NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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April 6, 2015

Via E-mail and Regular Mail

Kurt Wendler
Sphere STP LLC
PO Box 207
Manlius, NY 13104

Re: Amended Site Management Plan (SMP), March 2015
Skinner Automotive, Herkimer
Herkimer County, Site No.: C622031

Dear Mr. Wendler,

The New York State Department of Environmental Conservation ("Department") in consultation with New York State Department of Health (NYSDOH) has reviewed Amended Site Management Plan (SMP) received on April 2, 2015. The amendment incorporates discontinuation of Ground Water Monitoring whereas all other Engineering and Institutional Controls (IC/ECs) remains applicable. The Amended SMP is hereby approved.

If you have any questions, please write to me at parag.amin@dec.ny.gov.

Sincerely,

Parag Amin, P.E.
Project Manager
Remedial Bureau C
Division of Environmental Remediation

ec: J. Blasting, OneGroup
D. Crosby, NYSDEC, DER
G. Rys, NYSDOH

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

SITE MANAGEMENT PLAN

Former Skinner Sales Site
700 Mohawk Street,
Herkimer, New York

NYSDEC Site Number: C622031

Prepared for:
Sphere STP, LLC
2836 Route 20 East
Cazenovia, NY 13035

Prepared by:
GREYSTONE ENVOLUTIONS, LLC*
202 Highbridge Street
Fayetteville, NY 13066

NOTE- *27 January 2015 revision prepared by James F. Blasting, P.G., Qualified Environmental Professional with OneGroup New York, Inc. 315-457-1830*

Revisions to Final Approved Site Management Plan:

Revision #	Submitted Date	Summary of Revision	DEC Approval Date
1	14 November 2012	Modify in accordance with NYSDEC comments and update to include sub-slab depressurization system installation, testing, operation and maintenance.	
2	27 January 2015	Remove requirement for groundwater monitoring, as remedial goals have been met and NYSDEC approved well closure.	

AUGUST 2012

Greystone Project No.: 12072EP

GREYSTONE

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1.0 INTRODUCTION AND DESCRIPTION OF REMEDIAL PROGRAM

1.1 Introduction

This document is required as an element of the remedial program implemented at the Former Skinner Sales Property located at 700 Mohawk Street in Herkimer, New York (hereinafter referred to as the "Site") under the New York State (NYS) Brownfield Cleanup Program (BCP) administered by New York State Department of Environmental Conservation (NYSDEC). The Site was remediated in accordance with Brownfield Cleanup Agreement (BCA) Index #C622031-06-12 and the Remedial Action Work Plan (RAWP) prepared by Greystone Envolutions, LLC (Greystone) dated 9 May 2012 and approved by NYSDEC and the New York State Department of Health (NYSDOH) on 31 May 2012.

1.1.1 General

Sphere STP, LLC (Sphere) entered into a BCA with the NYSDEC to remediate a 2.531 acre Site located in Herkimer, New York. This BCA required Sphere to remediate contaminated media at the Site. Figure 1 shows the site location and Figure 2 shows the boundaries of the Site, including a description of the metes and bounds. The boundaries of the Site are more fully described in the metes and bounds site description that is part of the Environmental Easement (Appendix B).

After completion of the remedial work described in the RAWP, along with the remediation of additional areas of concern (AOCs) discovered during building demolition and site redevelopment, the remedial objectives for soil were achieved. That is, post-excavation soil sampling demonstrated that all soils remaining onsite meet the Commercial Use Soil Cleanup Objectives (SCOs) defined in 6 NYCRR 375-6.8. A limited number of contaminants of concern (COCs) were detected above the Unrestricted Use SCOs defined in 6 NYCRR 375-6.8 in post-excavation soil samples from the Site.

These soils are hereafter referred to as "impacted soils." A program of in-situ chemical oxidant groundwater remediation has also been implemented at the Site. Groundwater sampling events were completed on the Site on 15 August and 18 October 2012 following the completion all soil remediation activities and the introduction of the in-situ chemical oxidants. The post-remediation groundwater sampling shows the presence of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) at concentrations above the 6 NYCRR Part 703 groundwater quality standards (GWQS) in groundwater sampled from monitoring well MW01, located within AOC 3 of the Site (hereafter referred to as "impacted groundwater"). Certain metals were detected above the GWQS in groundwater samples from the Site, but these exceedances are associated with the natural occurrence of certain metals (e.g. iron and manganese) at elevated concentrations, the mobilization of metals from turbid groundwater samples and/or the application and storage of road salt in the surrounding area. Finally, sub-slab soil gas samples were collected beneath the concrete slab of the new Tractor Supply Co. (TSC) on 20 September 2012 and NYSDOH determined that the concentration of certain petroleum-related VOCs in one of those samples warranted activation of a sub-slab depressurization system (SSDS) to mitigate potential vapor intrusion.

This Site Management Plan (SMP) was prepared to manage the soil, groundwater and sub-slab soil gas at the Site until the Environmental Easement is extinguished in accordance with ECL Article 71, Title 36. All reports associated with the Site can be viewed by contacting the NYSDEC or its successor agency managing environmental issues in New York State.

This SMP was prepared by Greystone, on behalf of Sphere, in accordance with the requirements in NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation, dated May 2010, and the guidelines provided by NYSDEC. This SMP

addresses the means for implementing the Institutional Controls (ICs) and Engineering Controls (ECs) that are required by the Environmental Easement for the Site.

1.1.2 Purpose

Areas of impacted soil and groundwater and potentially impacted sub-slab soil gas remain at the Site after completion of the remedial actions. Engineering Controls have been incorporated into the site remedy to control exposure to remaining impacted media during the use of the Site to ensure protection of public health and the environment. An Environmental Easement, granted to the NYSDEC and recorded with the Herkimer County Clerk, requires compliance with this SMP and all ECs and ICs placed on the Site. The ICs place restrictions on site use, and mandate operation, maintenance, monitoring and reporting measures for all ECs and ICs. This SMP specifies the methods necessary to ensure compliance with all ECs and ICs required by the Environmental Easement for impacted media that remains at the Site. This plan has been approved by the NYSDEC, and compliance with this plan is required by the grantor of the Environmental Easement and the grantor's successors and assigns. This SMP may only be revised with the approval of the NYSDEC.

This SMP provides a detailed description of all procedures required to manage the impacted soil and groundwater that remain at the Site after completion of the Remedial Action, including: (1) implementation and management of all Engineering and Institutional Controls; (2) media monitoring; (3) operation and maintenance of all treatment, collection, containment, or recovery systems; (4) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports; and (5) defining criteria for termination of treatment system operations.

To address these needs, this SMP includes three plans: (1) an Engineering and Institutional Control Plan for implementation and management of EC/ICs; (2) a Monitoring Plan for implementation of Site Monitoring; (3) an Operation and Maintenance Plan for implementation of remedial collection, containment, treatment, and recovery systems (including, where appropriate, preparation of an Operation and Maintenance Manual for complex systems).

This plan also includes a description of Periodic Review Reports for the periodic submittal of data, information, recommendations, and certifications to NYSDEC.
It is important to note that:

- This SMP details the site-specific implementation procedures that are required by the Environmental Easement. Failure to properly implement the SMP is a violation of the environmental easement, which is grounds for revocation of the Certificate of Completion (COC);

Failure to comply with this SMP is also a violation of Environmental Conservation Law, 6NYCRR Part 375 and BCA Index #C622031-06-12 for the Site, and thereby subject to applicable penalties.

1.1.3 Revisions

Revisions to this plan will be proposed in writing to the NYSDEC's project manager. In accordance with the Environmental Easement for the Site, the NYSDEC will provide a notice of any approved changes to the SMP, and append these notices to the SMP that is retained in its files.

1.2 Site Background

1.2.1 Site Location and Description

The Site is located in the Village of Herkimer, County of Herkimer, New York and is identified as Section No. 120.32 Block No. 2 and Lot No. 11on the Herkimer County Tax Map. The Site is an approximately 2.531-acre area bounded by the CSX Railroad tracks to the north, Fifth Avenue and Mohawk Street to the south, Mohawk Street to the east, and Fifth Avenue to the west (see Figure 1). The boundaries of the Site are more fully described on Figure 2 and within the Environmental Easement provided in Appendix B. The Site is developed with a one-story commercial building constructed in 2012 that will be operated as a TSC retail store beginning in November 2012.

1.2.2 Site History

Based on available records and information provided by others, the Site was first developed between 1906 and 1923 and appears to have been operated in some capacity as an automobile dealership and/or repair garage since at least 1923. Lewis Pace & Louis Lory (Pace & Lory) operated on the Site from the late 1920s until the 1950s selling Terraplane, Hudson and Packard automobiles and operating an auto body and painting repair facility. The Castle Car Company operated a dealership, repair garage and body shop on the Site after Pace & Lory. The Skinners purchased the property from Robert Castle in 1985 and have operated a dealership, automobile repair garage and body shop on the Site since that time.

In addition, there was also a separate building on the southwest portion of the Site that was constructed between 1923 and 1931. Based on available documents, from at least 1931 through at least 1950, this structure was operated as a gasoline filling station. By 1961, records indicate it was converted to an automobile sales and service facility. The date at which the building was demolished could not be ascertained.

Prior to the implementation of the RAWP and redevelopment activities, the Site was developed with a 36,566-square-foot commercial building operated as a car dealership, auto body shop and automobile service/repair center, and asphalt-paved and gravel-covered parking areas. This structure was demolished in June and July 2012 as part of site redevelopment.

Natural gas and electricity are provided to the Site by National Grid. Potable water and sanitary sewer are provided to the Site by the Village of Herkimer.

Additional information about the Site and site history is provided in the following documents which were included as appendices to the RAWP:

- Phase I & II Environmental Site Assessment Report, Skinner Sales, 700 Mohawk Street, Herkimer, NY 13350. Greystone Envolutions, LLC, 1 March 2012;
- Supplemental Phase II Site Investigation Report, Skinner Sales, 700 Mohawk Street, Herkimer, NY. Greystone Envolutions, LLC, 23 March 2012.

1.2.3 Geologic Conditions

Topographically, the Site is located on a flat-lying area north of the Mohawk River at an elevation between 380 and 400 feet above mean sea level (AMSL). The surrounding topography slopes gently to the south-southeast toward the Mohawk River. According to the Geologic Map of New York / Hudson-Mohawk Sheet from the University of the State of New York / The State Education Department, the Site is mapped as Quarternary glacial and alluvial deposits with the underlying bedrock geology unknown. The nearest mapped bedrock unit is the Middle to Upper Ordovician Utica Shale. According to the United States Department of Agriculture Soil Conservation Service Soil Survey of Herkimer County, New York, Southern Part, soils at the Site are mapped as Cut and Fill

Land, which are areas of soil recently disturbed by man that has not been in place long enough for profile development to take place.

Soil borings advanced at the Site by Greystone in February and March 2012 and excavations completed to remediate the Site in June, July and August 2012 found unconsolidated deposits of silt, sand, gravel and cobble-fill extending to depths of approximately two to six feet below grade. The fill was underlain by silt with trace sand extending to depths between eight and twelve feet below grade. A one-foot to four-foot thick transitional unit, consisting of silt and sand was present between the base of the silt and the top of a sand, gravel and cobble unit. The high permeability sand, gravel and cobble unit with little to some silt was encountered at depths between 12 and 14 feet below grade and was observed to depths of 50 feet below grade. Soil boring logs are included in the above referenced Phase II reports.

During investigation and remediation activities, saturated soils indicative of groundwater were encountered at depths between ten and fifteen feet below grade, generally within the sand and gravel unit. The shallow groundwater system is unconfined (the top of the water table has consistently been found to be below the base of the silt unit) and groundwater flow is to the south-southeast towards the Mohawk River. Groundwater elevation contour maps developed from the first two rounds of groundwater elevations measured on 15 August 2012 and 18 October 2012 are provided as Figures 3A and 3B. The groundwater elevations indicate the hydraulic gradient across the Site is relatively flat with flow to the south-southeast.

1.3 Summary of Remedial Investigation Findings

A Phase II Site Investigation (SI) and a Supplemental Phase II SI were performed to characterize the nature and extent of contamination at the Site. The results of the SIs are described in detail in the following reports that are included as appendices to the RAWP:

- Phase I & II Environmental Site Assessment Report, Skinner Sales, 700 Mohawk Street, Herkimer, NY 13350. Greystone Envolutions, LLC, 1 March 2012;
- Supplemental Phase II Site Investigation Report, Skinner Sales, 700 Mohawk Street, Herkimer, NY. Greystone Envolutions, LLC, 23 March 2012.

Generally, the SI activities determined that there are surficial and subsurface soils in certain AOCs on the Site containing petroleum-related VOCs and/or metals at concentrations exceeding the applicable SCOs defined in 6NYCRR 375-6 to be protective of human health, groundwater and/or ecological resources. Groundwater sampling also found elevated concentrations of VOCs at one of the AOCs. The investigations found the affected media to be limited to the AOCs and that the impacts to soil and groundwater were concentrated near the site features that functioned as the sources. There was no evidence to indicate offsite migration of site-related contaminants in soils or groundwater. As such, the remedial approach implemented at the Site focused on AOC-specific treatments, primarily via excavation, to remediate the Site.

Below is a summary of site conditions when the site investigations were performed in February and March 2012:

Soil:

The Phase I & II Environmental Site Assessment (ESA) report identified six AOCs at the Site and characterized conditions at those AOCs. The supplemental investigation defined

the vertical and horizontal extent of affected media at the AOCs with significant impacts. Information on each AOC is provided below and the AOCs identified during the site investigation activities are shown on Figure 4. Additional information on each AOC is presented in the previously-referenced reports.

The table below lists the AOCs investigated during the SI and the corresponding soil borings, temporary wells and/or surface samples advanced to characterize these AOCs [Note: Soil boring locations are designated by "SB," temporary wells are designated by "TW" and surface soil sample locations are designated by "SS"].

Table 1 – AOC Description

Area of Concern	Description	Soil Boring, Temporary Well and/or Surface Sample Location
AOC 1	Former Filling Station and Gasoline Tanks	SB01/TW01, SB02, SB03, SB24, SB25, SB26 and SB27/TW27
AOC 2	Surficial Oil Staining on Unpaved Ground Surface on the Northwestern Portion of the Site	SB07/TW07
AOC 3	Surficial Oil Staining Beneath Air Compressor Blowdown; and Former Used Oil UST	SS01 SB05/TW05, SB15, SB16, SB17, SB18, SB19, SB20, SB21, SB22, SB23/TW23
AOC 4	Sub-Grade Hydraulic Lifts	SB09/SB09A, SB10/TW10 and SB14
AOC 5	Green-Colored Sand from Sand Blasting Activities	SS02
AOC 6	Interior Trench Drains and Trench Drain Outlets	SB06/SB06A, SB08, SB11
Additional Features of Interest	Potential Impacts from Upgradient Spills and Releases; and Area Downgradient of the Onsite Building	SB04/TW04, SB07/TW07 SB12 and SB13

Conclusions related to each AOC, as presented in the ESA report and the Supplemental Phase II Site Investigation report, are summarized below.

