2015 ANNUAL MONITORING / INSPECTION REPORT

SNPE- VDM Creek Bank Corrective Actions

VanDeMark Chemical Inc. – Lockport, New York

Order on Consent: R9-20080205-5

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1.0 INTRODUCTION

Golder Associates Inc. (Golder) under contract to SNPE Inc. (SNPE) and in close cooperation with VanDeMark Chemical Inc. (VDM), the Site owner, has prepared this annual monitoring and inspection summary report for 2015, in support of the Operations and Maintenance Plan (OMP) that was prepared for the VDM Lockport facility by Golder (Golder, April 2013). This summary report describes the activities that were undertaken during 2015 to maintain and monitor the effectiveness of the remedial system that was implemented at the VDM site along a portion of VDM's property adjacent to the north bank of Eighteen Mile Creek Bank (hereafter referred to as the "Creek Bank Area") and associated groundwater/DNAPL impacts at VDM's manufacturing facility in Lockport, New York. The VDM facility is located in the north central sector of the City of Lockport city limits, as shown on Figure 1-1.

The purpose of the constructed remedial system was twofold: create a barrier to restrict and contain the migration of dense non-aqueous phase liquid (DNAPL) consisting of coal tar residuals that have been exiting the fractured bedrock formation at, or near, the toe of the Creek Bank area slope; and promote the collection of the DNAPL in a defined permeable trench for subsequent mechanical removal, if required. This annual monitoring/inspection report documents the extent to which these objectives are being met based on the following primary activities that were conducted throughout the 2015 monitoring period:

- Three visual inspections for presence of DNAPL in the passive upgradient permeable collection trench installed along the grout cutoff wall alignment;
- Three visual inspections for presence of DNAPL along the Eighteen Mile Creek bank areas where coal tar residuals have previously been observed;
- Semi-annual groundwater sampling of the four piezometers installed upgradient and downgradient of the grout cutoff wall;
- Semi-annual sampling of the water discharge from the collection trench Filter Sump overflow chamber;
- Semi-annual groundwater sampling of two representative monitoring wells located within the VDM Plant at the top of the Niagara Escarpment;
- Visual inspection of the Filter Sump media (i.e., filter sand and activated carbon) and sump chamber;
- Visual inspection of the passive collection trench for the presence of DNAPL residuals; and,
- Visual inspection of the collection trench permeable stone media and DNAPL observation sumps.

Figure 1-2 shows the locations of the areas both within the active VDM facility and to the south along the Eighteen Mile Creek Bank Area (Creek Bank Area) that were monitored as part of this annual report.

The following sections present details on the frequency and methodologies employed for the inspections, monitoring and maintenance activities described above. The documentation and reporting associated with these activities are also described and provided.

2.0 SEMI-ANNUAL MONITORING AND INSPECTIONS

On March 18, 2015, the NYSDEC approved the petition dated March 5, 2015 from SNPE to reduce annual inspections from quarterly to semi-annually to coincide with the semi-annual groundwater sampling events. This schedule was implemented for the 2015 O & M reporting period.

2.1 Passive DNAPL Collection Trench

Visual inspections were performed on the DNAPL collection trench by Golder personnel in May, and November 2015. Based on the visual inspections performed by Golder personnel, the following observations were recorded and summarized on written inspection reports, included in this report as Appendix A.

2.1.1 May 2015 Inspection

DNAPL accumulation was not observed during the May 2015 inspection period within the DNAPL observation sumps located within the DNAPL collection trench based on visual inspection and use of a wooden probe stick inserted to bottom of four, 4-inch diameter PVC DNAPL observation sumps (OS-1, OS-2, OS-3 and OS-4). Groundwater was encountered in OS-1 and OS-3, while OS-2 and OS-4 were dry. Snow covered ground conditions limited the visual inspection of some sheltered slope areas. The down-gradient slope was generally obscured by snow cover, while the up-gradient slope was only partially covered.

2.1.2 November 2015 Inspection

DNAPL accumulation was not observed during the November 2015 inspection period within the DNAPL observation sumps located within the DNAPL collection trench based on visual inspection and use of a stick to probe the bottom of four, 4-inch diameter PVC DNAPL observation sumps (OS-1, OS-2, OS-3 and OS-4). Groundwater was encountered in OS-1 and OS-3, while OS-2 and OS-4 were dry. Large amounts of dead foliage inhibited the visual inspection of both the up and down-gradient slopes.

2.2 Creek Bank Area

Visual inspections were performed along approximately 300 feet of the Creek Bank Area down gradient of the DNAPL collection trench in May and November, 2015. Based on the visual inspections performed by Golder personnel, the following observations were recorded and summarized on written inspection reports, included in this report as Appendix A.

2.2.1 May 2015 Inspection

DNAPL accumulation was observed by the NYSDEC and Golder representatives along a 15-20 long section of the creek bank south of PZ-1 on the down gradient side of the collection trench during the May 2015 inspection. The small outcroppings of solidified DNAPL were discovered intermingled within portions of a partially exposed large stone formation assumed to be a part of a former buried mill race structure

adjacent to the creek bank. The large rock structure was not removed during the construction of the collection trench as it was critical to the structural support of the creek bank in that area. It was agreed that all exposed DNAPL seeps observed during the May inspection would be removed by Golder during the November 2015 inspection visit. During the May inspection no other signs of DNAPL were observed along the up-gradient slope and toe area of the creek bank north of the DNAPL collection trench, as well as the down-gradient portion adjacent to the creek.

2.2.2 November 2015 Inspection

During the November 2015 inspection the exposed DNAPL residuals noted during the May 2015 inspection were removed by Golder personnel with hand tools and placed in 5 gallon containers. A total of 3 containers were filled (approximately 15 gallons by volume) of DNAPL residuals were removed and transferred to a poly lined 55 gallon steel drum supplied by VanDeMark. The material was removed from a 15-20 long section of the creek bank south of the buried stone structure which is also south of the PZ-1 location. No additional DNAPL accumulations were observed during the November 2015 inspection period along the up-gradient slope and toe area of the creek bank north of the DNAPL collection trench, although remaining foliage at the time of inspection may have limited full observation of possible small outbreaks. New DNAPL accumulations were not observed along the down-gradient portion adjacent to the Creek.

2.3 Collection Trench Overflow Filter Sump Structure

Inspections of the collection trench drainage/filtration system including the Filter Sump and gravel filled sump drain were performed during the May and November, 2015 inspection periods. Visual observations included noting the general condition of the drainage sump filter media and any evidence of excessive solids accumulation, presence of DNAPL residuals or filter media washout. Based on the visual inspections performed by Golder personnel, the following observations were recorded and summarized on written inspection reports, included in this report as Appendix A.

2.3.1 May 2015 Inspection

During the May 2015 inspection period, DNAPL or other signs of contamination were not present on the surface of accumulated water or filter media in the filter sump. There was no erosion or disturbance of the drainage sump filter media, with only negligible sediment present on the top of the sand media. The overflow section (filtered water discharge chamber) of the sump structure was clear and free of any sediment or solids. Water was observed to be freely overflowing to the discharge pipe.

The gravel filled sump drainage area adjacent to the filter sump was observed to be in good condition with no evidence of surficial water overflow, silting or DNAPL.

2.3.2 November 2015 Inspection

During the November 2015 inspection period, DNAPL or other signs of contamination were not present on the surface of accumulated water or filter media in the filter sump. There was no erosion or disturbance of the drainage sump filter media, with only a small amount sediment present on the top of the sand media. The overflow section (filtered water discharge chamber) of the sump structure was clear and free of any sediment or solids. Water was observed to be freely overflowing to the discharge pipe.

The gravel filled sump drainage area adjacent to the filter sump was observed to be in good condition with no evidence of surficial water overflow, silting or DNAPL.

3.0 SEMI-ANNUAL GROUNDWATER MONITORING

3.1 Introduction

A total of four (4) piezometers located in the Creek Bank Area were installed in 2012 and two (2) bedrock monitoring wells located at the top of the escarpment within the VDM plant site and installed in 1999 and 2006 were monitored to establish a groundwater quality baseline data set at the site as described below. A table summarizing the piezometer, monitoring well and DNAPL Observation Sump installation information (Table 3-1) was provided in the Operations & Maintenance Plan (OMP) report previously submitted by Golder (Golder, April 2013).

