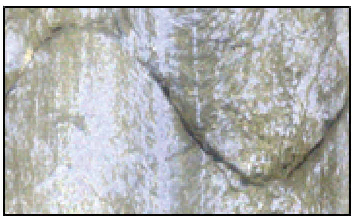
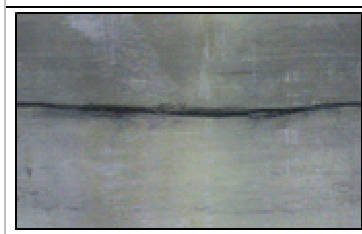
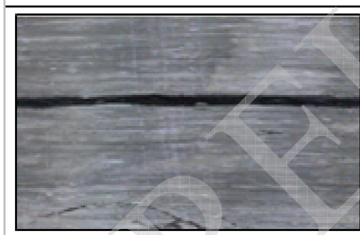
Geometry of a Planar Feature Intersecting a Borehole



Appendix B

The Paillet Ranking System

The Paillet Ranking System

Example OPTV Feature	Paillet Rank	Description
	0	Sealed feature – no flow
	1	Partial open fracture
	2	Continuous open fracture
	3	Wide open fracture or fractures
	4	Very wide fracture or multiple interconnected fractures
	5	Major fracture zone or breakout

Appendix C

Planar Feature Characterizations Tables

Mid-Atlantic Geosciences
Planar Feature Characterizations

Well ID:	MW7D	Client:	Parsons
Site Name:		Project No.:	080613
Location:	Niagara Falls, NY	Revision Date:	10/25/2006

Depth	Strike (deg.)	Dip (deg.)	Paillet Rank
	Note: Any strike correct for dip=0		
15.1	N 11 W	35 NE	0 sealed feature
15.3	N 28 W	90 SW	0 sealed feature
15.3	N 19 W	36 NE	0 sealed feature
15.5	N 40 W	38 NE	0 sealed feature
15.6	N 51 E	90 NW	0 sealed feature
15.8	N 79 E	26 NW	0 sealed feature
19.3	N 32 E	10 NW	0 sealed feature
21.7	N 51 W	28 SW	1 Partial open fracture
22.1	N 16 E	6 NW	3 Wide open fracture

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Planar Feature Characterizations

Well ID:	**MW21D**	**Client:**	**Parsons**
Site Name:		**Project No.:**	**080613**
Location:	**Niagara Falls, NY**	**Revision Date:**	**10/25/2006**

Depth	Strike (deg.)	Dip (deg.)	Paillet Rank
	Note: Any strike correct for dip=0		
16.5	N\A	N\A	2 Continuous open fracture
18.7	N 87 W	16 SW	2 Continuous open fracture
22.6	N 84 W	9 SW	2 Continuous open fracture
23.2	N 51 E	4 NW	1 Partial open fracture
23.9	N 59 E	6 SE	0 sealed feature
25.9	N 88 W	10 SW	1 Partial open fracture
28.2	N 63 E	7 SE	3 Wide open fracture
28.5	N 6 W	9 SW	0 sealed feature
28.7	N 43 W	24 SW	0 sealed feature

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