AOC 1: Former Filling Station & Gasoline Tanks. Soil sampling analytical results from AOC 1 are summarized on Table 2 and soil boring locations are shown on Figure 4. Total petroleum hydrocarbons (TPH) were detected at a concentration of 69.2 ppm in the soil sample collected from 12 to 14 feet below grade at the SB01 soil boring location. The chromatogram from the Spill Technology and Remediation Series (STARS) VOC analysis indicated the petroleum hydrocarbon present in the sample was likely kerosene. Soil sampling and field screening results from the Supplemental Phase II SI indicated that the area of TPH-impacted soils at AOC 1 was concentrated in the immediate vicinity of soil boring SB01 at or near the top of the water table.

Acetone was detected at a concentration of 82 ppb in sample SB26-10.5'-12.5', slightly exceeding the Unrestricted Use SCO of 50 ppb [Note: The soil sample IDs provide the boring location (SB26) and the sample depth (10.5 to 12.5 feet below grade)]. According to representatives from the laboratory that completed the analysis, acetone can be generated in samples as a result of the reaction of organics in the sample with methanol that is present during sample purging. The occurrence of this reaction cannot be verified by the lab with acetone concentrations this low. Regardless, the Unrestricted Use SCO for acetone is set at 50 ppb for purposes of protection of groundwater (the most stringent protection of public health SCO for acetone is 100,000 ppb). Acetone was detected in groundwater sample TW01-020812, collected from AOC 1, but at an estimated concentration of 1.9 ppb, significantly less than the NYSDEC groundwater quality guidance value of 50 ppb, as defined in the Technical and Operational Guidance Series (1.1.1) (TOGS 1.1.1) [Note: The groundwater sample IDs provide the temporary well location (TW01) and the sampling date (2/8/2012)]. Therefore, if acetone is present in soils at AOC 1, it is not causing a degradation of groundwater quality. No other VOC or

semi-volatile organic compound (SVOC) compounds were detected in soils from AOC 1 at concentrations above the Unrestricted Use SCOs.

Table 2 – Soil Analytical Results – AOC 1

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SB01-12-14 2/8/2012	SB03-10-12 2/8/2012	SB26-10.5-12.5 3/12/2012
Volatile Organic Compounds (VOCs)						
Acetone	50	500,000	50	NA	NA	**82**
Isopropylbenzene	NL	NL	NL	ND	ND	1.4 J
n-Propylbenzene	3,900	500,000	3,900	ND	ND	2.2 J
1,2,4,5-Tetramethylbenzene	NL	NL	NL	NA	NA	2.4 J
Total Petroleum Hydrocarbons (TPH)	NL	NL	NL	69,200	NA	NA
Semi-Volatile Organic Compounds (SVOCs)						
Fluoranthene	100,000	500,000	1,000	ND	39	ND
Benzo(a)anthracene	1,000	5,600	1,000	ND	19	ND
Benzo(a)pyrene	1,000	1,000	22,000	ND	19	ND
Benzo(b)fluoranthene	1,000	5,600	1,700	ND	24	ND
Benzo(k)fluoranthene	800	56,000	1,700	ND	17	ND
Chrysene	1,000	56,000	1,000	ND	20	ND
Anthracene	100,000	500,000	1,000,000	ND	4.9 J	ND
Benzo(ghi)perylene	100,000	500,000	1,000,000	ND	14	ND
Phenanthrene	100,000	500,000	1,000,000	ND	20	ND
Dibenzo(a,h)anthracene	330	560	1,000,000	ND	3.4 J	ND
Indeno(1,2,3-cd)Pyrene	500	5,600	8,200	ND	13	ND
Pyrene	100,000	500,000	1,000,000	2.2J	36	ND

Notes:

SB01-12-14: Analyzed for STARS VOCs, STARS SVOCs and TPH.

SB03-10-12: Analyzed for STARS VOCs and STARS SVOCs.

SB26-10.5-12.5: Analyzed for TCL VOCs and TCL SVOCs.

Only those compounds detected in at least one sample are presented on the table.

All results reported in µg/kg - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

NL - NYSDEC Soil Cleanup Objective not listed.

NA - Compound not analyzed for corresponding analyte.

Concentrations exceeding the Unrestricted Use Soil Cleanup Objectives are shown in **Boldfaced Font**.

Concentrations exceeding the Protection of Groundwater Soil Cleanup Objectives are shown Underlined.

AOC 2: Surficial Oil Staining on Unpaved Ground Surface on the Northwestern Portion of the Site. Soil sampling analytical results from AOC 2 are summarized on Table 3 and soil boring locations are shown on Figure 4. STARS VOCs and STARS SVOCs were not detected in the soil sample collected from AOC 2 at concentrations exceeding the Unrestricted Use SCOs. As such, the sampling results from AOC 2 indicated that the impacts from surficial oil staining did not extend into the subsurface soils.

Table 3 – Soil Analytical Results – AOC 2

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SB07-0-4 2/8/2012
Volatile Organic Compounds (VOCs)				ND
Semi-Volatile Organic Compounds (SVOCs)				
Fluoranthene	100,000	500,000	1,000,000	25
Naphthalene	12,000	500,000	12,000	4.6 J
Benzo(a)anthracene	1,000	5,600	1,000	14
Benzo(a)pyrene	1,000	1,000	22,000	24
Benzo(b)fluoranthene	1,000	5,600	1,700	37
Benzo(k)fluoranthene	800	56,000	1,700	14
Chrysene	1,000	56,000	1,000	21
Anthracene	100,000	500,000	1,000,000	5.5 J
Benzo(ghi)perylene	100,000	500,000	1,000,000	28
Phenanthrene	100,000	500,000	1,000,000	12
Dibenzo(a,h)anthracene	330	1,100	1,000,000	8.4
Indeno(1,2,3-cd)Pyrene	500	5,600	8,200	21
Pyrene	100,000	500,000	1,000,000	23

Notes:

SB07-0-4: Analyzed for STARS VOCs and STARS SVOCs.

Only those compounds detected in the sample are presented on the table.

All results reported in µg/kg - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

AOC 3: Former Used Oil UST & Surficial Oil Staining Beneath Air Compressor Blow-Down. Soil sampling analytical results from AOC 3 are summarized on Table 4 and soil boring locations are shown on Figures 4 and 5. Lead and mercury were detected at concentrations exceeding the Unrestricted Use SCOs in surface soil sample SS01-0'-0.5', collected from immediately beneath the air compressor blow-down. Several gasoline-related VOCs including ethylbenzene, xylenes, n-propylbenzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene were detected in soil sample SB05-4'-6' at concentrations exceeding the Unrestricted Use SCOs. The other soil samples from AOC 3 (SB15-4'-6', SB18-6'-8', SB20-4.5'-6.5' and SB22-6'-8') were collected to delineate the horizontal extent of subsurface soils with gasoline-related VOCs exceeding the Unrestricted Use SCOs. Total xylenes were detected in soil sample SB20-4.5'-6.5' at a concentration of 740 ppb, exceeding the Unrestricted Use SCO but no other VOCs or SVOCs were detected in the delineation samples at concentrations exceeding the Unrestricted Use SCOs. As such, the delineation soil samples defined the area in which remedial actions were required at AOC 3 to treat soils with VOC concentrations exceeding the Unrestricted Use SCOs. There were no compounds detected above the Restricted Commercial Use SCOs at AOC 3.

Table 4 – Soil Analytical Results – AOC 3

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SB05-4-6 2/8/2012	SS01-0-0.5 2/9/2012	SB15-4-6 3/12/2012	SB18-6-8 3/12/2012	SB20-4.5-6.5 3/12/2012	SB22-6-8 3/12/2012
Metals									
Arsenic, Total	13,000	16,000	16,000	7,400	4,400	NA	NA	NA	NA
Barium, Total	350,000	400,000	820,000	120,000	35,000	NA	NA	NA	NA
Cadmium, Total	2,500	9,300	7,500	60 J	740	NA	NA	NA	NA
Chromium, Total	30,000	1,500,000	NL	21,000	10,000	NA	NA	NA	NA
Lead, Total	63,000	1,000,000	450,000	17,000	**84,000**	NA	NA	NA	NA
Mercury, Total	180	2,800	730	70 J	**320**	NA	NA	NA	NA
Selenium, Total	3,900	1,500,000	4,000	1,300	460 J	NA	NA	NA	NA
Silver, Total	2,000	1,500,000	8,300	ND	ND	NA	NA	NA	NA
Volatile Organic Compounds (VOCs)									
Benzene	60	44,000	60	ND	ND		ND	5.2	ND
Ethylbenzene	1,000	390,000	1,000	**2,400**	ND	ND	ND	ND	ND
p/m-Xylene	--	--	--	14,000	ND	ND	ND	740	ND
o-Xylene	--	--	--	160 J	ND	ND	ND	ND	ND
Total Xylenes	260	500,000	1,600	**14,160**	ND	ND	ND	**740**	ND
Acetone	50	500,000	50	ND	ND	ND	ND	44	ND
1,2,3-Trichloropropane	NL	NL	NL	290 J	ND	ND	ND	ND	ND
n-Butylbenzene	12,000	500,000	12,000	1,400	ND	ND	ND	ND	ND
sec-Butylbenzene	11,000	500,000	11,000	ND	ND	ND	ND	11	ND
Isopropylbenzene	NL	NL	NL	1,200	ND	ND	ND	90	ND
p-Isopropyltoluene	NL	NL	NL	320	ND	ND	ND	5.9	ND
Naphthalene	12,000	500,000	12,000	3,100	ND	ND	ND	ND	ND
n-Propylbenzene	3,900	500,000	3,900	**4,200**	ND	ND	ND	150	ND
1,3,5-Trimethylbenzene	8,400	190,000	8,400	**10,000**	ND	ND	ND	220	ND
1,2,4-Trimethylbenzene	3,600	190,000	3,600	**30,000**	ND	ND	ND	2,200	ND
1,4-Diethylbenzene	NL	NL	NL	8,700	ND	ND	ND	120	ND
4-Ethyltoluene	NL	NL	NL	19,000	ND	ND	ND	220	ND
1,2,4,5-Tetramethylbenzene	NL	NL	NL	3,000	ND	ND	ND	40	ND
Semi-Volatile Organic Compounds (SVOCs)									
Fluoranthene	100,000	500,000	1,000,000	ND	ND	ND	ND	51 J	ND
Naphthalene	12,000	500,000	12,000	750	ND	ND	ND	ND	ND
Bis(2-Ethylhexyl)phthalate	NL	NL	NL	ND	180 J	ND	ND	ND	ND
Butyl benzyl phthalate	NL	NL	NL	ND	360 J	ND	ND	ND	ND
Di-n-butylphthalate	NL	NL	NL	ND	120 J	ND	ND	ND	ND
Anthracene	100,000	500,000	1,000,000	ND	ND	ND	ND	29 J	ND
Phenanthrene	100,000	500,000	1,000,000	ND	ND	ND	ND	110 J	ND
Pyrene	100,000	500,000	1,000,000	ND	ND	ND	ND	47 J	ND
2-Methylnaphthalene	NL	NL	NL	360	ND	ND	ND	ND	ND
Benzoic Acid	NL	NL	NL	ND	ND	340 J	ND	ND	ND
Polychlorinated Biphenyls (PCBs)									
Aroclor 1260	100	1,000	3,200	ND	15.3 J	NA	NA	NA	NA

Notes:

SB05-4-6 and SS01-0-0.5: Analyzed for TCL VOCs, TCL SVOCs, PCBs and 8 RCRA Metals.

SB15-4-6, SB18-6-8, SB20-4.5-6.5 and SB22-6-8: Analyzed for TCL VOCs and TCL SVOCs.

Only those compounds detected in at least one sample are presented on the table.

All results reported in µg/kg - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

NL - NYSDEC Soil Cleanup Objective not listed.

NA - Compound not analyzed for corresponding analyte.

Concentrations exceeding the Unrestricted Use Soil Cleanup Objectives are shown in **Boldfaced Font.**

Concentrations exceeding the Protection of Groundwater Soil Cleanup Objectives are shown Underlined.

AOC 4: Sub-Grade Hydraulic Lifts. Soil sampling analytical results from AOC 4 are summarized on Table 5 and soil boring locations are shown on Figures 4 and 6. STARS VOCs, STARS SVOCs and polychlorinated biphenyls (PCBs) were not detected in the soil samples collected from AOC 4 at concentrations exceeding the Unrestricted Use SCOs. However, soil borings had to be offset from these features five to ten feet to insure that drilling activities did not damage the sub-grade hydraulic oil reservoir tanks or lines associated with the lifts.

Table 5 – Soil Analytical Results – AOC 4

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SB10-14-16 2/8/2012	SB09A-12-14 2/9/2012	SB14-12-14 2/9/2012
Volatile Organic Compounds (VOCs)				ND	ND	ND
Semi-Volatile Organic Compounds (SVOCs)						
Fluoranthene	100,000	500,000	1,000,000	4.2J	ND	7.5
Benzo(a)anthracene	1,000	5,600	1,000	3.2J	ND	4.8J
Benzo(a)pyrene	1,000	1,000	22,000	3.0J	ND	5.5J
Benzo(b)fluoranthene	1,000	5,600	1,700	ND	ND	12
Benzo(k)fluoranthene	800	56,000	1,700	ND	ND	4.0J
Chrysene	1,000	56,000	1,000	7.3J	ND	6.0J
Benzo(ghi)perylene	100,000	500,000	1,000,000	3.1J	ND	5.0J
Fluorene	30,000	500,000	386,000	2.9J	ND	ND
Phenanthrene	100,000	500,000	1,000,000	5.1J	ND	4.7J
Indeno(1,2,3-cd)Pyrene	500	5,600	8,200	2.4J	ND	4.6J
Pyrene	100,000	500,000	1,000,000	7.9	ND	9
Polychlorinated Biphenyls (PCBs)	100	1,000	3,200	ND	NA	NA

Notes:

SB10-14-16: Analyzed for STARS VOCs, STARS SVOCs and PCBs.

SB09A-12-14 and SB14-12-14: Analyzed for STARS VOCs and STARS SVOCs.

Only those compounds detected in at least one sample are presented on the table.

All results reported in µg/kg - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

NA - Compound not analyzed for corresponding analyte.

AOC 5: Green-Colored Sand from Sand Blasting Activities. Soil sampling analytical results from AOC 5 are summarized on Table 6 and soil sampling locations are shown on Figure 4. Lead was detected above the Unrestricted Use SCO in surface soil sample

SS02-0'-0.5' collected from the green-colored sand. No other metals were detected above the Unrestricted Use SCOs and the lead concentration did not exceed the Commercial Use SCO.