3.2 Creek Bank Piezometers

Piezometer development and semi-annual groundwater sampling was performed on the four (4) piezometers (PZ-1, PZ-2, PZ-3 and PZ-4) installed as part of the Creek Bank Corrective Measures in 2012 (refer to Figure 3-1) as described below.

3.2.1 Piezometer Development

The 2-inch diameter piezometers were purged prior to both the May and November 2015 sampling events. Purging methods implored by Golder personnel involved the use of dedicated polyethylene bailers to remove standing water and sediment trapped in well screens to insure representative samples of groundwater at each location. Purging of piezometers continued until extraction of three well volumes was complete and field measurements for turbidity, pH, specific conductivity and temperature stabilized.

Well purging data, including the duration of the development process, methods employed, and the volume of water removed, are included on the Sample Collection Field Logs provided in Appendix B. Water purged from the piezometers during the development process was collected by Golder personnel in appropriate containers and discharged into VDM's process sewer manhole.

3.2.2 Piezometer Sampling & Analytical Results

Following development, groundwater samples were collected from each of the piezometers to assess the general groundwater quality up gradient and down gradient of the grout wall and bedrock cutoff system. Pre-sampling activities included determining the piezometer's water elevation, a piezometer-maintenance check, and non-aqueous phase liquid (NAPL) determination. All piezometers were measured, however piezometer PZ-1 was found to be dry during sampling activities and no measurements could be obtained. After completion of these pre-sampling activities, the piezometers were purged of three well volumes (or until dry). A sample of the third well volume was measured for the following field parameters: pH, temperature, and specific conductivity.

Groundwater samples were then collected for chemical analysis using dedicated polyethylene bailers. The groundwater samples were shipped via courier under proper chain of custody procedures to TestAmerica Laboratories, Inc. (TestAmerica) in Buffalo, New York, a New York State Department of Health Environmental Laboratory Accreditation Program (ELAP) certified laboratory, within 24 hours of collection. Water purged from the piezometers during the sampling activities was collected in appropriate containers by Golder personnel and discharged into VDM's process sewer manhole. At the conclusion of each semi-annual sampling event, the physical condition of the piezometers and protective casings/locks was also noted and any recommended repairs or maintenance required (if necessary) was documented on the sample collection field logs provided in Appendix B.

All piezometer groundwater samples collected were analyzed for TCL Volatile Organic Compounds (VOCs) in accordance with USEPA Method 8260B and TCL Semi-volatile Organic Compounds (SVOCs) in accordance with USEPA Method 8270C and the analytical results are presented in Table 3-1. This is the third year of Site monitoring following the completion of the Corrective Measures, therefore the 2015 sample results are also presented in Table 3-2 comparing this year's analytical results to the 2013 and 2014 groundwater sampling events analytical results.

The results of the piezometer sampling and analyses identified one SVOC, phenol, in PZ-3, in both sampling events as exceeding the NYSDEC Part 703 groundwater quality standards (GWQS). The detection of phenol in this piezometer is consistent with previous sampling event findings. No other compounds were detected above the GWQS in the piezometers. Golder will assess the piezometer groundwater data for trends and evaluate the effectiveness of the Corrective Measures as additional analytical data is collected during future annual monitoring events.

3.3 Plant Monitoring Well Sampling & Analytical Results

Semi-annual groundwater sampling was performed on only one (1) existing monitoring well, MW-7D, located within the operational portion of the VDM facility at the top of the escarpment, to assess the general groundwater quality at these up gradient locations on the top of the escarpment. Monitoring Well MW-7D was installed in 2006 by Benchmark as part of voluntary site investigations associated with the sale of the facility. During the June 2014 sampling event MW-3D, installed in 1999 by Dames and Moore and located within the operational portion of the VDM facility, was noted as being damaged by plant snow removal activities the previous winter/spring, therefore no samples were obtained from MW-3D during the 2014 and 2015 sampling events and a replacement well was not identified for sampling. Location of the wells is presented on Figure 1-2.

Pre-sampling activities included measuring the well's water elevation, a well-maintenance check, and non-aqueous phase liquid (NAPL) determination. After completion of these pre-sampling activities, the wells were purged of three well volumes (or until dry). A sample of the third well volume was measured for

the following field parameters: pH, temperature, and specific conductivity. Groundwater samples were then collected for chemical analysis using dedicated polyethylene bailers. The groundwater samples were shipped via courier under proper chain of custody procedures to Test America within 24 hours of collection. Water purged from the wells during the sampling activities was collected in appropriate containers by Golder personnel and discharged into VDM's process sewer manhole.

All monitoring well groundwater samples collected were analyzed for TCL Volatile Organic Compounds (VOCs) in accordance with USEPA Method 8260B and TCL Semi-volatile Organic Compounds (SVOCs) in accordance with USEPA Method 8270C and the analytical results are presented in Table 3-1. This is the third year of Site monitoring following the completion of the Corrective Measures and 2015 sample results are also presented in Table 3-2 to compare 2015 analytical results to the results from the 2013 and 2014 groundwater sampling events analytical results.

The results of the monitoring well sampling and analyses identified six VOCs in the spring and fall 2015 monitoring events as exceeding the NYSDEC Part 703 GWQS. One SVOC, acenaphthene was detected in monitoring well MW-7D during the May 2015 sampling event above the GWQS.

VOCs detected in MW-7D within the operational portion of the VDM facility were not detected in down-gradient piezometers. Golder will continue to assess Plant monitoring well groundwater data for trends and evaluate potential impacts of the up-gradient groundwater on the Corrective Measures as additional analytical data is collected from future annual monitoring events.

At the conclusion of each semi-annual sampling event, the physical condition of the monitoring wells and protective casings or covers was noted and any recommended repairs or maintenance required (if necessary) was documented on the sample collection field logs provided in Appendix B.

3.4 Filter Sump Structure Sampling & Analytical Results

Semi-annual sampling was performed on the collection trench drainage/filtration system overflow chamber (Filter Sump) as part of the annual site inspection activities performed by Golder personnel in 2014. One aqueous sample was collected from the overflow chamber of the Filter Sump to assess the general performance of the grout wall and bedrock cutoff system. Pre-sampling activities included inspection of the vault filter media, a vault-maintenance check, and non-aqueous phase liquid (NAPL) determination.

After completion of these pre-sampling activities, a sample of the Filter Sump effluent water was measured for the following field parameters: pH, temperature, and specific conductivity. Aqueous samples were then collected for chemical analysis by direct fill methods. The aqueous samples were shipped via courier under proper chain of custody procedures to TestAmerica within 24 hours of collection.

Samples collected from the Filter Sump overflow chamber were analyzed for TCL Volatile Organic Compounds (VOCs) in accordance with USEPA Method 8260B and TCL Semi-volatile Organic Compounds (SVOCs) in accordance with USEPA Method 8270C and the analytical results are presented in Table 3-1. This is the third year of Site monitoring following the completion of the Corrective Measures, therefore the 2015 sample results are presented in Table 3-2 comparing this year's analytical results to the 2013 and 2014 Filter Sump analytical results. Golder will continue to assess the Filter Sump system overflow chamber data for trends and evaluate the effectiveness of the Corrective Measures as appropriate.

One VOC, chloroform was detected in the Filter Sump sample during the November 2015 effluent sampling. One SVOC was detected bis(2-ethlhexyl)phthalate above the GWQS in the May sampling event as exceeding the NYSDEC Part 703 groundwater quality standards (GWQS). Bis(2-ethlhexyl)phthalate is a common laboratory contaminant and was not detected in the 2013 or 2014 sample results, therefore they are considered to be an anomalous result in this sample. No other compounds were detected above the GWQS.

At the conclusion of each semi-annual sampling event, the physical condition of the collection vault was noted and any recommended repairs or maintenance required (if necessary) was documented on the sample collection field logs provided in Appendix B.

4.0 MAINTENANCE AND CLEAN-OUT ACTIVITIES

As described in Section 2.0 above, the inspections conducted in 2015 did not find evidence of DNAPL impacts to the DNAPL Collection Trench or Filter Sump, therefore maintenance or clean-out activities were not necessary or performed on these components of the Creek Bank Area remedial system. Repairs to the piezometers and monitoring wells were not required since no damage was observed to the protective casings, locks or the monitoring well or piezometer risers.

Approximately 15 gallons of solidified DNAPL residuals was removed from the creek bank south of PZ-1 as described in Section 2.2. The collected material was transferred into a poly lined 55 gallon steel drum for characterization and disposal by VDM. Some routine trimming of tree branches and debris clearing was performed by VDM along the access road down to the bottom of the Creek Bank Area to maintain good access to the monitoring piezometers and Filter Sump.

5.0 REFERENCES

1.) Golder Associates Inc., *SNPE-VanDeMark Corrective Actions, Operation & Maintenance Plan*, prepared for SNPE Inc., April 2013.

TABLES

SNPE-VANDEMARK SITE
2015 GROUNDWATER AND VAULT MONITORING RESULTS
LOCKPORT, NY

Lab ID	NYSDEC Part 703 Groundwater Quality Standards	480-80722-4	480-90488-4	480-80722-5	480-90488-5	480-80722-1	480-90488-1	480-80722-2	480-90488-2	480-80722-3	480-90488-3	480-80722-6	130617007-007
Sample Date		5/20/2015	11/4/2015	5/20/2015	11/4/2015	5/20/2015	11/4/2015	5/20/2015	11/4/2015	5/20/2015	11/4/2015	5/20/2015	11/4/2015
Sample ID		Vault Effluent	Vault Effluent	MW-7D	MW-7D	PZ-2	PZ-2	PZ-3	PZ-3	PZ-4	PZ-4	Dup (Vault)	Dup (Vault)
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Volatile Organics by GC/MS (US EPA Method 8260B)													
1,1,1-Trichloroethane	5	-	-	**52**	**59**	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	**180**	**210**	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	**54**	**60**	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	-	-	**3.6** J	**4.2** J	-	-	-	-	-	-	-	-
2-Butanone	NV	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	NV	-	-	-	-	-	-	9.1 J	4.9 J	-	-	-	-
Carbon disulfide	60	-	-	-	-	-	-	-	3	-	-	-	-
Carbon tetrachloride	5	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	-	-	**68**	**110**	-	-	-	-	-	-	-	-
Chloroform	7	2.4	**11**	-	-	1.6	0.54 J	-	-	-	-	2.6	**11**
cis-1,2-Dichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	-	-	**13**	**15**	-	-	-	-	-	-	-	-
Semivolatile Organics by GC/MS (US EPA Method 8270C)													
Biphenyl	5	-	-	3.3 J	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	5	-	-	-	-	-	0.56 J	-	-	-	-	-	-
2-Methylnaphthalene	NV	-	-	-	-	-	-	1.9 J	2 J	-	-	-	-
2-Nitroaniline	5	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	5	-	-	-	-	-	-	1.5 J	1.4 J	-	-	-	-
4-Methylphenol & 3-Methlyphenol	5	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	20	-	-	**42** J	-	3.5 J	5	4.2 J	3.7 J	-	-	-	-
Acenaphthylene	NV	-	-	0.54 J	-	-	-	-	-	-	-	-	-
Anthracene	NV	-	-	0.84 J	-	0.75 J	-	0.32 J	0.38 J	-	-	-	-
Benzaldehyde	NV	-	-	-	-	-	0.26 J	-	-	-	-	-	-
Benzo(a)anthracene	NV	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	ND	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	NV	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	**7.9**	3.2 J	-	-	-	1.8 J	-	2.7 J	-	1.7 J	-	-
Butyl benzyl phthalate	5	-	0.47 JB	0.48 J	-	-	0.47 JB	-	0.48 JB	-	0.61 JB	-	0.48 JB
Caprolactam	NV	-	-	-	2200	-	140 DL	-	280	-	110	-	-
Carbazole	NV	-	-	5.2	-	0.88 J	1.2 J	0.62 J	0.48 J	-	-	-	-
Chrysene	NV	-	-	-	-	0.42 J	0.33 J	-	-	-	-	-	-
Dibenzofuran	NV	-	-	32	-	-	0.51 J	-	-	-	-	-	-
Di-n-butyl phthalate	50	-	-	-	-	0.48 JB	-	-	-	-	-	0.3 JB	-
Fluoranthene	NV	-	-	1.2 J	-	0.96 J	1.4 J	-	-	-	-	-	-
Fluorene	NV	-	-	22	-	1.5 J	2.2 J	1.1 J	0.76 J	-	-	-	-
Isophorone	NV	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	NV	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	10	-	-	1.4 JB	-	2.4 JB	1.4 J	7 B	6.6	-	-	-	-
Nitrobenzene	0.4	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	6.2	-	3.1 J	6.1	1.6 J	1.5 J	-	-	-	-
Phenol	1*	-	-	-	-	-	-	**50**	**73** J	-	-	-	-
Pyrene	NV	-	-	0.47 J	-	1.7 J	2 J	-	0.46 J	-	-	-	-

Key:
Vault Effluent Sample Results
Plant Monitoring Well Sample Results
Piezometer Sample Results

Footnotes:
- Compound not detected above the Analytical Method Detection Limit
BOLD = Value exceed the groundwater quality standards.
* = The sum of all phenols
NV = No GW Quality Standard

Qualifications:
J = Analyte detected at a level less that Reporting Limit and greater than or equal to the Method Detection Limit.
B = Analyte detected in the method blank.