Table 6 – Soil Analytical Results – AOC 5

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SS02-0-0.5 2/9/2012
Metals				
Arsenic, Total	13,000	16,000	16,000	670
Barium, Total	350,000	400,000	820,000	95,000
Cadmium, Total	2,500	9,300	7,500	330 J
Chromium, Total	30,000	1,500,000	NL	7,900
Lead, Total	63,000	1,000,000	450,000	**87,000**
Mercury, Total	180	2,800	730	ND
Selenium, Total	3,900	1,500,000	4,000	210 J
Silver, Total	2,000	1,500,000	8,300	ND

Notes:

SS02-0-0.5: Analyzed for 8 RCRA Metals.

All results reported in µg/kg - parts per million (ppb).

ND - Compound not detected.

J - Estimated concentration.

NL - NYSDEC Soil Cleanup Objective not listed.

Concentrations exceeding the Unrestricted Use Soil Cleanup Objectives are shown in **Boldfaced Font.**

AOC 6: Interior Trench Drains and Trench Drain Outlets. Soil sampling analytical results from AOC 6 are summarized on Table 7 and soil boring locations are shown on Figures 4 and 6. Target compound list (TCL) VOCs, TCL SVOCs and metals were not detected in the soil samples collected from AOC 6 at concentrations exceeding the Unrestricted Use SCOs.

Table 7 – Soil Analytical Results – AOC 6

Analyte/Compound	NYSDEC Subpart 375-6 Unrestricted Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Restricted Commercial Use Soil Cleanup Objectives (ppb)	NYSDEC Subpart 375-6 Protection of Groundwater Soil Cleanup Objectives (ppb)	SB08-12-14 2/8/2012	SB06A-8-10 2/9/2012	SB11-8-10 2/9/2012
Metals						
Arsenic, Total	13,000	16,000	16,000	2,500	8,300	3,200
Barium, Total	350,000	400,000	820,000	24,000	100,000	49,000
Cadmium, Total	2,500	9,300	7,500	ND	140 J	40 J
Chromium, Total	30,000	1,500,000	NL	5,600	20,000	11,000
Lead, Total	63,000	1,000,000	450,000	3,200	17,000	5,500
Mercury, Total	180	2800	730	ND	60 J	30 J
Selenium, Total	3,900	1,500,000	4,000	290 J	1,600	1,300
Silver, Total	2,000	1,500,000	8,300	ND	ND	ND
Volatile Organic Compounds (VOCs)						
Toluene	700	500,000	700	ND	6.2	ND
p/m-Xylene	--	--	--	ND	3.2 J	ND
Total Xylenes	260	500,000	1,600	ND	3.2 J	ND
n-Propylbenzene	3,900	500,000	3,900	ND	1.1 J	ND
1,3,5-Trimethylbenzene	8,400	190,000	8,400	ND	3.6 J	ND
1,2,4-Trimethylbenzene	3,600	190,000	3,600	ND	8.8 J	ND
1,4-Diethylbenzene	NL	NL	NL	ND	4.6 J	ND
4-Ethyltoluene	NL	NL	NL	ND	6.1 J	ND
1,2,4,5-Tetramethylbenzene	NL	NL	NL	ND	1.6 J	ND
Semi-Volatile Organic Compounds (SVOCs)						
Bis(2-Ethylhexyl)phthalate	NL	NL	NL	160 J	ND	ND

Notes:

SB08-12-14, SB06A-8-10 and SB11-8-10: Analyzed for 8 RCRA Metals, TCL VOCs and TCL SVOCs.

Only those compounds detected in at least one sample are presented on the table.

All results reported in µg/kg - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

NL - NYSDEC Soil Cleanup Objective not listed.

Site-Related Groundwater:

Groundwater samples were collected from temporary monitoring wells installed on the Site during the Phase II Site Investigation completed in February 2012. Groundwater sampling results are summarized on Table 8 and the temporary well locations are shown on Figure 4. VOCs and SVOCs were either not detected or were detected at concentrations below the applicable 6 NYCRR Part 703 Groundwater Quality Standards (GWQS) in samples TW01-020812, TW04-020812 and TW07-020812. VOCs were detected at concentrations exceeding the Part 703 GWQS in groundwater sample TW05-020912, which was collected from temporary monitoring well TW05 installed at AOC 3 (former Used Oil UST). Naphthalene was also detected in this sample above the GWQS. VOCs and SVOCs were also detected in sample TW10-020812 collected from temporary well TW10, installed near one of the sub-grade hydraulic lifts in AOC 4. The concentrations of VOCs in this sample did not exceed the Part 703 GWQS. All of the SVOC compounds in sample TW10-020812 were detected at concentrations of 0.23 µg/L or less. Several of the detected SVOCs do not have specific groundwater quality standards defined in Part 703. In the absence of such standards, the SVOC concentrations were compared to groundwater quality guidance values defined in the TOGS 1.1.1. As highlighted on Table 8, in some instances, certain SVOCs were detected at concentrations exceeding the TOGS 1.1.1 guidance values.

In summary, sample TW05-020912 was the only groundwater sample collected from the Site in which there were compounds detected above the GWQS. The temporary well from which this sample was collected was installed through the presumed source area at AOC 3; the reported former location of the used oil UST. There was no evidence that impacted groundwater is migrating away from the Site.

Table 8 – Groundwater Analytical Results – Site-Wide

Analyte/Compounds	NYSDEC Part 703 Groundwater Quality Standards or TOGS 1.1.1 Guidance Values (ug/L)	TW01-020812 2/8/2012	TW04-020812 2/8/2012	TW05-020912 2/9/2012	TW07-020812 2/8/2012	TW10-020812 2/8/2012
Volatile Organic Compounds (VOCs)						
Toluene	5	ND	ND	ND	1.5	0.28 J
Ethylbenzene	5	ND	ND	**1500**	ND	ND
p/m-Xylene	5	ND	ND	**6100**	0.6 J	1.8
o-Xylene	5	ND	ND	**77 J**	ND	ND
Acetone	50*	1.9 J	ND	ND	NA	NA
n-Butylbenzene	5	ND	ND	**210**	ND	ND
Isopropylbenzene	5	ND	ND	**310**	ND	0.6
p-Isopropyltoluene	5	ND	ND	**120**	ND	ND
Naphthalene	10	ND	ND	**330 J**	ND	ND
n-Propylbenzene	5	ND	ND	**580**	ND	1.2
1,3,5-Trimethylbenzene	5	ND	ND	**1100**	0.47 J	0.6 J
1,2,4-Trimethylbenzene	5	ND	ND	**4400**	1.1 J	2.0 J
1,4-Diethylbenzene	5	NA	ND	**770**	NA	NA
4-Ethyltoluene	5	NA	ND	**3300**	NA	NA
1,2,4,5-Tetramethylbenzene	5	NA	ND	**370 J**	NA	NA
Semi-Volatile Organic Compounds (SVOCs)						
Biphenyl	5*	NA	ND	3.3	NA	NA
Fluoranthene	50*	ND	ND	ND	ND	0.12 J
Naphthalene	10	0.21	ND	**320**	0.09 J	0.13 J
Benzo(a)anthracene	0.002*	ND	ND	ND	ND	**0.22**
Benzo(a)pyrene	ND	ND	ND	ND	ND	**0.22**
Benzo(b)fluoranthene	0.002*	ND	ND	ND	ND	**0.16 J**
Chrysene	0.002*	ND	ND	ND	ND	**0.17 J**
Benzo(ghi)perylene	NL	ND	ND	ND	ND	0.17 J
Fluorene	50*	ND	ND	1.5J	ND	0.11 J
Phenanthrene	50*	ND	ND	ND	ND	0.16 J
Indeno(1,2,3-cd)Pyrene	0.002*	ND	ND	ND	ND	**0.23**
Pyrene	50*	ND	ND	ND	ND	0.23
2-Methylnaphthalene	NL	NA	ND	150	NA	NA

Notes:

TW01-020812: Analyzed for STARS VOCs +Acetone and STARS SVOCs.

TW04-020812 and TW05-020912: Analyzed for TCL VOCs and TCL SVOCs.

TW07-020812 and TW10-020812: Analyzed for STARS VOCs and STARS SVOCs.

Only those compounds detected in at least one sample are presented on the table.

All results reported in µg/L - parts per billion (ppb).

ND - Compound not detected.

J - Estimated concentration.

NL - NYSDEC groundwater quality standard or guidance value not listed.

*Guidance value as defined in NYSDEC TOGS 1.1.1

Concentrations exceeding groundwater quality standards or guidance values are shown in **Boldfaced Font.**

Site-Related Soil Vapor Intrusion:

A soil vapor intrusion investigation was not conducted during the site investigation phase. However, a sub-slab soil gas sampling event was conducted on 20 September 2012 following the completion of the soil and groundwater remedial activities. Four sub-slab soil gas samples (SG01, SG02, SG03 and SG04) were collected from beneath the new concrete slab of the TSC building in accordance with the Sub-Slab Soil Gas Sampling Workplan (SSSGWP) prepared by Greystone dated 5 September 2012 and approved by NYSDOH and NYSDEC on 18 September 2012. The sub-slab soil gas sample locations are shown on Figure 17.

Results of the sub-slab soil gas sampling event are presented on Table 9. Based on these results, NYSDOH and NYSDEC requested activation of the Site's SSDS, which was put in operation on 15 October 2012. Additional information on the construction and operation of the SSDS is provided in Section 1.4.2.2.

Table 9 – Sub-Slab Soil Gas Sample Analytical Results

Compound/Analyte		SG01-092012 9/20/2012	SG02-092012 9/20/2012	SG03-092012 9/20/2012	SG04-092012 9/20/2012
Volatile Organic Compounds (VOCs)					
	Dichlorodifluoromethane	2.68	ND	ND	2.53
	Ethanol	56.9	ND	31.8	36
	Acetone	18.1	ND	17	14.1
	Methylene chloride	14.5	ND	ND	ND
	Carbon disulfide	4.89	9.5	1.97	4.48
	2-Butanone	2.3	ND	1.98	ND
	n-Hexane	20.5	16	10.2	25.8
	Benzene	3.67	ND	1.9	2.39
	Cyclohexane	7.54	ND	5.37	11.2
	Heptane	9.67	13.8	4.59	20.2
	Toluene	15.3	22.9	26	13.1
	Ethylbenzene	ND	55.2	ND	5.82
	p/m-Xylene	9.03	166	5	19
	o-Xylene	3.06	135	ND	10.2
	4-Ethyltoluene	ND	496	ND	6.54
	1,3,5-Trimethybenzene	2.58	551	ND	10.5
	1,2,4-Trimethylbenzene	6.98	2080	2.85	32

Notes:
All results and soil gas screening levels presented in $\mu g/m^3$
Only those compounds detected in a least one sample are presented on this table

Underground Storage Tanks:

A used oil UST was reportedly located at the northeast corner of the Skinner Sales building. According to the previous property owner, this UST was removed in 1986. Historic Sanborn Fire Insurance Maps from the 1920s and 1930s showed two gasoline tanks on the southern corner of the Site, associated with a former filling station, and a third gasoline tank in Mohawk Street along the eastern boundary of the Site. The maps did not indicate if these were underground or aboveground tanks. No USTs were identified in these areas as part of a geophysical scan completed during the site

investigation activities. Additional information regarding USTs discovered during remedial activities and site redevelopment is provided below.

1.4 Summary of Remedial Actions

The Site was remediated in accordance with the NYSDEC-approved RAWP dated May, 2012.

The following is a summary of the Remedial Actions performed at the Site:

1. Asbestos abatement, removal of oil-affected sediments in interior trench drains and proper disposal of regulated wastes (e.g. fluorescent light bulbs, paints, light ballasts, used oil, etc.) remaining inside the former dealership building prior to demolition;
2. Proper handling and disposal of oil-stained concrete construction debris from the former dealership building;
3. All soils with staining, odors and/or elevated photoionization detector (PID) field screening results were excavated/removed to the extent possible and disposed offsite. This included excavation of surficial soils at AOCs 2, 3, and 5 with visible oil-staining and/or contaminants of concern at concentrations exceeding the Commercial use SCOs; excavation of subsurface soils with petroleum-related impacts and removal of a 1,000-gallon UST at AOC 3; removal of the sub-grade hydraulic lifts, associated appurtenances and petroleum-impacted soils at AOC 4 (this included three additional lifts discovered during removal of the building slab); removal of trench drain piping and associated impacted soils at AOC 6; removal of paint and oil-stained soils uncovered immediately beneath the concrete building slab; removal of a 275-gallon No. 2 fuel oil UST uncovered at the northeast corner of the Site during site redevelopment activities along with

associated petroleum-impacted soils (this area was classified as AOC 7); removal of an empty 1,000-gallon UST discovered beneath the building (this area was classified as AOC 8); removal of a 1,000-gallon UST discovered beneath the building containing water and No. 2 fuel oil along with associated petroleum-impacted soils (this area was classified as AOC 9); removal of a 2,000-gallon UST containing No. 2 fuel oil and a 550-gallon UST containing water discovered near the south corner of the property along with associated petroleum-impacted soil and perched water (this area was classified as AOC 10); and removal of a 2,000-gallon UST containing water discovered at the south corner of the property during redevelopment activities (this area was classified as AOC 11). [Note: The area identified as AOC 1 during the SI activities was reclassified as AOC 10 and AOC 11 during the implementation of the RAWP.] The location of each of the above-listed AOCs is shown on Figure 7. Detail figures of each AOC are also provided and referenced in subsequent sections of the SMP. All soils exceeding the Commercial Use SCOs were removed and properly disposed offsite as a result of these activities. Further details are provided below.

4. Treatment of groundwater with VOCs exceeding the Part 703 GWQS at AOC 3 through the introduction of chemical oxidants into the open excavation;

5. Construction and maintenance of a site cover system consisting of structures such as the new commercial building, asphalt-paved parking areas and driveways, concrete-paved display areas, concrete sidewalks or a soil cover to prevent human exposure to potentially impacted soil/fill remaining at the Site;

6. Installation and activation of a sub-slab depressurization system;

7. Execution and recording of an Environmental Easement to restrict land use and prevent future exposure to any impacted media that may remain at the Site;

8. Development and implementation of a Site Management Plan for long term management of remaining impacted media as required by the Environmental Easement, which includes plans for: (1) Institutional and Engineering Controls, (2) monitoring, (3) operation and maintenance and (4) reporting;

Remedial activities were completed at the Site during June, July and August 2012.