SNPE-VANDEMARK SITE
HISTORIC GROUNDWATER AND VAULT MONITORING RESULTS
LOCKPORT, NY

Lab ID		130617007-001	130930005-006B	480-62067-2	480-71961-4	480-80722-4	480-90488-4	130617007-003	130930005-001B	-	130617007-002	130930005-002B	480-62067-1	480-71961-5	480-80722-5	480-90488-5	130617007-004	130930005-003B	480-62067-6	480-71961-1	480-80722-1	480-90488-1	130617007-005	130930005-004B	480-62067-3	480-71961-2	480-80722-2	480-90488-2	130617007-006	130930005-005B	480-62067-5	480-62067-3	480-80722-3	480-90488-3
Sample Date	NYSDEC Part 703 Groundwater	6/13/2013	9/26/2013	6/17/2014	11/25/2014	5/20/2015	11/4/2015	6/13/2013	9/26/2013	-	6/13/2013	9/26/2013	6/17/2014	11/25/2014	5/20/2015	11/4/2015	6/13/2013	9/26/2013	6/17/2014	11/25/2014	5/20/2015	11/4/2015	6/13/2013	9/26/2013	6/17/2014	11/25/2014	5/20/2015	11/4/2015	6/13/2013	9/26/2013	6/17/2014	11/25/2014	5/20/2015	11/4/2015
Sample ID	Quality Standards	Vault Effluent	Vault Effluent	Vault Effluent	Vault Effluent	Vault Effluent	Vault Effluent	MW-3D	MW-3D	MW-3D+	MW-7D‡	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	PZ-2	PZ-2	PZ-2	PZ-2	PZ-2	PZ-2	PZ-3	PZ-3	PZ-3	PZ-3	PZ-3	PZ-3	PZ-4	PZ-4	PZ-4	PZ-4	PZ-4	PZ-4
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Volatile Organics by GC/MS (US EPA Method 8260B)																																		
1,1,1-Trichloroethane	5	-	-	-	-	-	-	**11**	**13**		**19**	**71**	**97**	**140**	**52**	**59**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	**87**	**120**		**79**	**260**	-	**350**	**180**	**210**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	5	-	-	-	-	-	-	**27**	**38**		**21**	**70**	**77**	**110**	**54**	**60**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.6	-	-	-	-	-	-	**17**	**23**		**2** J	-	**4.8**	**6.6**	**3.6** J	**4.2** J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone	NV	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	NV	1.8 J, B	-	-	-	-	-	-	-		-	-	-	-	-	-	-	12	-	-	-	-	-	8.6 J	16 *	6 J	9.1 J	4.9 J	8.3 J, B	-	-	-	-	-
Carbon disulfide	60	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.61 J	-	-	3	-	-	-	-	-	-
Carbon tetrachloride	5	-	-	-	-	-	-	-	-		-	-	0.53 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	5	-	-	-	-	-	-	-	-		**20**	**58**	**73**	**100**	**68**	**110**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	7	4.2 J	-	3.7	**9.6**	2.4	**11**	-	-		-	-	0.8 J	-	-	-	**12**	**14**	3.2	0.6 J	1.6	0.54 J	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	5	-	-	-	-	-	-	-	-		-	-	0.98 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	5	-	-	-	-	-	-	-	-		2.9 J	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-	-		-	-	1.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	2	-	-	-	-	-	-	**17**	**26**		**5.3** J	**23**	**21**	**19**	**13**	**15**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Semivolatile Organics by GC/MS (US EPA Method 8270C)																																		
Biphenyl	5	-	-	-	-	-	-	-	-		-	-	-	5	3.3 J	-	-	-	-	0.1 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	5	-	-	-	-	-	-	-	-		-	-	-	0.48 J	-	-	-	-	-	0.9 J	-	0.56 J	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	NV	-	-	-	-	-	-	-	-		-	1.1 J	-	-	-	-	-	-	-	-	-	-	-	-	0.79 J	1.3 J	1.9 J	2 J	-	-	-	-	-	-
2-Nitroaniline	5	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1 J	-	-	-	-	-	-	-	-
4-Methylphenol	5	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	2.6 J	-	1.2 J	1.5 J	1.4 J	-	-	-	-	-	-
4-Methylphenol & 3-Methylphenol	5	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**5.9** J	-	-	-	-	-
Acenaphthene	20	-	-	-	-	-	-	2.5 J	2.9 J		**27**	**28**	12	**39**	**42** DL	-	-	1.4 J	0.88 J	4.1 J	3.5 J	5	-	3.7 J	1.6 J	2.7 J	4.2 J	3.7 J	-	-	-	-	-	-
Acenaphthylene	NV	-	-	-	-	-	-	1.2 J	-		-	-	-	0.56 J	0.54 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	NV	-	-	-	-	-	-	-	-		-	-	0.22 J	1 J	0.84 J	-	-	-	0.23 J	1.2 J	0.75 J	-	1.1 J	- J	-	-	0.32 J	0.38 J	-	-	-	-	-	-
Benzaldehyde	NV	-	-	-	0.86 JB*	-	-	-	-		-	-	-	0.84 JB*	-	-	-	-	-	0.87 JB	-	0.26 J	-	-	-	1.5 JB*	-	-	-	-	-	0.89 JB*	-	-
Benzo(a)anthracene	NV	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	2.0 J	0.38 J	0.53 J	-	-	1.3 J	- J	-	-	-	-	-	-	-	-	-	-
Benzo(a)pyrene	ND	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	**1.6** J	-	**0.5** J	-	-	**1** J	- J	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene	NV	-	-	-	-	-	-	-	-		-	-	-	0.28 J	-	-	-	-	-	0.43 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-ethylhexyl)phthalate	5	-	-	-	3.1 J	**7.9**	3.2 J	-	-		-	2.5 J	**6.7** J	3.5 J	-	-	1.5 J	1.1 J	-	3.4 J	-	1.8 J	1.2 J	- J	-	**6.3**	-	2.7 J	-	**15** J	3.1 J	-	1.7 J	-
Butyl benzyl phthalate	5	-	-	-	-	-	0.47 JB	-	-		-	-	-	-	0.48 J	-	-	-	-	-	-	0.47 JB	-	-	-	-	-	0.48 JB	-	-	-	-	0.61 JB	-
Caprolactam	NV	-	-	-	-	-	-	-	-		-	-	-	-	-	2200	-	-	-	-	-	140 DL	-	-	-	-	-	280 DL	-	-	-	-	110	-
Carbazole	NV	-	-	-	-	-	-	-	1.2 J		2.3 J	5.1	2.2 J	10 *	5.2	-	-	-	-	1.1 J*	0.88 J	1.2 J	-	-	-	-	0.62 J	0.48 J	-	-	-	-	-	-
Chrysene	NV	-	-	-	-	-	-	-	-		-	-	-	-	-	-	1.1 J	2.2 J	0.42 J	0.59 J	0.42 J	0.33 J	1.4 J	- J	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	NV	-	-	-	-	-	-	-	1.2 J		16	18	6.5 J	-	32	-	-	-	-	-	-	0.51 J	-	-	-	-	-	-	-	-	-	-	-	-
Di-n-butyl phthalate	50	1.2 J, B	-	-	-	-	-	2 J, B	1.4 J		1.5 J, B	2.5 J	-	27	-	-	-	-	-	-	0.48 JB	-	-	-	-	-	-	-	-	-	-	0.31 J	-	-
Fluoranthene	NV	-	-	-	-	-	-	-	-		-	1.5 J	0.34 J	1.3 J	1.2 J	-	1.1 J	2.6 J	0.47 J	1.7 J	0.96 J	1.4 J	1.6 J	- J	-	-	-	-	-	-	-	-	-	-	-
Fluorene	NV	-	-	-	-	-	-	-	-		8.9	9.7	4.3	18	22	-	-	-	0.32 J	1.9 J	1.5 J	2.2 J	-	-	0.34 J	0.64 J	1.1 J	0.76 J	-	-	-	-	-	-
Isophorone	NV	-	-	-	-	-	-	-	-		-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	NV	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	4.1 JB	-	-	-	-	-	-	-	-	-	-	-	4.2 JB	-	-
Naphthalene	10	-	-	-	-	-	-	-	-		8.2	9.8	2.5	8	1.4 JB	-	-	1.5 J	0.54 J	1.3 J	2.4 JB	1.4 J	-	3.4 J	2.5	4.4 J	7 B	6.6	4.3 J	-	-	-	-	-
Nitrobenzene	0.4	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**0.49** J	-	-	-	-	-	-	-	-
Phenanthrene	50	-	-	-	-	-	-	-	-		1.8 J	4.2 J	1.1 J	7.5	6.2	-	1.2 J	3.3 J	1 J	5.4	3.1 J	6.1	3.3 J	2.4 J	0.52 J	1.4 J	1.6 J	1.5 J	-	-	-	-	-	-
Phenol	1*	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	**130**	**38**	**53**	**50**	**73** J	**260**	**1.4** J	-	0.61 J	-	-
Pyrene	NV	-	-	-	-	-	-	-	-		-	1.1 J	-	0.74 J	0.47 J	-	1.9 J	4.4 J	0.74 J	2.9 J	1.7 J	2 J	2.8 J	-	-	-	-	0.46 J	-	-	-	-	-	-

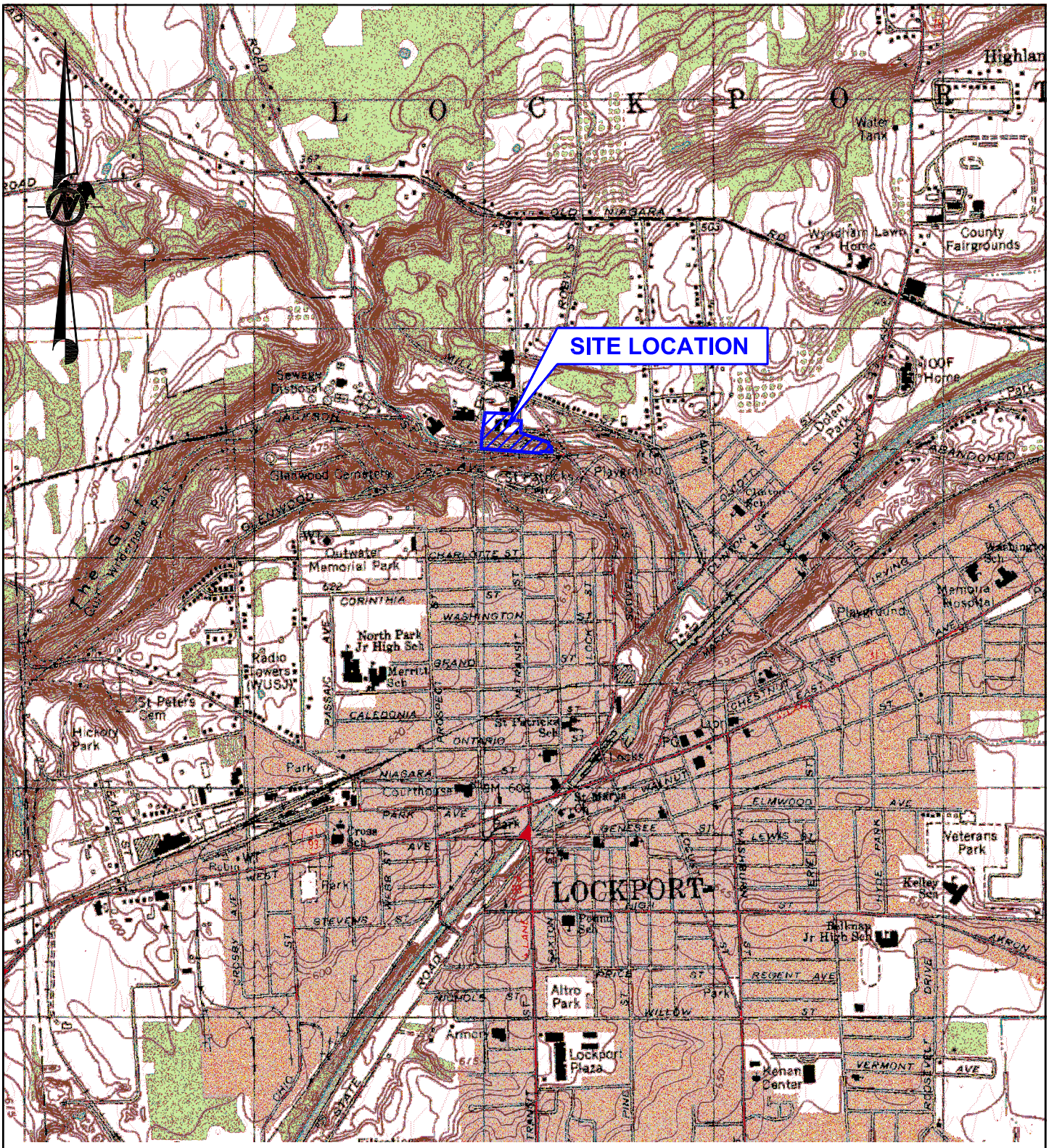
Key:
Vault Effluent Sample Results
Plant Monitoring Well Sample Results
Piezometer Sample Results