1.4.1 Removal of Contaminated Materials from the Site

Remediation activities were implemented at the Site with the objective of removing potential source areas or features that could contribute future releases; removing soils that may function as sources of contaminants degrading shallow groundwater quality; and at a minimum, achieving the Commercial Use SCOs defined in 6NYCRR 375-6.8. Remedial actions involving the removal of contaminated media included the following:

- Site Preparation: The following removal activities were implemented to prepare the building for demolition.
  - An asbestos abatement program was completed by Dakota Environmental Services, a certified asbestos-abatement contractor, to properly remove and dispose asbestos-containing material from the former car dealership building.
  - Sediments accumulated in the trench drains of the service garage and body shop areas of the building were removed with shovels and placed in drums, which were properly disposed offsite.
  - Oil containers, fluorescent light bulbs, light ballasts, waste paints and other regulated materials left in the building were characterized, profiled and properly disposed offsite in accordance with applicable laws and regulations governing these materials.

- Excavation and Removal of Impacted Materials and Structures: Table 10 below describes the materials removed from each AOC, the amount of the various materials removed, lists whether or not the Commercial Use SCOs were achieved at each AOC and references a Figure that depicts the excavation area, if applicable.

Table 10 - Summary of Removal Activities

AOC / Site Feature	Materials and Amounts Removed	Commercial Use SCOs Achieved?	Figure Reference
AOC 1	This AOC was reclassified as AOC 10 and AOC 11 during the implementation of the RAWP.		
AOC 2 – Surficial Excavation	Approximately 7 tons of soil that had been pushed onto the neighboring property to the north by the previous property owner and one remaining area of surficial oil-staining excavated to nine inches below grade from area shown on Figure 8. Soils disposed at the Ava Landfill.	Yes	Figure 8
AOC 3 – Surficial Excavation	Approximately 0.5 tons of oil-stained soils beneath the air compressor blow-down excavated to a depth of six inches below grade from area shown on Figure 9. Soils disposed at the Ava Landfill.	Yes	Figure 9
AOC 5 – Surficial Excavation	Approximately 7 tons of green discolored sand from historic sand blasting activities excavated to depths of three to twelve inches below grade from areas shown on Figure 10. Soils disposed at the Ava Landfill.	Yes	Figure 10
Oil and Painted-Stained Concrete	A) 18.44 tons of paint-stained concrete disposed at the Ava Landfill. B) 122.02 tons of oil-stained	Samples of non-stained portions of concrete met the Commercial	Figure not generated.

	concrete disposed at the Ava Landfill.	Use SCOs.	
AOC 4- Sub-Grade Hydraulic Lifts	A) 14 hydraulic cylinders and 5 hydraulic oil reservoir tanks that were drained, cleaned and disposed as scrap metal at Sims Metal Management. B) 125 gallons of hydraulic oil and liquids drained from the cylinders and oil reservoir disposed at Industrial Oil Tank Services. C) 227.83 tons of petroleum-impacted soils excavated to a depth of ten feet below grade from area shown on Figures 11 and 11A. Soils disposed at the Ava Landfill.	Yes	Figures 11 & 11A
AOC 3 – Subsurface Soils	A) 1,000-gallon UST (Tank No. 0002), cleaned and disposed as scrap metal (tank did not contain any petroleum product) at Sims Metal Management. B) 2,097.3 tons of petroleum-impacted soils disposed at the Ava Landfill. Soils excavated to depths of 15 to 18 feet below grade within area shown on Figure 12.	Yes	Figure 12
AOC 6 – Stained soils and piping associated with trench drains.	A) 43.18 tons of oil-stained soils and piping associated with the trench drains in the body shop and service garage. The excavated areas are shown on Figure 13. Soils disposed at the Ava Landfill.	Yes	Figure 13
AOC 7 – 275-gallon No. 2 Fuel Oil UST (Tank No. 0001)	A) 275-gallon UST (Tank No. 0001), cleaned and disposed as scrap metal (tank was filled with soils disposed with materials listed under item B) at Sims Metal Management. B) 341.21 tons of petroleum-impacted soils excavated to depths of 11.5 feet below grade from area	Yes	Figure 14

	shown on Figure 14 disposed at the Ava Landfill.		
AOC 8 – 1,000-gallon UST	A) 1,000-gallon UST (Tank No. 0004), cleaned and disposed as scrap metal at Sims Metal Management. B) No impacted soils encountered around Tank No. 0004). Waste generated from tank cleaning drummed with materials generated from cleaning Tank No. 0003.	Yes	Figure 15
AOC 9 – 1,000-gallon No. 2 fuel oil UST	A) 1,000-gallon UST (Tank No. 0003), emptied, cleaned and disposed as scrap metal at Sims Metal Management. B) One 55-gallon drum of tank bottoms generated from cleaning Tank No. 0003 and 0004 disposed at Industrial Oil Tank Services. C) 40 gallons of No. 2 fuel oil and 179 gallons of water pumped from Tank No. 003 and disposed at Industrial Oil Tank Services. D) 563.47 tons of petroleum-impacted soils excavated to a depth of eight to twelve feet below grade from area shown on Figure 15 disposed at the Ava Landfill.	Yes	Figure 15
AOC 10 – 2,000-gallon No. 2 fuel Oil UST (Tank No. 0005) and 550-gallon No. 2 Fuel Oil UST (Tank No. 0006)	A) 2,000-gallon UST (Tank No. 0005), and 550-gallon UST (Tank No. 0006) emptied, cleaned and disposed as scrap metal at Weitsman of Syracuse. B) One 55-gallon drum of tank bottoms generated from cleaning Tank Nos. 0005 and 0006 disposed at Industrial Oil Tank Services. C) 1450 gallons of No. 2 fuel oil pumped from Tank 0005 and 50 gallons of water pumped from Tank No. 0006 and disposed at Industrial	Yes	Figure 16

	Oil Tank Services. D) 255.95 tons of petroleum-impacted soils excavated to a depth of seven to ten feet below grade from area shown on Figure 16 disposed at the Ava Landfill.		
AOC 11 – 2,000-gallon UST (Tank No. 0007)	A) 2,000-gallon UST (Tank No. 0007) emptied, cleaned and disposed as scrap metal at Weitsman of Syracuse. B) One 55-gallon drum of tank bottoms generated from cleaning Tank No. 0007 disposed at Industrial Oil Tank Services. C) No impacted soils were encountered.	Yes	Figure 16

1.4.2 Site-Related Treatment Systems

1.4.2.1 Groundwater Treatment

The excavation of petroleum-impacted soil at AOC 3, completed between 2 July and 17 July 2012, was extended into the upper portion of the water table. During the excavation activities, 850 pounds of zero valent iron (ZVI) and 3,575 pounds of sodium persulfate were introduced into the open excavation and mixed into the upper portion of the water table to treat petroleum-related compounds in the groundwater. This in-situ treatment utilizes ZVI-catalyzed hydroxyl and sulfate free radical oxidation to treat the petroleum-related compounds of concern in two phases. In the first phase of the treatment, persulfate chemistry catalyzed by the ZVI creates sulfate free radicals which drive the direct oxidation of the petroleum-related compounds. The mass of persulfate introduced was designed to extend this phase of the remedial program for three months based on the concentration of the compounds of concern and the estimated amount of naturally occurring organic carbon present in the subsurface. In the second phase of this remedial approach, the decomposition products of the initial oxidation, primarily sulfate and ferric

iron, are utilized to enhance and stimulate facultative biological activity and drive degradation of the compounds of concern via anaerobic biodegradation. That is, the sulfate and ferric iron generated as a by-product of the initial oxidation reactions will function as terminal electron acceptors utilized by anaerobic bacteria in the metabolism/degradation of the petroleum-related compounds. By stimulating the biological activity, the duration over which the introduced chemicals will enhance the degradation of the petroleum-related compounds is extended from roughly three months to greater than 12 months.

1.4.2.2 Sub-Slab Depressurization System

A SSDS was installed as part of the construction of the new commercial building. The system design is depicted and described on Figure 17. The SSDS was placed in operation on 15 October 2012.

A sub-slab communication test was performed on 17 October 2012 to verify the system was operating properly. The communication testing was performed in accordance with the scope of work emailed to NYSDOH and NYSDEC on 15 October 2012 and approved via email by both agencies on that day. For the communication test, a three-eighths-inch-diameter hole was drilled through the concrete building slab and underlying vapor barrier into the gravel sub-base adjacent to the SG02 sub-slab soil gas sample location. Tubing connected to a micro-manometer was then inserted into the hole and the annular space was sealed with hydrated granular bentonite. The micro-manometer showed that the system was operating correctly, generating a negative pressure of -0.004 inches of water column beneath the concrete slab and vapor barrier. The negative pressure field generated beneath the building slab by the SSDS will prevent vapor intrusion from occurring. After the testing was completed, the hole beneath the slab was backfilled with hydrated granular bentonite and the floor was repaired with concrete.

1.4.3 Remaining Contamination

Table 11 and Figure 18 summarize the results of all soil samples remaining at the Site after completion of Remedial Action that exceed the Track 1 (unrestricted) SCOs.

Figure 19 shows the locations of all soil samples remaining at the Site after completion of Remedial Action that meet the SCOs for unrestricted use of the Site.

Table 11 - Soil Samples with Compounds Detected above the Unrestricted Use SCOs

Sample ID	Compound(s) Detected Above Unrestricted Use SCOs	Concentration (ppm)	NYSDEC Part 375-6.8 Unrestricted Use SCO (ppm)	NYSDEC Part 375-6.8 Residential Use SCO (ppm)	Approximate Elevation of Soil Sample (ft AMSL)
AOC3-PE03-7.5'-9.5'	Total Xylenes	0.734	0.26	100	379.5 – 381.5
	Acetone	0.36	0.05	100	
AOC3-PE13-3'-5'	Total Xylenes	0.3821	0.26	100	384 – 386
	Acetone	0.61	0.05	100	
	2-Butanone	0.15	0.12	100	
AOC3-PE15-15'-16'	Total Xylenes	0.462	0.26	100	372 – 373
AOC3-PE16-10'-12'	Naphthalene	23	12	100	376 – 378
	Ethylbenzene	33	1	30	
	Total Xylenes	194	0.26	100	
	n-Propylbenzene	20	3.9	100	
	1,3,5-Trimethylbenzene	46	8.4	47	
	1,2,4-Trimethylbenzene	150	3.6	47	
AOC4-PE12-10'-11'	Acetone	0.087	0.05	100	378 – 379
AOC5-PE01-1'-1.5'	4,4'-DDT	0.00981 J	0.0033	1.7	388.9 - 389.4
	Lead	72	63	400	
AOC5-PE02-0.5'-1'	Lead	360	63	400	390 – 390.5
	Zinc	140	109	2200	
AOC5-PE03-3"-6"	Lead	150	63	400	388.75 – 389
AOC6-PE01-0.5'-1'	Zinc	110	109	2200	390.25 – 390.75
AOC6-PE04-5'-6'	PCBs	0.122	0.1	1	384 – 385

AOC6-PE06-2'-2.5'	Zinc	300	109	2200	386 – 386.5
AOC6-PE14-3'-3.5'	Zinc	370	109	2200	385.75 – 386.25
AOC7-PE01-8.5'-10.5'	Acetone	0.054	0.05	100	380.5 – 382.5
AOC8-PE04-6.5'-8.5'	Acetone	0.054	0.05	100	383.75 – 385.75
AOC9-PE07-7'-8'	Acetone	0.56	0.05	100	381 – 382
	2-Butanone	0.13	0.12	100	
AOC10-PE02-7'-8'	Acetone	0.16	0.05	100	382 – 383
AOC10-PE03-10'-11'	Acetone	0.34	0.05	100	379 – 380
AOC10-PE05-7'-8'	Acetone	0.34	0.05	100	382-383
AOC10-PE06-5.5'-6.5'	Acetone	0.088	0.05	100	383.5 – 384.5
AOC10-PE07-5'-6'	Acetone	0.12	0.05	100	384 – 385

Of the nearly 80 non-duplicate post-excavation soil samples collected and submitted for laboratory analysis as part of the site remediation activities, only those 20 samples listed on Table 11 had at least one compound detected at a concentration exceeding the Unrestricted Use SCOs. Further, for 19 of these 20 samples, the concentrations of the contaminants of concern only exceeded the Protection of Ecological Resources SCOs and/or the Protection of Groundwater SCOs. That is, only one of the samples, AOC3-

PE16-10’-12’, was found to have concentrations of contaminants of concern that exceeded the most restrictive SCOs for the protection of human health (the Part 375-6.8 Residential Use SCOs). The Residential Use SCOs are also listed on Table 11.

As such, the only sample representative of in-place soils that contained contaminants of concern that exceeded the concentrations defined by NYSDEC to present an exposure risk to human health was AOC3-PE16-10’-12’. The position of this sample is shown on Figure 12 and Figure 18. This was a sidewall sample representative of an approximate 20 foot length of soils located immediately west of a sewer line. The impacts were identified at a depth between 373 and 378 feet AMSL. To the west, non-impacted soils are demarcated by a transition from a mix of silt, sand, gravel and cobbles to #2 and #3 washed stone that was used to backfill the excavation. Soil boring AOC3-DB01 was advanced on the eastern side of the sewer line in the position shown on Figure 12 for further delineation. There was no visual, olfactory or PID screening evidence of impacts to subsurface soils at this boring location.

Appropriate measures are to be implemented if the sewer line adjacent to sample AOC3-PE16-10’-12’ is replaced to protect human health and the environment and the Excavation Work Plan provided in Appendix A is to be followed for all ground intrusive activities that breech the Site Cover System across the entire Site.

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2.0 ENGINEERING AND INSTITUTIONAL CONTROL PLAN

2.1 Introduction

2.1.1 General

Since remaining impacted soil and groundwater exists beneath the Site and soil vapor is present beneath the building at concentrations above typical mean background levels for indoor air in commercial buildings, Engineering Controls and Institutional Controls (EC/ICs) are required to protect human health and the environment. This Engineering and Institutional Control Plan describes the procedures for the implementation and management of all EC/ICs at the Site. The EC/IC Plan is one component of the SMP and is subject to revision by NYSDEC.

2.1.2 Purpose

This plan provides:

- A description of all EC/ICs on the Site;
- The basic implementation and intended role of each EC/IC;
- A description of the key components of the ICs set forth in the Environmental Easement;
- A description of the features to be evaluated during each required inspection and periodic review;
- A description of plans and procedures to be followed for implementation of EC/ICs, such as the implementation of the Excavation Work Plan for the proper handling of remaining contamination that may be disturbed during maintenance or redevelopment work on the Site; and
- Any other provisions necessary to identify or establish methods for implementing the EC/ICs required by the site remedy, as determined by the NYSDEC.

2.2 Engineering Controls

2.2.1 Engineering Control Systems

2.2.1.1 Site Cover System

Exposure to contamination in soil/fill at the Site is prevented by a cover system placed over the entire Site. This cover system is comprised of a minimum of 12 inches of clean soil, asphalt pavement, concrete-covered sidewalks, or concrete building slabs. Details of the Site Cover System are depicted on Figures 20A and 20B. The Excavation Work Plan provided in Appendix A outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and any underlying remaining contamination is disturbed. Procedures for the inspection and maintenance of this cover are provided in the Monitoring Plan included in Section 3 of this SMP.