Footnotes:
- = Compound not detected above the Analytical Method Detection Limit
BOLD = Value exceed the groundwater quality standards.
* = This well was damaged and unable to be sampled.
‡ In 2013 this sample was incorrectly labeled as MW-2D on chain of custody and laboratory report
• = The sum of all phenols
NV = No GW Quality Standard

Qualifications:
J = Analyte detected at a level less that Reporting Limit and greater than or equal to the Method Detection Limit. Concentrations in this range are estimated.
B = Analyte detected in the method blank.

Table by: JGT
Checked by: KH
Reviewed by: PTM

FIGURES



REFERENCES

1.) BASE MAP TAKEN FROM U.S.G.S. 7.5 MINUTE QUADRANGLE OF LOCKPORT, NEW YORK DATED 1980.

2000 0 2000
SCALE FEET

NJ Authorization #24GA28029100

Golder Associates
Buffalo, New York

SCALE	AS SHOWN
DATE	02/04/11
DESIGN	AML
CADD	GLS
CHECK	
REVIEW	

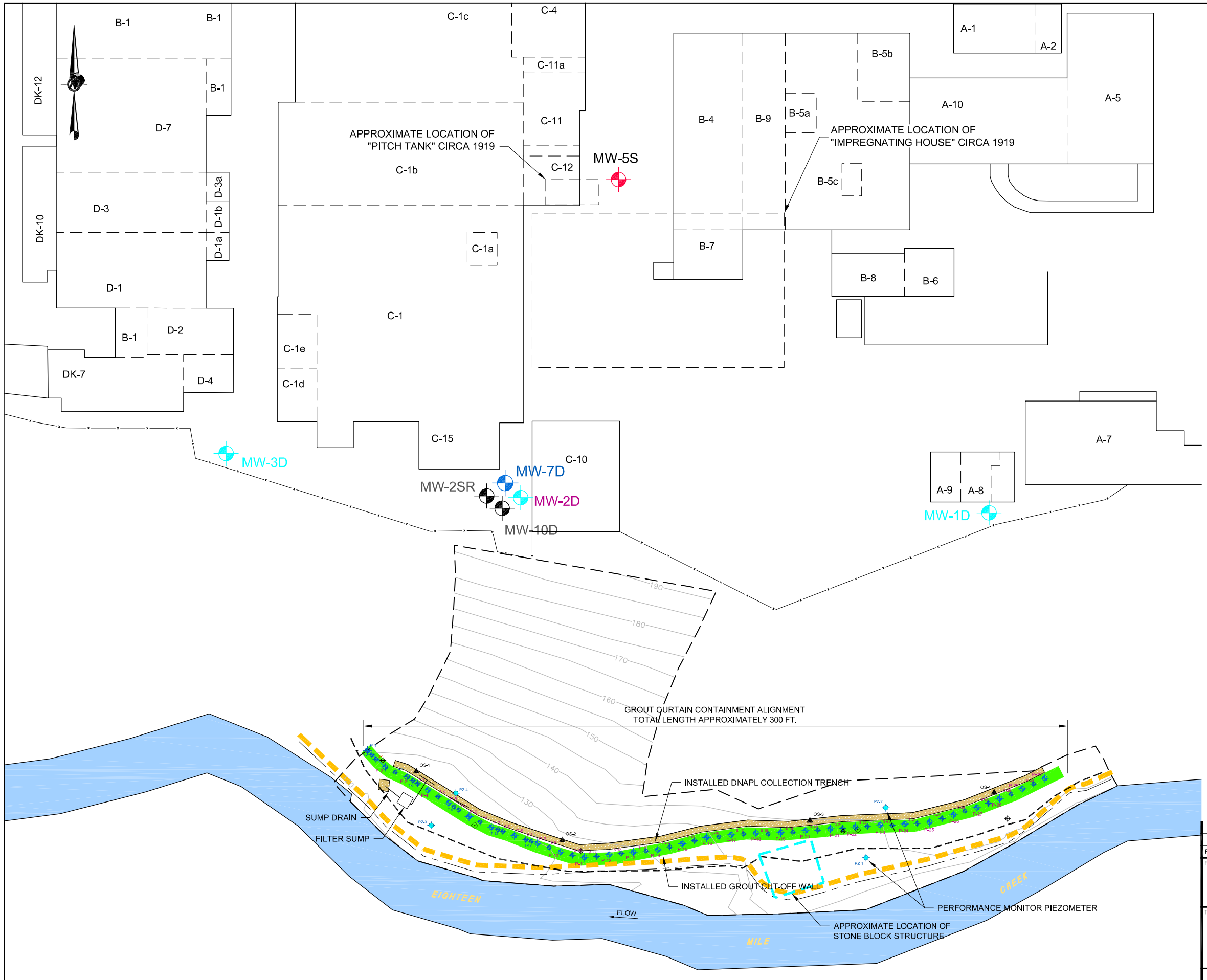
FILE No. 09389168A011
PROJECT No. 093-89168 REV. 0

TITLE

SITE LOCATION MAP

SNPE - VANDEMARK CHEMICAL

FIGURE 1-1



LEGEND

- FENCE
- SILT FENCE
- STRAW BALES
- SAND BAGS
- FLOWABLE FILL AND CEMENT GROUT
- No. 2 WASHED STONE
- IN-SITU GROUT WALL PERMEABILITY SAMPLE LOCATION
- OS-2 — 4-INCH DNAPL OBSERVATION SUMP (IN COLLECTION TRENCH)
- PZ-1 — 1-INCH PERFORMANCE MONITORING PIEZOMETER
- 1999 INVESTIGATION OVERBURDEN MONITORING WELL
- 1999 INVESTIGATION BEDROCK MONITORING WELL
- 2006 BEDROCK MONITORING WELL
- MONITORING WELL (UNKNOWN INSTALLATION DATE)
- EIGHTEEN-MILE CREEK

REFERENCE

1.) TOPOGRAPHY SHOWN ON THIS PLAN WAS TAKEN FROM SURVEY FILE xve-vandemark base.dwg, DATED 06-21-2010.

2.) BOREHOLE AND CORE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.

3.) MAP DIGITIZED FROM HARD COPY OF FIGURE 1 ENTITLED "SITE PLAN," PREPARED BY BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC.

4.) CONCRETE VAULT, PIEZOMETERS, GRAVEL COLLECTION TRENCH, OBSERVATION SUMPS, AND FRENCH DRAIN FROM 121205 FIELD DATA REVISED.XLSX, PREPARED BY WENDEL IN NOVEMBER 30, 2012.

SCALE 20 0 20 40 FEET

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW
1	09/30/13	AML	Corrected the layout and IDs of several GW wells west of Building C-10	AML	PTM	PTM

PROJECT

SNPE - VANDEMARK
CREEK BANK AREA CORRECTION MEASURES PROJECT
LOCKPORT, NEW YORK

TITLE

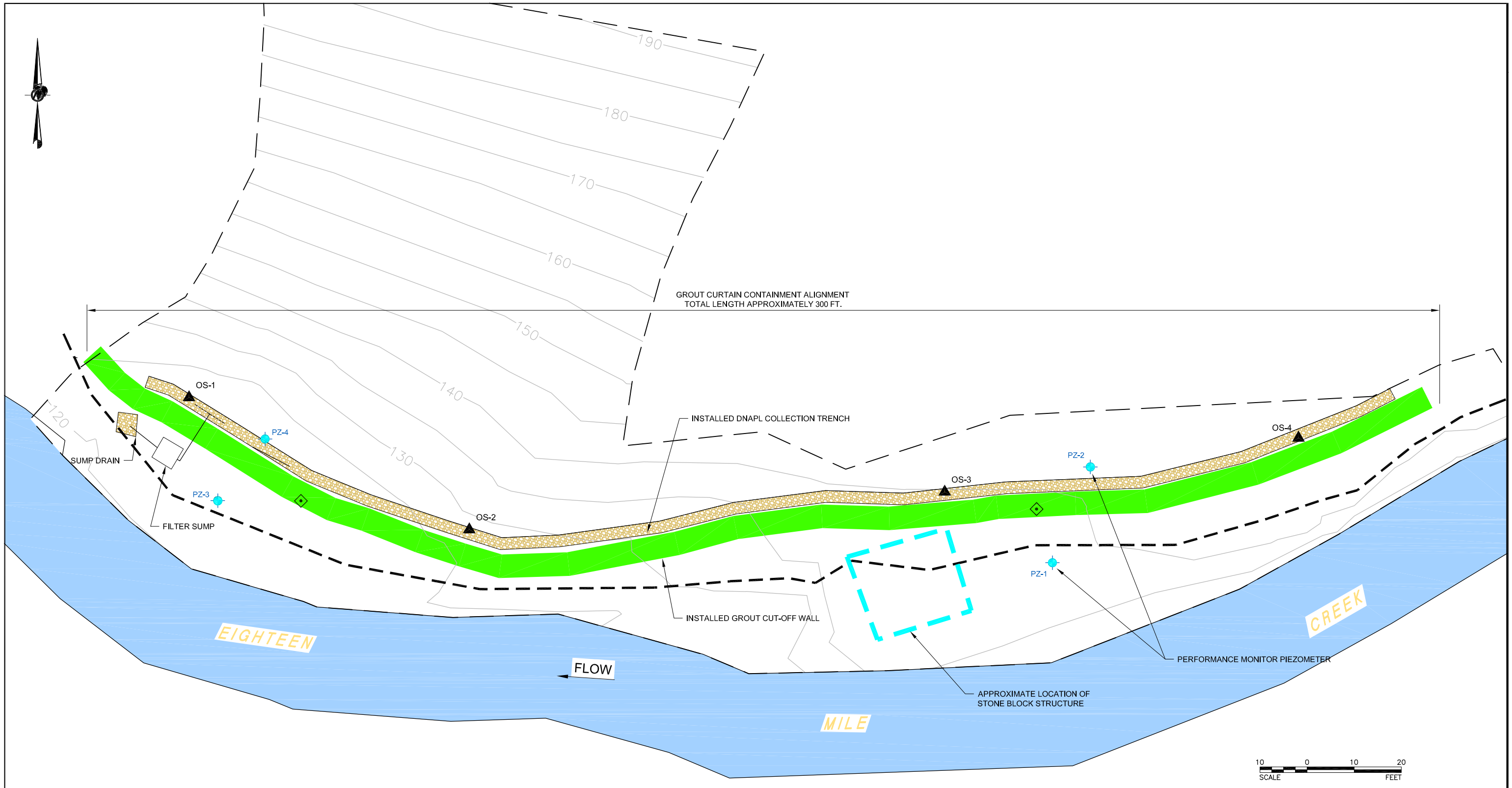
OMP SITE PLAN - VDM PLANT & CREEK BANK AREA

NJ Authorization #24GA28029100

Golder Associates
Mt. Laurel, New Jersey

PROJECT No.	093-89168		FILE No.	09389168A030	
DESIGN	PTM	04/16/13	SCALE	AS SHOWN	REV. 0
CADD	MJS	04/16/13			
CHECK	AML	04/17/13			
REVIEW					

FIGURE 1-2



LEGEND

- APPROXIMATE LOCATION OF EROSION CONTROL MEASURES (SILT FENCE, STRAW BALES, AND SAND BAGS). TO REMAIN IN PLACE UNTIL SPRING OF 2013
- PZ-1 — PERFORMANCE MONITORING PIEZOMETER
- OBSERVATION SUMPS
- IN-SITU GROUT WALL PERMEABILITY SAMPLE LOCATION
- FLOWABLE FILL AND CEMENT GROUT
- No. 2 WASHED STONE
- EIGHTEEN-MILE CREEK

REFERENCE

1.) TOPOGRAPHY SHOWN ON THIS PLAN WAS TAKEN FROM SURVEY FILE xve-vandemark base.dwg, DATED 06-21-2010.

2.) CORE LOCATIONS SHOWN ON THIS PLAN ARE APPROXIMATE.

3.) MAP DIGITIZED FROM HARD COPY OF FIGURE 1 ENTITLED "SITE PLAN," PREPARED BY BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC.

4.) CONCRETE VAULT, PIEZOMETERS, GRAVEL COLLECTION TRENCH, OBSERVATION SUMPS, AND FRENCH DRAIN FROM 121205 FIELD DATA REVISED.XLSX, PREPARED BY WENDEL IN NOVEMBER 30, 2012.

REV	DATE	DES	REVISION DESCRIPTION	CADD	CHK	RVW

PROJECT

SNPE - VANDEMARK
CREEK BANK AREA CORRECTION MEASURES PROJECT
LOCKPORT, NEW YORK

TITLE

CREEK BANK AREA SITE PLAN OPERATION & MAINTENANCE PLAN

NJ Authorization #24GA28029100

Golder Associates
Mt. Laurel, New Jersey

PROJECT No.		093-89168	FILE No.		09389168A028
DESIGN	PTM	12/11/12	SCALE	AS SHOWN	REV. 0
CADD	AML	03/28/13			
CHECK	PTM				
REVIEW	DCW				

FIGURE 3-1

APPENDIX A

OPERATIONS AND MONITORING
SUMMARY INSPECTION FORMS

OPERATIONS & MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 093-89168 PROJECT TITLE: Creek Bank Corrective Measures -Site No. 932149
OWNER: SNPE - VanDeMark Chemical CONTRACTOR:
LOCATION: Lockport, New York SUB CONTRACTOR(S):

DATE: 5/20/15

WEATHER: TEMPERATURE: LOW: 60 @ HIGH 68 @
CLOUD COVER Partly PRECIPITATION WIND N/A

GOLDER PERSONNEL ON SITE:

Patrick Martin / Jonathan Taylor

SUMMARY OF FIELD INSPECTION OBSERVATIONS:

THIS INSPECTION WAS COORDINATED W/ MIKE HANTON OF NYSDEC

(1) EFFLUENT VAULT: WATER WAS OBSERVED TO BE CLEAR; OVERFLOWING TO CHAMBER OUTFALL W/ NO OBSTRUCTION. NO EVIDENCE OF SHEEN OR DNAPL OBSERVED ON WATER SURFACE OR TOP OF FILTER SAND MEDIA. MINOR SEDIMENT ACCUMULATION ON TOP OF SAND BED.