2.2.1.2 Sub-slab Depressurization System

A sub-slab depressurization system was installed beneath the TSC building and placed in operation on 15 October 2012. The system design is provided on Figure 17.

Procedures for operating and maintaining the sub-slab depressurization system, if needed, will be documented in the Operation and Maintenance Plan (Section 4 of this SMP). Procedures for monitoring the system, if needed, are included in the Monitoring Plan (Section 3 of this SMP). The Monitoring Plan also addresses severe condition inspections in the event that a severe condition, which may affect controls at the Site, occurs.

2.2.2 Criteria for Completion of Remediation/Termination of Remedial Systems

Generally, remedial processes are considered completed when effectiveness monitoring indicates that the remedy has achieved the remedial action objectives identified by the

decision document. The framework for determining when remedial processes are complete is provided in Section 6.6 of NYSDEC DER-10.

2.2.2.1 Composite Cover System

The composite cover system is a permanent control and the quality and integrity of this system will be inspected at defined, regular intervals in perpetuity.

2.2.2.2 Sub-Slab Depressurization System

The active SSDS will not be discontinued unless prior written approval is granted by the NYSDEC. In the event that monitoring data indicates that the SSDS is no longer required, a proposal to discontinue the SSDS will be submitted by the property owner to the NYSDEC and NYSDOH. The NYSDOH does not provide specific guidance values with respect to vapor intrusion for acceptable concentrations of petroleum-related VOCs. Given that the primary source of potential vapor intrusion remaining onsite is petroleum-impacted groundwater at AOC 3, groundwater quality data will be the primary screening tool utilized to determine when the system will be taken offline. Additional site information will also be taken into consideration when determining if operation of the SSDS will be discontinued.

2.2.2.3 Groundwater Monitoring

Groundwater monitoring activities to assess the chemical oxidation and enhanced biodegradation of VOCs from the introduction of chemical oxidants at AOC 3 will continue until residual groundwater concentrations are found to be consistently below NYSDEC standards or have become asymptotic at an acceptable level over an extended period. Monitoring will continue until permission to discontinue is granted in writing by the NYSDEC. If groundwater contaminant levels become asymptotic at a level that is

not acceptable to the NYSDEC, additional source removal, treatment and/or control measures will be evaluated.

2.3 Institutional Controls

A series of Institutional Controls is required by the RAWP and Decision Document to: (1) implement, maintain and monitor Engineering Control systems; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the Site to commercial uses only. Adherence to these Institutional Controls on the Site is required by the Environmental Easement and will be implemented under this Site Management Plan. These Institutional Controls are:

- Compliance with the Environmental Easement and this SMP by the Grantor and the Grantor's successors and assigns;
- All Engineering Controls must be operated and maintained as specified in this SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP.
- Groundwater and other environmental or public health monitoring must be performed as defined in this SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in this SMP;

Institutional Controls identified in the Environmental Easement may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The Site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- The property may only be used for commercial use provided that the long-term Engineering and Institutional Controls included in this SMP are employed.
- The property may not be used for a higher level of use, such as unrestricted, residential or restricted-residential use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of the groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- A sub-slab depressurization system will be operated to mitigate vapor intrusion until sampling data demonstrates the absence of a source of vapors to the indoor air or that the vapor intrusion pathway is not complete from potential sources;
- Vegetable gardens and farming on the property are prohibited;
- The Site owner will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls.

2.3.1 Excavation Work Plan

The Site has been remediated for restricted commercial use. Any future intrusive work that will penetrate the Site Cover System, or encounter or disturb the remaining contamination, including any modifications or repairs to the existing cover system will be performed in compliance with the Excavation Work Plan (EWP) that is attached as Appendix A to this SMP. Any work conducted pursuant to the EWP must also be conducted in accordance with the procedures defined in a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) prepared for the Site. A sample HASP is attached as Appendix C to this SMP. The HASP will be updated and amended as appropriate as part of future excavation work conducted at the Site. HASPs for future excavation work conducted at the Site will comply with DER-10, and 29 CFR 1910, 29 CFR 1926, and all other applicable Federal, State and local regulations. The CAMP developed for and included with the RAWP is provided as Appendix D. Based on future changes to State and federal health and safety requirements, and specific methods employed by future contractors, the HASP and CAMP will be updated and re-submitted with the notification provided in Section A-1 of the EWP. Any intrusive construction work will be performed in compliance with the EWP, HASP and CAMP, and will be included in the periodic inspection and certification reports submitted under the Site Management Reporting Plan (See Section 5).

The Site owner and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all intrusive work, the structural integrity of excavations, proper disposal of excavation de-water, control of runoff from open excavations into remaining contamination, and for structures that may be affected by excavations (such as building foundations). The Site owner will ensure that site development activities will not

interfere with, or otherwise impair or compromise, the engineering controls described in this SMP.

2.3.2 Soil Vapor Intrusion Evaluation

In the unlikely event that any additional enclosed structures are planned for the Site, an evaluation will be made as to whether there is the potential for soil vapor intrusion (SVI) into the structure based on the proposed location. The SVI evaluation will be performed to determine whether any mitigation measures are necessary to eliminate potential exposure to vapors in the proposed structure. Alternatively, an SVI mitigation system may be installed as an element of the building foundation without first conducting an investigation. This mitigation system will include a vapor barrier and passive sub-slab depressurization system that is capable of being converted to an active system.

Prior to conducting an SVI investigation or installing a mitigation system, a work plan will be developed and submitted to the NYSDEC and NYSDOH for approval. This work plan will be developed in accordance with the most recent NYSDOH "Guidance for Evaluating Vapor Intrusion in the State of New York". Measures to be employed to mitigate potential vapor intrusion will be evaluated, selected, designed, installed, and maintained based on the SVI evaluation, the NYSDOH guidance, and construction details of the proposed structure.

Preliminary (unvalidated) SVI sampling data will be forwarded to the NYSDEC and NYSDOH for initial review and interpretation. Upon validation, the final data will be transmitted to the agencies, along with a recommendation for follow-up action, such as mitigation. SVI sampling results, evaluations, and follow-up actions will also be summarized in the next Periodic Review Report.

2.4 INSPECTIONS AND NOTIFICATIONS

2.4.1 Inspections

Inspections of all remedial components installed at the Site will be conducted at the frequency specified in the SMP Monitoring Plan schedule. A comprehensive site-wide inspection will be conducted annually, regardless of the frequency of the Periodic Review Report. The inspections will determine and document the following:

- Whether Engineering Controls continue to perform as designed;
- If these controls continue to be protective of human health and the environment;
- Compliance with requirements of this SMP and the Environmental Easement;
- Achievement of remedial performance criteria;
- Sampling and analysis of appropriate media during monitoring events;
- If site records are complete and up to date; and
- Changes, or needed changes, to the remedial or monitoring system;

Inspections will be conducted in accordance with the procedures set forth in the Monitoring Plan of this SMP (Section 3). The reporting requirements are outlined in the Periodic Review Reporting section of this plan (Section 5).

If an emergency, such as a natural disaster or an unforeseen failure of any of the ECs occurs, an inspection of the Site will be conducted within 5 days of the event to verify the effectiveness of the EC/ICs implemented at the Site by a qualified environmental professional as determined by NYSDEC.

2.4.2 Notifications

Notifications will be submitted by the property owner to the NYSDEC as needed for the following reasons:

- 60-day advance notice of any proposed changes in site use that are required under the terms of the BCA, 6NYCRR Part 375, and/or Environmental Conservation Law.
- 7-day advance notice of any proposed ground-intrusive activities pursuant to the Excavation Work Plan.
- Notice within 48-hours of any damage or defect to the foundations structures that reduces or has the potential to reduce the effectiveness of other Engineering Controls and likewise any action to be taken to mitigate the damage or defect.
- Verbal notice by noon of the following day of any emergency, such as a fire, flood, or earthquake that reduces or has the potential to reduce the effectiveness of Engineering Controls in place at the Site, with written confirmation within 7 days that includes a summary of actions taken, or to be taken, and the potential impact to the environment and the public.
- Follow-up status reports on actions taken to respond to any emergency event requiring ongoing responsive action shall be submitted to the NYSDEC within 45 days and shall describe and document actions taken to restore the effectiveness of the ECs.

Any change in the ownership of the Site or the responsibility for implementing this SMP will include the following notifications:

- At least 15 days prior to the change, the NYSDEC will be notified in writing of the proposed change. This will include a certification that the prospective purchaser has been provided with a copy of the BCA and all approved work plans and reports, including this SMP.
- Within 15 days after the transfer of all or part of the Site, the new owner's name, contact representative, and contact information will be confirmed in writing.

2.5 Contingency Plan

Emergencies may include injury to personnel, fire or explosion, environmental release, or serious weather conditions.

2.5.1 Emergency Telephone Numbers

In the event of any environmentally related situation or unplanned occurrence requiring assistance the Owner or Owner's representative(s) should contact the appropriate party from the contact list below. For emergencies, appropriate emergency response personnel should be contacted. Prompt contact should also be made to OneGroup NY, Inc. These emergency contact lists must be maintained in an easily accessible location at the Site.

Table 12 - Emergency Contact Numbers

Medical, Fire, and Police:	911
One Call Center:	(800) 272-4480 (3 day notice required for utility markout)
Poison Control Center:	(800) 222-1222
Pollution Toxic Chemical Oil Spills:	(800) 424-8802
NYSDEC Spills Hotline	(800) 457-7362

Table 13 - Contact Numbers

James F. Blasting: OneGroup NY, Inc.	(315) 457-1830

* Note: Contact numbers subject to change and should be updated as necessary

2.5.2 Map and Directions to Nearest Health Facility

Site Location: 700 Mohawk Street, Herkimer, NY

Nearest Hospital Name: Faxton St. Luke's Healthcare: St. Luke's Campus

Hospital Location: 1656 Champlin Avenue, Utica, NY

Hospital Telephone: (315) 624-6000

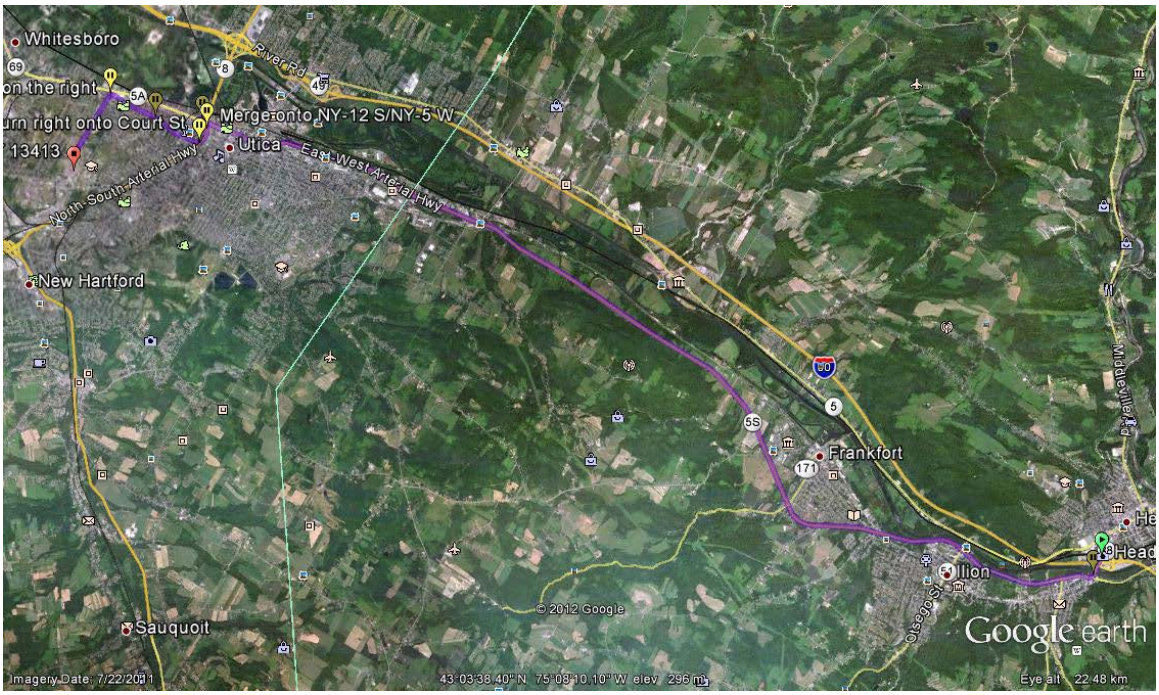
Directions to the Hospital:

1. Make right from Site going **south** on **Mohawk St/Route 28 S (0.3 mi)**
2. Turn **right** onto **Route 5S W (14.8 mi)**
3. Slight right onto **Route 5W / Route 8 S / Route 12 S** toward **New Hartford (0.3 mi)**
4. Merge onto **Route 12 S / Route 5W (0.2 mi)**
5. Turn **right** onto **Court Street (0.7 mi)**
6. Continue onto **Whitesboro Street (0.7 mi).**
7. Turn **left** onto **Champlin Avenue (1.0 mi) –** Hospital is on the **right** at 1656 Champlin Avenue.

Total Distance: 18 miles

Total Estimated Time: 27 minutes

Map Showing Route from the Site to the Hospital:



2.5.3 Response Procedures

As appropriate, the fire department and other emergency response groups will be notified immediately by telephone of the emergency. The emergency telephone number list is found at the beginning of this Contingency Plan (Table 12). The list will also be posted prominently at the Site and made readily available to all personnel at all times. Procedures for responding to spills and an evacuation plan will be developed as appropriate for the future use of the Site. These plans will be developed and implemented once site redevelopment is completed and will be maintained on the Site.

3.0 SITE MONITORING PLAN

3.1 Introduction

3.1.1 General

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the site cover system, and all affected site media identified below. Monitoring of other Engineering Controls (i.e. the SSDS) is described in Chapter 4, Operation, Monitoring and Maintenance Plan. This Monitoring Plan may only be revised with the approval of NYSDEC.

3.1.2 Purpose and Schedule

This Monitoring Plan describes the methods to be used for:

- Sampling and analysis of all appropriate media (e.g., groundwater, indoor air, soil vapor, soils);
- Assessing compliance with applicable NYSDEC standards, criteria and guidance, particularly ambient groundwater standards and Part 375 SCOs for soil;
- Assessing achievement of the remedial performance criteria.
- Evaluating site information periodically to confirm that the remedy continues to be effective in protecting public health and the environment; and
- Preparing the necessary reports for the various monitoring activities.

To adequately address these issues, this Monitoring Plan provides information on:

- Sampling locations, protocol, and frequency;
- Information on all designed monitoring systems (e.g., well logs);
- Analytical sampling program requirements;

- Reporting requirements;
- Quality Assurance/Quality Control (QA/QC) requirements;
- Inspection and maintenance requirements for monitoring wells;
- Monitoring well decommissioning procedures; and
- Annual inspection and periodic certification.

Quarterly groundwater monitoring of the performance of the remedy and overall reduction in contamination on-site will be conducted for the first year. The frequency thereafter will be determined based on the results of the first year of monitoring and in consultation with NYSDEC*. The post-excavation soil samples have demonstrated the effectiveness of the soil remedies such that further monitoring of soil conditions will not be conducted. Concentration trends of the compounds of concern in groundwater in the affected areas will be evaluated to determine if the remedy continues to be effective in achieving remedial goals. Monitoring programs are summarized in Table 14 and outlined in detail in Sections 3.2 and 3.3 below.

***REVISION 27 JANUARY 2015.** As required by NYSDEC, four rounds of sampling were conducted on a quarterly basis in 2012 to documents the success of groundwater remediation. NYSDEC requested additional sampling event in August 2013 and August 2014 from monitoring wells MW-1 and MW-4.

Data from the sampling described above demonstrated that past source removal and groundwater treatment activities have completely remediated previously-affected groundwater which had been present only in one localized area of the Site. Based on the results of all remedial activities and the outcome of all groundwater sampling, NYSDEC issued a letter on 22 December 2014 stating that **groundwater monitoring was no longer necessary** and that all monitoring wells could be closed (see Appendix K). Monitoring wells were properly closed on 30 December 2014.

Table 14 - Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis**
Groundwater***	First Year – Quarterly Subsequent Years – Annually	Groundwater	TCL VOCs and TCL SVOCs
Site Cover System	First Year – Quarterly Subsequent Years – Annually	Soil	Visual Inspection
Sub-Slab Depressurization System	First Year – Quarterly Subsequent Years – Annually	Soil Vapor	Visual & Operations Inspection

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

** Initial analyses were selected based on post-excavation soil sampling results. This list may be amended based on the results of subsequent groundwater sampling events.

*** As of January 2015, groundwater monitoring is no longer needed. Wells have been closed.

3.2 Site Cover System Monitoring

The entire site cover system will be inspected concurrent with the groundwater monitoring events (i.e. quarterly for the first year, and annually thereafter).

The soil cover system on the landscaped portions of the Site will be inspected for evidence of the following:

- Erosion
- Stressed Vegetation
- Settling/Pooling of Surface Water
- Uplift

- Washouts
- Rodent Holes

The concrete and asphalt-paved portions of the Site will be inspected for evidence of the following:

- Cracks
- Potholes
- Settling/Pooling of Surface Water
- Uplift
- Deterioration

In addition, the protective casing, surface seal, well plug and lock for the monitoring wells will be inspected.

Any observations of degraded conditions of the site cover system will be reported to the Site owner for appropriate repair, replacement or upgrade.

3.3 Media Monitoring Program

3.3.1 Groundwater Monitoring- Redacted as a Part of Revision 2; Refer to Appendix K for Details

Groundwater monitoring will be performed on a periodic basis to assess the performance of the remedy.

A network of five monitoring wells has been installed to monitor groundwater conditions at the Site. The layout of the network of on-site wells, shown on Figures 3A and 3B, has been designed to accomplish the following objectives:

- Properly contour groundwater elevations to determine groundwater flow direction;
- Monitor the progress of chemical oxidant treatments at AOC 3 including the availability of the terminal electron acceptors and the reduction in concentration of the compounds of concern;
- Monitor groundwater conditions immediately downgradient of AOC 3; and
- Verify that site-related contaminants are not migrating to the downgradient property boundaries.

The monitoring wells were installed to depths of 19 to 20 feet below grade and were screened within the saturated, unconsolidated, heterogeneous sand and gravel unit. Boreholes for each of the wells were installed using 4.25-inch inside diameter hollow stem auger (HSA) drilling techniques. The wells were constructed in accordance with NYSDEC protocols under the supervision of Greystone's onsite geologist. Each of the monitoring wells is constructed of two-inch-diameter PVC riser and ten feet of two-inch-diameter, 0.01-inch slotted PVC well screen. The well screens "straddle" the top of the water table in the shallow, unconfined groundwater unit.

A sand pack was installed around the well screens and extended one to two feet above the top of the screens. An approximate two foot thick seal of hydrated bentonite pellets was installed above the sand pack and cement/bentonite grout was utilized to backfill the remainder of the well annulus. The wells were completed with a steel protective flush-mount cover. Following installation, reference points were marked on the top of the PVC at each well location and surveyed. Each well is fitted with an expandable locking plug and lock. Monitoring well construction logs are included in Appendix E.

As summarized on Table 14, the network of monitoring wells will be sampled on a quarterly basis for the first year. Samples will be analyzed for TCL VOCs and TCL

SVOCs. Groundwater samples from monitoring well MW01 will also be analyzed for total and dissolved iron and sulfate to evaluate the availability of the terminal electron acceptors introduced to treat groundwater. Further, the sampling frequency and analytes will be adjusted as appropriate based on the results of the initial rounds of groundwater sampling. Please note that as of January 2015, based on favorable data, groundwater monitoring is no longer required. Wells have been properly closed.

Deliverables for the groundwater monitoring program are specified below.

3.3.1.1 Sampling Protocol

All monitoring well sampling activities will be recorded in a field book and a groundwater-sampling log presented in Appendix F. Other observations (e.g., well integrity, etc.) will be noted on the well sampling log. The well sampling log will serve as the inspection form for the groundwater monitoring well network.

During each sampling event, a water level indicator will be used to accurately measure the depth to groundwater from a surveyed datum on the top of the PVC well casing to the nearest 0.01 of a foot. This measurement will be used in conjunction with the total depth of the well to calculate the standing volume of water in the well as well as to establish the water table elevation for groundwater flow direction purposes.

Each monitoring well will be purged using low flow techniques. Field parameters (pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity) will be monitored during purging using a multi-parameter water quality meter equipped with a flow-thru cell. Groundwater elevation data will also be collected before, during and after the purging. Each well will be purged until the field parameters stabilize or until the equivalent of at least three well volumes has been removed. Following

purging, groundwater samples will be collected directly from the low flow tubing. Purge water free of sheen and odor will be discharged to ground surface. Precautions will be taken to avoid the pooling of water, surface water runoff or flooding of the Site via discharge of the purge water. Impacted development water, if encountered, will be pumped through a carbon treatment system and discharged to ground surface.

Initially, groundwater samples collected from the monitoring wells will be analyzed for TCL VOCs (USEPA Method 8260) and TCL SVOCs (USEPA Method 8270). Monitoring well MW01 will also be sampled for total and dissolved iron (USEPA Method 6010) and sulfate (USEPA Method 9038) for purposes of monitoring the availability of terminal electron acceptors remaining from the in-situ chemical oxidation treatments. Samples collected during subsequent groundwater sampling events will be analyzed based on the results of the initial sampling event and discussions with NYSDEC.

Laboratory analytical procedures will adhere to NYS Analytical Services Protocol (ASP) methodologies and/or to USEPA SW-846 methodologies as appropriate. Samples collected during and after the completion of the remedial actions will be analyzed by a NYSDOH Environmental Laboratory Accreditation Program (ELAP) certified analytical laboratory that adheres to the Contract Laboratory Protocol (CLP).

Further details on the sampling and analytical procedures are provided in the Sampling and Analysis Plan (SAP) and the Quality Assurance Project Plan (QAPP) that were included with the RAWP and are provided in Appendices G and H, respectively. [Note: NYSDEC Category B laboratory deliverables and a Data Usability Summary Report (DUSR) will not be generated for the groundwater monitoring sampling events. NYSDEC Category B deliverables and a DUSR will be prepared for closure samples (i.e.

sample data used to demonstrate that future groundwater monitoring is no longer needed).]

3.3.1.2 Monitoring Well Repairs, Replacement and Decommissioning

If biofouling or silt accumulation occurs in the on-site monitoring wells, the wells will be physically agitated/surged and redeveloped. Additionally, monitoring wells will be properly decommissioned and replaced (as per the Monitoring Plan), if an event renders the wells unusable.

Repairs and/or replacement of wells in the monitoring well network will be performed based on assessments of structural integrity and overall performance.

Please note that in December 2014 NYSDEC was notified that wells would be decommissioned, per an agreement with NYSDEC that further groundwater monitoring was not necessary. Well decommissioning without replacement was done with the prior approval of NYSDEC. Well abandonment was performed in accordance with NYSDEC's "Groundwater Monitoring Well Decommissioning Procedures." Monitoring wells will not be reinstalled, as approved by the NYSDEC. Please refer to Appendix K.

3.4 Site-Wide Inspection

Site-wide inspections will be performed on a regular schedule at a minimum of once a year. Site-wide inspections will also be performed after all severe weather conditions that may affect Engineering Controls or monitoring devices. During these inspections, an inspection form will be completed (Appendix I). The form will compile sufficient information to assess the following:

- Compliance with all ICs, including site usage;

- An evaluation of the condition and continued effectiveness of ECs including the SSDS;
- General site conditions at the time of the inspection;
- The site management activities being conducted including, where appropriate, confirmation sampling and a health and safety inspection;
- Compliance with permits and schedules included in the Operation and Maintenance Plan; and
- Confirm that site records are up to date.

3.5 Monitoring Quality Assurance/Quality Control

All sampling and analyses will be performed in accordance with the requirements of the Quality Assurance Project Plan (QAPP) prepared for the Site as part of the RAWP. The Main Components of the QAPP include:

- QA/QC Objectives for Data Measurement;
- Sampling Program:
  - Sample containers will be properly washed, decontaminated, and appropriate preservative will be added (if applicable) prior to their use by the analytical laboratory. Containers with preservative will be tagged as such.
  - Sample holding times will be in accordance with the NYSDEC ASP requirements.
  - Field QC samples (e.g., trip blanks, coded field duplicates, and matrix spike/matrix spike duplicates) will be collected as necessary.
- Sample Tracking and Custody;
- Calibration Procedures:

- All field analytical equipment will be calibrated immediately prior to each day's use. Calibration procedures will conform to manufacturer's standard instructions.
- The laboratory will follow all calibration procedures and schedules as specified in USEPA SW-846 and subsequent updates that apply to the instruments used for the analytical methods.

- Analytical Procedures;
- Preparation DUSR for closure samples (i.e. sample data used to demonstrate that future groundwater monitoring is no longer needed), which will present the results of data validation, including a summary assessment of laboratory data packages, sample preservation and chain of custody procedures, and a summary assessment of precision, accuracy, representativeness, comparability, and completeness for each analytical method. DUSRs will not be prepared for the regularly scheduled groundwater monitoring samples.
- Internal QC and Checks;
- QA Performance and System Audits;
- Preventative Maintenance Procedures and Schedules;
- Corrective Action Measures.

3.6 Monitoring Reporting Requirements

Forms and any other information generated during regular monitoring events and inspections will be kept on file on-site. All forms, and other relevant reporting formats used during the monitoring/inspection events, will be (1) subject to approval by NYSDEC and (2) submitted at the time of the Periodic Review Report, as specified in the Reporting Plan of this SMP.

All monitoring results will be reported to NYSDEC on a periodic basis in the Periodic Review Report. The report will include, at a minimum:

- Date of event;
- Personnel conducting sampling;
- Description of the activities performed;
- Type of samples collected (e.g., sub-slab vapor, indoor air, outdoor air, etc);
- Copies of all field forms completed (e.g., well sampling logs, chain-of-custody documentation, etc.);
- Sampling results in comparison to appropriate standards/criteria;
- A figure illustrating sample type and sampling locations;
- Copies of all laboratory data sheets and the required laboratory data deliverables required for all points sampled (o be submitted electronically in the NYSDEC-identified format);
- Any observations, conclusions, or recommendations; and
- A determination as to whether groundwater conditions have changed since the last reporting event.

Data will be reported in hard copy or digital format as determined by NYSDEC. A summary of the monitoring program deliverables are summarized in Table 15 below.

Table 15: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency*
Groundwater Monitoring	Annual (*no longer required as of 1/2015*)
Site Cover System Inspection	Annual

Sub-Slab Depressurization System Inspection	Annual

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC

4.0 OPERATION AND MAINTENANCE PLAN

4.1 Introduction

This Operation and Maintenance Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the Site. This Operation and Maintenance Plan:

- Includes the steps necessary to allow individuals unfamiliar with the Site to operate and maintain the SSDS;
- Includes an operation and maintenance contingency plan; and,
- Will be updated periodically to reflect changes in site conditions or the manner in which the SSDS is operated and maintained.

Information on non-mechanical Engineering Controls (i.e. soil cover system) is provided in Section 3 - Engineering and Institutional Control Plan. A copy of this Operation and Maintenance Plan, along with the complete SMP, will be kept at the Site. This Operation and Maintenance Plan is not to be used as a stand-alone document, but as a component document of the SMP.

4.2 SSDS Operation and Maintenance

The SSDS was installed during the construction of the new TSC building between August and October 2012. The SSDS consists of a series of four slotted lateral four-inch-diameter PVC pipes installed within high-permeability gravel backfill. The slotted laterals connect to a header pipe that is attached to an above-grade standpipe with an in-line Fantech HP220 Radon Fan which pulls sub-slab soil gas and vents it above roof level of the building and in doing so generates a negative pressure field beneath the concrete slab. In addition, a 15-mil vapor barrier was installed immediately beneath the concrete slab of the building to further mitigate potential vapor intrusion. The SSDS was activated on 15 October 2012. The details of the system design are shown on Figure 17.

Specification and installation instructions for the vapor barrier and fan are provided in Appendix J.

4.2.1 Scope

The operation and maintenance requirements for the SSDS generally consist of confirming the blower/fan is operating and that cracks are not forming through the concrete building slab or above-grade piping of the SSDS. The fan is a sealed unit that cannot be serviced in the field. If the fan stops operating, it is unlikely that repairs will be possible and it will require replacement. Cracks noted through the concrete floor will be filled with an appropriate sealant or caulk and cracked portions of piping will be sealed or replaced.

4.2.2 SSDS Start-Up and Testing

The Fantech HP220 Radon Fan was installed and activated on 15 October 2012 by a technician qualified in the installation of radon fans and familiar with the electric requirements of the system. The manufacturer's installation instructions are provided in Appendix J.

A sub-slab communication test was performed on 17 October 2012, two days after the system was activated. The communication test involved drilling a three-eighths-inch-diameter hole through the concrete building slab and underlying vapor barrier into the gravel sub-base adjacent to the SG02 sub-slab soil gas sample location (Figure 17). Tubing connected to a micro-manometer was then inserted into the hole and the annular space was sealed with hydrated granular bentonite. The micro-manometer showed that the system was operating correctly, generating a negative pressure of -0.004 inches of water column beneath the concrete slab and vapor barrier. The magnitude of the negative sub-slab pressure is expected to increase as the system continues to operate as it will

reduce the amount of water vapor in the sub-slab soil gas. This reduction in the moisture content will lead to increases in the efficiency of the system operation.