(2) OBSERVATION SUMPS:
OS-1: WATER PRESENT (42.5") - NO SHEEN OR DNAPL DETECTED (PROBED TO BOTTOM W/ WOOD STICK)
OS-2: DRY - NO DNAPL PRESENT
OS-3: WATER PRESENT (8") - NO SHEEN OR DNAPL DETECTED (PROBED)
OS-4: DRY - NO DNAPL PRESENT

(3) OBSERVATIONS OF UPGRADIENT SLOPE: TOE AREA (N. OF DNAPL COLLECTION TRENCH): NO NEW DNAPL ACCUMULATIONS OBSERVED

(4) OBSERVATIONS OF DOWN GRADIENT SLOPE ADJACENT TO CREEK: SEVERAL ~~SMALL DNAPL OUTBREAKS OBSERVED SOUTH OF PZ-1 ON STEEP BANK~~ SECTION THOUGHT TO BE SOUTH FACE OF BURIED STONE STRUCTURE. DEPOSITS FOUND IN A 15'-20' LONG AREA.

GOLDER ACTIVITIES AND TEST RESULTS:

- IT WAS AGREED W/ DEC THAT THE DNAPL DEPOSITS WOULD BE REMOVED DURING THE FALL 2015 INSPECTION / SAMPLING EVENT.

Golder Associates

SUBMITTED BY: Patrick J. Martin

FIELD MONITORING SUMMARY

SHEET 1 OF 2

PROJECT NUMBER: 093-89168
PROJECT TITLE: Creek Bank Corrective Measures
OWNER: SNPE - Van DeMark
CONTRACTOR:
LOCATION: Lockport, New York
SUB CONTRACTOR(S):

DATE: 11/4/15

WEATHER: Sunny
PRECIPITATION: N/A
TEMPERATURE: ~73°F
WIND: light

GOLDER PERSONNEL ON SITE:

Patrick T. Martin, Jonathon Taylor

SUMMARY OF FIELD OBSERVATIONS / INSPECTIONS PERFORMED:

The inspection was coordinated w/ DEC personnel, however no representative was present during the inspection.

① Inspected Effluent Vault - water is clear & appears to be overflowing to outfall w/ No restriction. No evidence of DNAPL or Sheen on water surface or top of sand media. Minimal sediment accumulation noted on top of sand filter surface.

② Observation Sumps

OS-1 → water present to ~3.5'. No DNAPL, sheen, or odor observed.
OS-2 → Dry. No DNAPL observed
OS-3 → Water present 8"-10". No DNAPL, sheen, or odor observed.
OS 4 → Dry. No DNAPL observed

③ Observation of Upgradient Slope (North of DNAPL trench)
- No new DNAPL accumulations observed (Heavy leaf debris)

GOLDER ACTIVITIES AND TEST RESULTS:

④ Observation of ~~Downstream~~ Downgradient Slop (South of DNAPL trench)
- Seem of DNAPL observed in earlier inspection w/ NYSDEC was removed from rock structure located approximately 15' east of PZ-1. Approximly three (3) 5 gallon buckets were removed from the creek bank and stored in a 55 gallon drum on site for disposal. A larger Seem of DNAPL was noted within the stone structure. The seen could only be partialy removed due to stability of creek bank.

Golder Associates

SUBMITTED BY:

GOLDER FORM: R4-0699
(JANUARY 2005)

APPENDIX B

PIEZOMETER DEVELOPMENT AND SAMPLE COLLECTION FORMS

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: Vantemark Chemical | GAI PROJECT NO.: 093-89168

SAMPLE ID.: MW-7D | SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	10:45	ELAPSED HRS.	00:15
CASING VOL.(Gal.)	3.0	GAL. PURGED (Gal.)	9.0		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	poly	DEDICATED (Y) N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	11:00	MATRIX	W
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED (Y) N)		FILTERED (Y / (N))	
SAMPLING DEVICE MATERIAL	poly	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	—	LAND ELEVATION (FT./MSL)	—
REF. PT. ELEV.(FT. MSL)	—	WELL DEPTH (FT.)	~49
DEPTH TO WATER (REF. PT.)	~31	STICKUP (FT.)	N/A
GW. ELEV.(FT. MSL.)	—	WELL DIAMETER (INCHES)	2.0"

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)			5.4	
TEMPERATURE (C)			14.1°C	
OTHER (SPECIFY)				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE - Grey color to water No odors Slightly turbid

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE [signature] DATE 5/20/15

Golder Associates

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: Vandemark Chem GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-2 SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	10:10	ELAPSED HRS.	00:10
CASING VOL.(Gal.)	0.15	GAL. PURGED (Gal.)	0.5		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	poly	DEDICATED (Y) N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	10:20	MATRIX	W
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED (Y) N)		FILTERED (Y (N))	
SAMPLING DEVICE MATERIAL	poly	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	Top	LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	~10
DEPTH TO WATER (REF. PT.)	~5	STICKUP (FT.)	~3
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	1.0

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)			1.29	
TEMPERATURE (C)			16.2°C	
OTHER (SPECIFY)				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Brown Rust color Turbid

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE DATE 5/20/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: Vanderbilt Chemical | GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-4 | SOURCE CODES: RIVER OR STREAM, (WELL), SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	09:30	ELAPSED HRS.	00:15
CASING VOL.(Gal.)	~0.22	GAL. PURGED (Gal.)	~0.7		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	poly	DEDICATED (Y) N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)	9:45	MATRIX	W
SAMPLING DEVICE (SEE BELOW)	bailer	DEDICATED (Y) N)		FILTERED (Y (N))	
SAMPLING DEVICE MATERIAL	poly	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	TOC	LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	~10
DEPTH TO WATER (REF. PT.)	~5	STICKUP (FT.)	
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	1.0

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)			6.02	
TEMPERATURE (C)			12.9°C	
OTHER (SPECIFY)				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE | DATE 5/20/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: Vandemark Chemical | GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-3 | SOURCE CODES: RIVER OR STREAM, (WELL), SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	05/20/15	TIME (24 HR CLOCK)	08:55	ELAPSED HRS.	00:10
CASING VOL.(Gal.)	~0.17	GAL. PURGED (Gal.)	0.5		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	poly Bailer	DEDICATED (Y) / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	05/20/15	TIME (24 HR CLOCK)	09:10	MATRIX	W
SAMPLING DEVICE (SEE BELOW)	bailer	DEDICATED (Y) / N)		FILTERED (Y / (N))	
SAMPLING DEVICE MATERIAL	poly	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	TOR	LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	NM
DEPTH TO WATER (REF. PT.)	NM	STICKUP (FT.)	~3'
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	1.0

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)			3.3	
TEMPERATURE (C)			11.9°C	
OTHER (SPECIFY) EG				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE: [signature] DATE: 5/20/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VondaMark Chemical | GAI PROJECT NO.: 093-89168

SAMPLE ID.: Vault Effluent (Solvent) | SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)		ELAPSED HRS.	
CASING VOL.(Gal.)		GAL. PURGED (Gal.)			
PURGING DEVICE (SEE BELOW)		PURGING DEVICE MATERIAL		DEDICATED (Y / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	5/20/15	TIME (24 HR CLOCK)		MATRIX	W
SAMPLING DEVICE (SEE BELOW)	direct fill	DEDICATED-(Y / N)		FILTERED (Y / N)	N
SAMPLING DEVICE MATERIAL	NA	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT		LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	
DEPTH TO WATER (REF. PT.)		STICKUP (FT.)	
GW. ELEV.(FT. MSL)		WELL DIAMETER (INCHES)	

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)				
TEMPERATURE (C)				
OTHER (SPECIFY)				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE

1" DIA. CASING CONTAINS .041 Gal./Ft. — Bird Drop taken from Vault

2" DIA. CASING CONTAINS .163 Gal./Ft.

4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE [signature] DATE 5/20/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VDM - O&M

GAI PROJECT NO.: 093-89168

SAMPLE ID.: Vault

SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)		ELAPSED HRS.	
CASING VOL.(Gal.)		GAL. PURGED (Gal.)			
PURGING DEVICE (SEE BELOW)		PURGING DEVICE MATERIAL		DEDICATED (Y / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	15:00	MATRIX	H_2O
SAMPLING DEVICE (SEE BELOW)	~~Bailer~~	DEDICATED (Y) / N)		FILTERED (Y / (N))	
SAMPLING DEVICE MATERIAL	~~Poly~~	SAMPLE TYPE - (GRAB) / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT		LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	
DEPTH TO WATER (REF. PT.)		STICKUP (FT.)	
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)			7.4	7.41
SPEC. COND.(uS)			2577	2538
TEMPERATURE (C)			12.1°	12.2°
OTHER (SPECIFY)			85	102

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Clear - No Odor

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

Blank Collected

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE: [signature]

DATE: 11/4/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME VDM - O&M GAI PROJECT NO. 093-89168

SAMPLE ID. PZ-1 SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)		ELAPSED HRS.	
CASING VOL.(Gal.)		GAL. PURGED (Gal.)			
PURGING DEVICE (SEE BELOW)		PURGING DEVICE MATERIAL		DEDICATED (Y / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	/ /	TIME (24 HR CLOCK)		MATRIX	
SAMPLING DEVICE (SEE BELOW)		DEDICATED-(Y / N)		FILTERED (Y / N)	
SAMPLING DEVICE MATERIAL		SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT		LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	~~23~~ 11.07
DEPTH TO WATER (REF. PT.)	11.05	STICKUP (FT.)	~3
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	1"

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)				
SPEC. COND.(uS)				
TEMPERATURE (C)				
OTHER (SPECIFY)				

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE

1" DIA. CASING CONTAINS .041 Gal./Ft. Dry
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE DATE 11/4/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VDM O&M | GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-2 | SOURCE CODES: RIVER OR STREAM, (WELL), SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	15:20	ELAPSED HRS.	:05
CASING VOL.(Gal.)	~6.15	GAL. PURGED (Gal.)	~~~5~~		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	Poly	DEDICATED (Y) / N	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	15:30	MATRIX	H_2O
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED-(Y) N		FILTERED (Y (N)	
SAMPLING DEVICE MATERIAL	Poly	SAMPLE TYPE - (GRAB) COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	—	LAND ELEVATION (FT./MSL)	—
REF. PT. ELEV.(FT. MSL)	—	WELL DEPTH (FT.)	10.54
DEPTH TO WATER (REF. PT.)	6.92	STICKUP (FT.)	~3'
GW. ELEV.(FT. MSL.)	—	WELL DIAMETER (INCHES)	1"

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)	6.80	6.80		6.81
SPEC. COND.(uS)	1256	1072		1104
TEMPERATURE (C)	14.1	13.9		14.2
OTHER (SPECIFY)	-37	-27		-28

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Yellow Slightly cloudy - No odor

1" DIA. CASING CONTAINS .041 Gal./Ft. 3.62 (0.041) = 0.148 x3 = 6.44

2" DIA. CASING CONTAINS .163 Gal./Ft.

4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE: [signature] DATE: 11/4/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VDM O&M

GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-3

SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	14:00	ELAPSED HRS.	:10
CASING VOL.(Gal.)	~0.15	GAL. PURGED (Gal.)	~0.5		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	Poly	DEDICATED (Y) / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	14:15	MATRIX	H2O
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED (Y) N)		FILTERED (Y / (N))	
SAMPLING DEVICE MATERIAL	Poly	SAMPLE TYPE - (GRAB) / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	—	LAND ELEVATION (FT./MSL)	—
REF. PT. ELEV.(FT. MSL)	—	WELL DEPTH (FT.)	9.12
DEPTH TO WATER (REF. PT.)	5.43	STICKUP (FT.)	~3'
GW. ELEV.(FT. MSL.)	—	WELL DIAMETER (INCHES)	2"

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)	12.5	11.62		11.59
SPEC. COND.(uS)	4303	2017		1924
TEMPERATURE (C)	15.0	15.0		14.8
OTHER (SPECIFY)	-192	-290		-280

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Slightly Cloudy No Odor

1" DIA. CASING CONTAINS .041 Gal./Ft. 3.69 (.041) = 0.15 x 3 = 0.45

2" DIA. CASING CONTAINS .163 Gal./Ft.

4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE: [signature] Golder Associates

DATE: 11/4/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VDM - O&M GAI PROJECT NO.: 093-89168

SAMPLE ID.: PZ-4 SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	14:30	ELAPSED HRS.	:08
CASING VOL.(Gal.)	~.2	GAL. PURGED (Gal.)			
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	Poly	DEDICATED (Y) N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	14:40	MATRIX	H_2O
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED (Y / N)		FILTERED (Y / (N))	
SAMPLING DEVICE MATERIAL	Poly	SAMPLE TYPE - (GRAB) / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT	—	LAND ELEVATION (FT./MSL)	—
REF. PT. ELEV.(FT. MSL)	—	WELL DEPTH (FT.)	~10.29
DEPTH TO WATER (REF. PT.)	5.04	STICKUP (FT.)	~3
GW. ELEV.(FT. MSL.)	—	WELL DIAMETER (INCHES)	1"

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)	7.72	7.03		7.06
SPEC. COND.(uS)	6118	6503		6529
TEMPERATURE (C)	13.7	13.6		13.6
OTHER (SPECIFY)	132	-92		-85

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Slightly Cloudy - No odor

1" DIA. CASING CONTAINS .041 Gal./Ft.: 5.25 (0.041) = 0.21 x (3) = 0.645

2" DIA. CASING CONTAINS .163 Gal./Ft.

4" DIA. CASING CONTAINS .652 Gal./Ft.

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE: [signature] DATE: 11/4/15

SAMPLE COLLECTION INFORMATION FORM

GAI PROJECT NAME: VOM - O&M | GAI PROJECT NO.: 093-89168

SAMPLE ID.: MW-70 | SOURCE CODES: RIVER OR STREAM, WELL, SOIL, OTHER (CIRCLE ONE)

PURGING INFORMATION (IF APPLICABLE)

PURGE DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	10:30	ELAPSED HRS.	30
CASING VOL.(Gal.)	~3	GAL. PURGED (Gal.)	~9		
PURGING DEVICE (SEE BELOW)	Bailer	PURGING DEVICE MATERIAL	Poly	DEDICATED (Y / N)	

SAMPLE COLLECTION INFORMATION

SAMPLING DATE (mm/dd/yy)	11/4/15	TIME (24 HR CLOCK)	11:15	MATRIX	H2O
SAMPLING DEVICE (SEE BELOW)	Bailer	DEDICATED (Y / N)		FILTERED (Y / N)	
SAMPLING DEVICE MATERIAL	Poly	SAMPLE TYPE - GRAB / COMPOSITE (CIRCLE ONE)			

(A) AIR-LIFT PUMP (B) BLADDER PUMP (C) PERISTALTIC PUMP (D) SCOOP/SHOVEL (E) BAILER (F) OTHER (SPECIFY)

WELL INFORMATION (IF APPLICABLE)

REFERENCE POINT		LAND ELEVATION (FT./MSL)	
REF. PT. ELEV.(FT. MSL)		WELL DEPTH (FT.)	~~46~~ 49.62
DEPTH TO WATER (REF. PT.)	~~28.84~~ 30.92	STICKUP (FT.)	
GW. ELEV.(FT. MSL.)		WELL DIAMETER (INCHES)	~~2~~ 2

FIELD MEASURMENTS (FOUR REPLICATES)

	Initial Purge	Final Purge	Initial Sample	Final Sample
pH (STD)	6.85	6.93		7.05
SPEC. COND.(uS)	3412	4463		3031
TEMPERATURE (C)	15.4°C	15.3°C		15.0
OTHER (SPECIFY) ORP	54	28		-21

COMMENTS/CALCULATIONS

WEATHER CONDITIONS

SAMPLE APPEARANCE: Slightly cloudy at first - No Odor

1" DIA. CASING CONTAINS .041 Gal./Ft.
2" DIA. CASING CONTAINS .163 Gal./Ft.
4" DIA. CASING CONTAINS .652 Gal./Ft.

18.7' ~~[illegible]~~ (.163) = 3.04 x 3 = 9

MS/MSD Collected

PLEASE INCLUDE SAMPLE BOTTLE SIZE, BOTTLE COLOR, BOTTLE MATERIAL, PRESERVATIVES AND ANALYTICAL METHODS ON LABORATORY CUSTODY FORMS.

SAMPLER SIGNATURE | DATE

At Golder Associates we strive to be the most respected global group of companies specializing in ground engineering and environmental services. Employee owned since our formation in 1960, we have created a unique culture with pride in ownership, resulting in long-term organizational stability. Golder professionals take the time to build an understanding of client needs and of the specific environments in which they operate. We continue to expand our technical capabilities and have experienced steady growth with employees now operating from offices located throughout Africa, Asia, Australasia, Europe, North America and South America.

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