A manometer has been installed on the standpipe of the SSDS at a point below the fan. The manometer shows that the system is generating negative pressure below the slab. If the reading on the manometer shows the system has ceased to generate a negative pressure (i.e. the reading is zero), appropriate repairs are to be made. Most likely, it will be necessary to replace the fan.

It is not anticipated that significant changes will be made to the system configuration during the course of the SSDS lifetime. The most likely change that will lead to the shutdown/restart of the system is the replacement of the fan. The fan will only be replaced with a model capable of generating equal or greater flow rates such that additional communication testing will not be required. This will eliminate the need to drill holes through the concrete slab and underlying vapor barrier, which compromises two of the passive components of the SSDS. Although not anticipated, if significant changes in the configuration of the system become necessary, the need for additional communication testing to verify the proper operation of the system will be considered at that time.

4.2.3 SSDS Operation: Routine Operation Procedures

The SSDS will be continually operated until it is demonstrated that there is no longer a vapor intrusion risk to the building. The specification sheet for the Fantech HP220 radon fan is provided in Appendix J.

4.2.4 SSDS Operation: Routine Equipment Maintenance

There is no routine maintenance required for the Fantech HP220 radon fan. The above-grade piping of the SSDS and the concrete building slab will be inspected in accordance with the schedule provided on Table 14. Evidence of deterioration of the piping or concrete that would affect the operation of the system will be repaired either via sealing or replacement.

4.2.5 System Operation: Non-Routine Equipment Maintenance

If the manometer shows that the system has ceased to operate (i.e. generate a negative sub-slab pressure), the cause of the problem will be immediately evaluated. The most likely reasons that a reduced effectiveness or complete deactivation of the system would be observed are the failure of the fan due to age/lightening strike/mechanical failure or blockage/damage to the above-grade piping. If the fan ceases to operate or begins operating at a significantly reduced effectiveness, it will be replaced by the same or comparable fan capable of generating equal or greater flow rates. If the above-grade piping is damaged or blocked, the affected sections will be replaced and the system reactivated.

4.3 SSDS Performance Monitoring

The SSDS has been installed to mitigate possible soil vapor intrusion into the TSC building. Details on the construction of the system and start-up date are provided in Section 4.2. Periodic performance monitoring will be conducted to verify that the system is in proper condition and operating in a manner such that it will continue to effectively mitigate potential soil vapor intrusion. The primary means for monitoring the performance of the SSDS will be checking the manometer on the above-grade standpipe to verify the system continues to generate a negative pressure.

4.3.1 Monitoring Schedule

Monitoring of the full SSDS is to be performed in accordance with the schedule specified on Table 14 (i.e. quarterly for the first year of operation and annually thereafter).

Inspection frequency is subject to change with the approval of the NYSDEC. Unscheduled inspections and/or sampling may take place when a suspected failure of the SSDS has been reported or an emergency occurs that is deemed likely to affect the operation of the system. Monitoring deliverables for the SSDS are specified later in this Plan.

4.3.2 General Equipment Monitoring

A visual inspection of the complete system will be conducted during the monitoring events. SSDS components to be monitored include, but are not limited to, the following:

- Concrete building slab
- Vacuum blower; and,
- General system piping.

A complete list of components to be checked is provided in the Inspection Checklist, presented in Appendix I. If any equipment readings are not within their typical range, any equipment is observed to be malfunctioning, or the system is not performing within specifications, maintenance and repair as per the Operation and Maintenance Plan are required immediately, and the SSDS restarted.

4.3.3 SSDS Monitoring Devices and Alarms

The SSDS has a manometer as a warning device to indicate if the system is not operating properly. In the event that the manometer shows that the SSDS has ceased to operate properly, applicable maintenance and repairs will be conducted, as specified in the

Operation and Maintenance Plan, and the SSDS restarted. Operational problems will be noted in the subsequent Periodic Review Report.

4.4 Maintenance and Performance Monitoring Reporting Requirements

Maintenance reports and any other information generated during regular operations at the Site will be kept on-file by the site owner. All reports, forms, and other relevant information generated will be available upon request to the NYSDEC and submitted as part of the Periodic Review Report, as specified in the Section 5 of this SMP.

4.4.1 Routine Maintenance Reports

As described in Section 4.2.3, the SSDS does not require any specific routine maintenance. Repairs completed to the piping or concrete floor noted during routine inspections will be documented as described in Section 4.4.2.

4.4.2 Non-Routine Maintenance Reports

During each non-routine maintenance event, a form will be completed which will include, but not be limited to, the following information:

- Date;
- Name, company, and position of person(s) conducting non-routine maintenance/repair activities;
- Presence of leaks;
- Date of leak repair;
- Other repairs or adjustments made to the system;
- Where appropriate, color photographs or sketches showing the approximate location of any problems or incidents (included either on the form or on an attached sheet); and,

- Other documentation such as copies of invoices for repair work, receipts for replacement equipment, etc. (attached to the checklist/form).

5.0 INSPECTIONS, REPORTING AND CERTIFICATIONS

5.1 Site Inspections

5.1.1 Inspection Frequency

All inspections will be conducted at the frequency specified in the schedules provided in the Section 3 Monitoring Plan and Section 4 Operation and Maintenance Plan of this SMP. At a minimum, a site-wide inspection will be conducted annually. Inspections of remedial components will also be conducted when a breakdown of any treatment system component has occurred or whenever a severe condition has taken place, such as an erosion or flooding event that may affect the ECs.

5.1.2 Inspection Forms, Sampling Data, and Maintenance Reports

All inspections and monitoring events will be recorded on the appropriate forms. The general site-wide inspection form will be completed during the site-wide inspection (see Appendix I). The SSDS inspection is included on the site-wide inspection form. These forms are subject to NYSDEC revision.

All applicable inspection forms and other records, including all media sampling data and system maintenance reports, generated for the Site during the reporting period will be provided in electronic format in the Periodic Review Report.

5.1.3 Evaluation of Records and Reporting

The results of the inspection and site monitoring data will be evaluated as part of the EC/IC certification to confirm that the:

- EC/ICs are in place, are performing properly, and remain effective;
- The Monitoring Plan is being implemented;

- Operation and maintenance activities are being conducted properly; and, based on the above items,
- The site remedy continues to be protective of public health and the environment and is performing as designed in the RAWP and FER.

5.2 Certification of Engineering and Institutional Controls

After the last inspection of the reporting period, a qualified environmental professional will prepare the following certification:

For each institutional or engineering control identified for the Site, I certify that all of the following statements are true:

- The inspection of the Site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under my direction;
- The institutional control and/or engineering control employed at this Site is unchanged from the date the control was put in place, or last approved by the Department;
- Nothing has occurred that would impair the ability of the control to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with any site management plan for this control;
- Access to the Site will continue to be provided to the Department to evaluate the remedy, including access to evaluate the continued maintenance of this control;

- If a financial assurance mechanism is required under the oversight document for the Site, the mechanism remains valid and sufficient for the intended purpose under the document;
- Use of the Site is compliant with the environmental easement;
- The engineering control systems are performing as designed and are effective;
- To the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program and generally accepted engineering practices; and
- The information presented in this report is accurate and complete.
- No new information has come to my attention, including groundwater monitoring data from wells located at the Site boundary, if any, to indicate that the assumptions made in the qualitative exposure assessment of off-site contamination are no longer valid; and

Every five years the following certification will be added:

- The assumptions made in the qualitative exposure assessment remain valid.
- I certify that all information and statements in this certification form are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, _____ , of _____, am certifying as Owner's Designated Site Representative for the Site.

The signed certification will be included in the Periodic Review Report described below.

5.3 Periodic Review Report

A Periodic Review Report will be submitted to the Department every year, beginning eighteen months after the Certificate of Completion is issued. In the event that the Site is subdivided into separate parcels with different ownership, a single Periodic Review Report will be prepared that addresses the Site described on Figure 2 (Metes and Bounds). The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period. Media sampling results will also be incorporated into the Periodic Review Report. The report will include:

- Identification, assessment and certification of all ECs/ICs required by the remedy for the Site;
- Results of the required annual site inspections and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- Data summary tables and graphical representations of contaminants of concern by media (groundwater), which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- Results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A site evaluation, which includes the following:

- The compliance of the remedy with the requirements of the site-specific Decision Document;
- The operation and the effectiveness of all treatment units, etc., including identification of any needed repairs or modifications;
- Any new conclusions or observations regarding site contamination based on inspections or data generated by the Monitoring Plan for the media being monitored;
- Recommendations regarding any necessary changes to the remedy and/or Monitoring Plan; and
- The overall performance and effectiveness of the remedy.

The Periodic Review Report will be submitted, in electronic format to the NYSDEC Central Office, Region 6 Office and the NYSDOH Bureau of Environmental Exposure Investigation.

5.4 Corrective Measures Plan

If any component of the remedy is found to have failed, or if the periodic certification cannot be provided due to the failure of an institutional or engineering control, a corrective measures plan will be submitted to the NYSDEC for approval. This plan will explain the failure and provide the details and schedule for performing work necessary to correct the failure. Unless an emergency condition exists, no work will be performed pursuant to the corrective measures plan until it is approved by the NYSDEC.

FIGURES

0 1000'

SCALE (IN FEET)

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
(315) 637-6342 (OFFICE)
(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

PROJECT LOCATION SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK SITE No. C622031	DRAWING TITLE SITE LOCATION MAP	DATE: 05/02/12	SCALE: AS NOTED
		PROJECT NO.	12020EP
		DRAWN BY:	MTG
		CHECKED BY:	
	PREPARED FOR: SPHERE DEVELOPMENT, LLC	DRAWING NO. FIGURE 1	

GENERAL NOTES:

1. Underground facilities, structures and utilities have been placed on this drawing from field locations, where visible or from recorded drawings provided to the undersigned. Therefore, locations should be considered approximate only. There may be other facilities or utilities, the existence of which are not known: for this reason, UFPO shall be contacted a minimum of 48 hours prior to any underground excavation.
2. There was no evidence observed of any changes to any street right of way lines.

MAP REFERENCES:

- M.R. #1 — "Map And Survey Showing Lands To Be Conveyed By Castle Car Co. Inc." Village Of Herkimer - Town Of Herkimer - Herkimer County - New York By Christopher S. Nash, L.L.S. No. 049163, Dated September 23, 1985 And Filed In The Herkimer County Clerk's Office On October 2, 1985 In Map Case JJ 5C 20
- M.R. #2 — "Map Showing Property Of Herkimer Hotel Inc." Marginal Road - Village Of Herkimer - Herkimer County - New York By W.S. Tiel, L.L.S. No. 31749, Dated August 5, 1961 And Filed In The Herkimer County Clerk's Office On November 20, 1961 As Parts 1 And 2 In Map Case KK9D-23
- M.R. #3 — "Survey Map Showing Lands To Be Conveyed To Herkimer County Chapter NYSARC, Inc." Village Of Herkimer - Town Of Herkimer - Herkimer County - New York By Edward L. Beauchamp, Professional Land Surveyor, Dated August 24, 2001 And Filed In The Herkimer County Clerk's Office On September 17, 2001 In Map Case JJ27A30
- M.R. #4 — "Map Of Riverwood Addition Located In The Village Of Herkimer, N.Y. Owned By Herkimer County Realty Corporation" Made By D.C. And C.L. Wood Dated 1915 And Filed In The Herkimer County Clerk's Office In Map Book 5, Page 21

LOCATION MAP:

NOT TO SCALE

DEED REFERENCE:

D.R. #1 — Hiram J. Skinner, Individually, And Hiram J. Skinner, Roger J. Skinner And Marie S. Guerra, as Trustees of the Hiram J. Skinner Revocable Trust amended and restated October 20, 2002 To **Sphere STP LLC** Warranty Deed - Dated: June 21, 2012 Liber 1443 Of Deeds At Page 959

Subject to any Easements, Covenants or Restrictions of Record.

ZONING:

MUNICIPALITY	Village Of Herkimer
STATUTE	Zoned 'C-2' General Commercial
Minimum Lot Size	N/A
Minimum Lot Width	N/A
Minimum Front Yard Setback	20 Feet
Minimum Side Yard Setback	8 Feet Each
Minimum Rear Yard Setback	35 Feet
Maximum Lot Coverage	40%
Maximum Building Height	40 Ft.

Zoning Requirements Were Obtained From The Village Of Herkimer Codes Enforcement Officer - Dave Kuehnle - office@village.herkimer.ny.us

SURVEYOR'S DESCRIPTION:

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE VILLAGE OF HERKIMER, TOWN OF HERKIMER, COUNTY OF HERKIMER AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

Beginning at a concrete nail on the northwesterly highway boundary of Mohawk Street (New York State Route #28), said concrete nail standing at the intersection of the northwesterly highway boundary of Mohawk Street with the southwesterly boundary of the lands of Conrail (New York Central Railroad - Formerly); thence **S35°38'31"W 450.33 feet** along the northwesterly highway boundary of Mohawk Street to a metal survey marker standing on the northerly highway boundary of lands appropriated for the New York State Thruway; thence **S84° 25'22"W 16.00 feet** along the northerly highway boundary of lands appropriated for the New York State Thruway; thence **N59°46'10"W 27.60 feet** along the northeasterly highway boundary of lands appropriated for the New York State Thruway to a concrete monument standing on the northeasterly highway boundary of lands appropriated for the New York State Thruway; thence **N59°46'10"W 27.60 feet** along the northeasterly highway boundary of lands appropriated for the New York State Thruway to a metal survey marker standing on the northeasterly highway boundary of Fifth Avenue; thence **N23° 50'18"W 407.84 feet** along the northeasterly highway boundary of Fifth Avenue to an iron rod standing on the southeasterly boundary of lands appropriated by the People of the State of New York by Map No. 397 - Parcel No. 432; thence **N63°40'28"E 64.85 feet** along the southeasterly boundary of lands appropriated by the People of the State of New York by Map No. 397 - Parcel No. 432 to an iron rod standing on the southerly boundary of the lands of Conrail; thence **N87° 04'16"E 222.28 feet** along the southerly boundary of the lands of Conrail to a metal survey marker standing on the easterly highway boundary of Fourth Avenue (Formerly); thence **S18° 54'19"E 22.35 feet** along the easterly highway boundary of Fourth Avenue to a metal survey marker standing on the southerly boundary of Sidney Nusbaum and Helaine Klein Nusbaum (Reputed Owner); thence **N88°28'12"E 117.72 feet** along the southerly boundary of lands reputedly owned by Sidney Nusbaum and Helaine Klein Nusbaum and then along the southerly boundary of the lands of Conrail to a metal survey marker standing on the southwesterly boundary of the lands of Conrail; thence **S56°10'49"E 74.61 feet** along the southwesterly boundary of the lands of Conrail to the **point and place of beginning.**

The above described parcel containing **2.531 acres** (110,265.1 sq.ft.) of land, more or less.

Subject to any easements, covenants or restrictions of record.

This Survey has been revised with the benefit of a Owner's Commitment for Title Insurance, Title Number ETS-12-112 as prepared by Old Republic National Title Insurance Company, Dated June 6, 2012 and Title Report Commitment No. ETS-12-111, Dated July 16, 2012.

STATEMENT OF ENCROACHMENTS:

No Encroachments Affect Subject's Property

LEGEND:

- Denotes Existing Iron Pin
- Denotes Existing Iron Rod
- SIR — Denotes Set Iron Rod
- CM — Denotes Existing Concrete Monument
- Denotes Existing Power Pole
- LP — Denotes Existing Light Pole
- FH — Denotes Existing Fire Hydrant
- OLP — Denotes Existing Old Light Pole
- Denotes Existing Manhole
- Denotes Existing Square Catch Basin
- Denotes Overhead Power Pole Line (See Note #1)
- Denotes Existing Valve
- Denotes Former Location Of Building On Site Before July 1, 2012

TOTAL ACREAGE THIS SURVEY IS "2.531± ACRES" (110,265.1± Sq. Ft)

"BOUNDARY SURVEY"

Tractor Supply Company

Lands Of

Sphere STP LLC

700 Mohawk Street

Village Of Herkimer - Town Of Herkimer - Herkimer County

State Of New York

Surveyor's Certification

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS IS AN ACCURATE MAP OF AN ACTUAL FIELD SURVEY DATED: October 7, 2012 AND THAT BOTH MAP AND SURVEY ARE CORRECT.

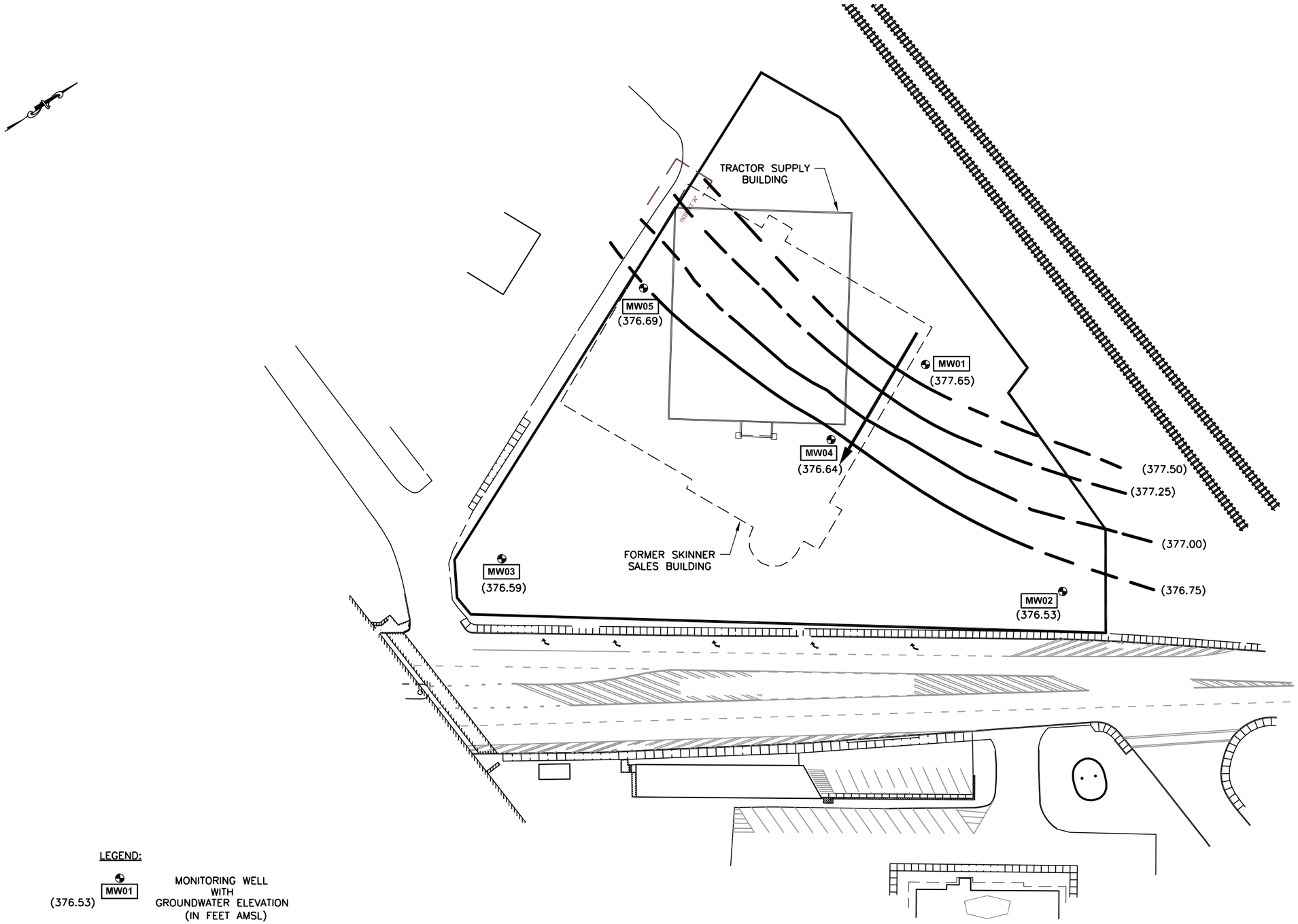
Bruce W. Snyder
Registered Land Surveyor No. 050195
In The State Of New York
Date Of Survey: October 12, 2012
Date Of Late Revision:
Project Number: 2012.053.001

"FIGURE #2"

DELTA ENGINEERS, ARCHITECTS, & LAND SURVEYORS
4873 NYS Route 5, Vernon, NY 13476
Tel: 315.953.4200
Fax: 315.953.4202
Website: www.deltaengineers.com

North By Instrument No. 2009-00151921

SCALE: 1" = 30 FEET (30 0 30 60 90)



LEGEND:

MW01 (376.53) — MONITORING WELL WITH GROUNDWATER ELEVATION (IN FEET AMSL)

(377.50) — GROUNDWATER ELEVATION CONTOUR (IN FEET ASLM)

DIRECTION OF GROUNDWATER FLOW

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
(315) 637-6342 (OFFICE)
(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

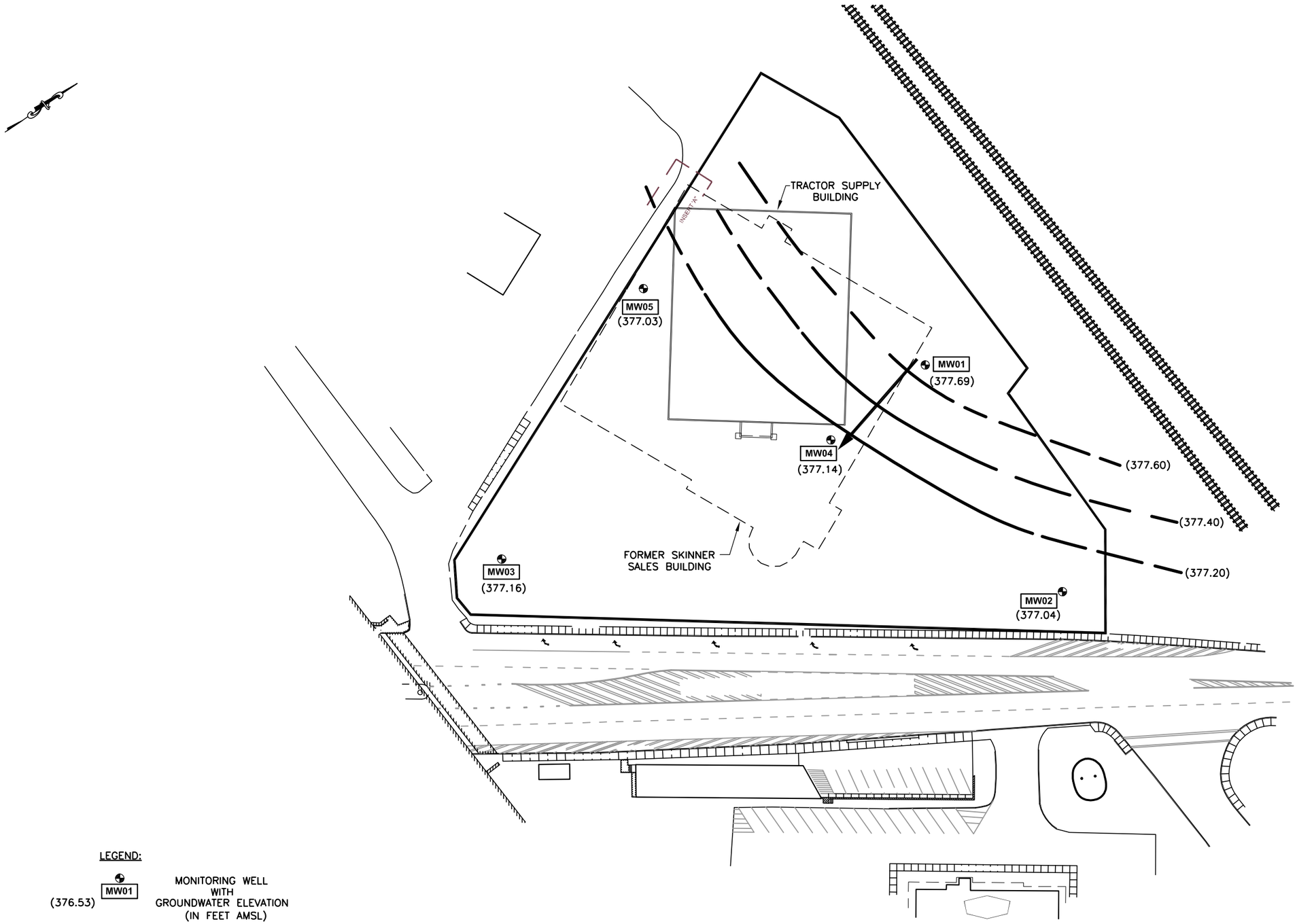
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
MONITORING WELL NETWORK AND GROUNDWATER CONTOUR MAP – AUGUST 15, 2012

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 3A



LEGEND:

MW01 (376.53) — MONITORING WELL WITH GROUNDWATER ELEVATION (IN FEET AMSL)

(377.50) — GROUNDWATER ELEVATION CONTOUR (IN FEET ASLM)

DIRECTION OF GROUNDWATER FLOW

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FAYETTEVILLE, NY 13066
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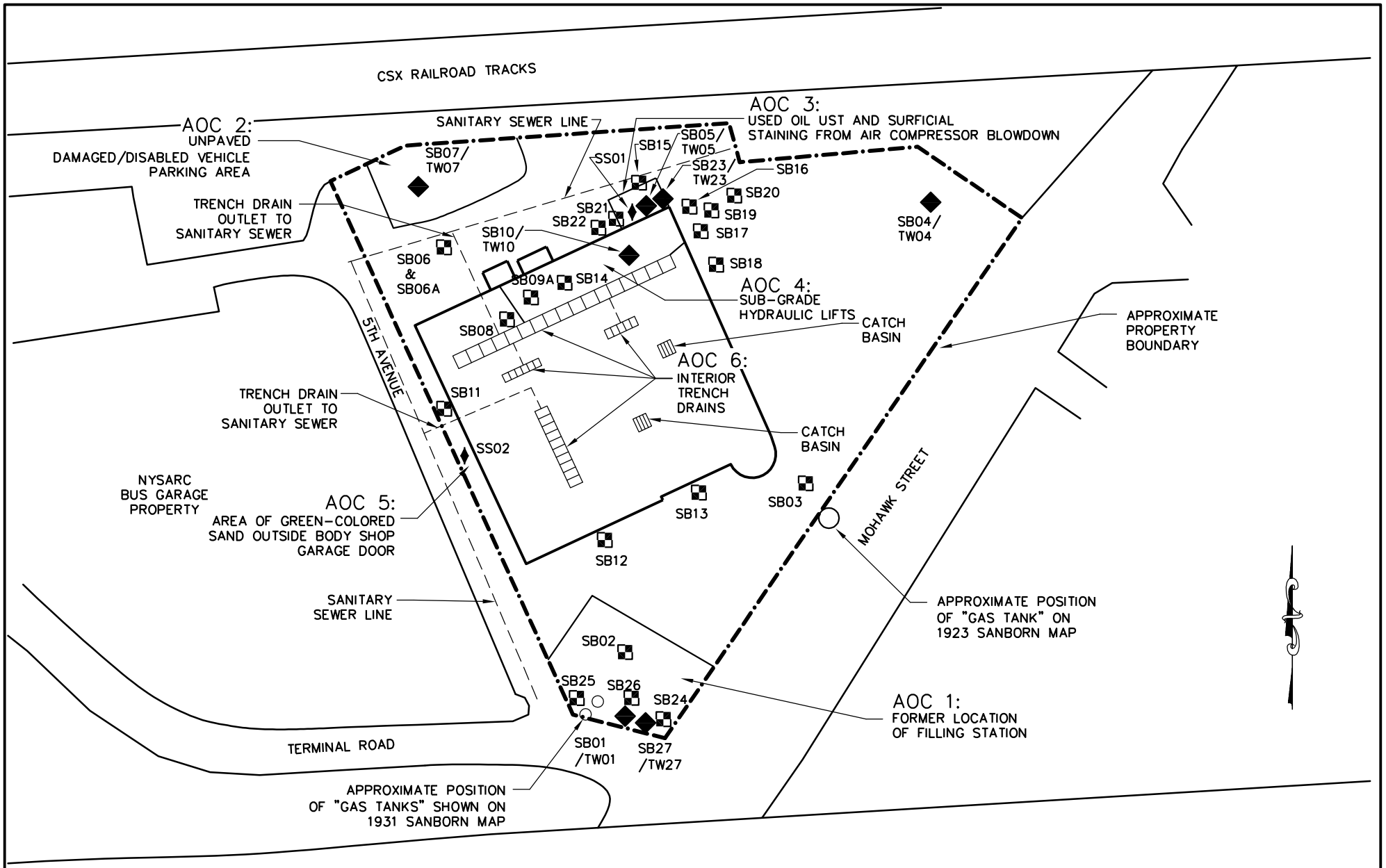
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
MONITORING WELL NETWORK AND GROUNDWATER CONTOUR MAP – OCTOBER 18, 2012

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 3B



LEGEND

SB01/TW01 ◆ SOIL BORING AND TEMPORARY WELL LOCATION

SB02 ⊡ SOIL BORING LOCATION

SS01 ♦ SURFACE SAMPLE LOCATION

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
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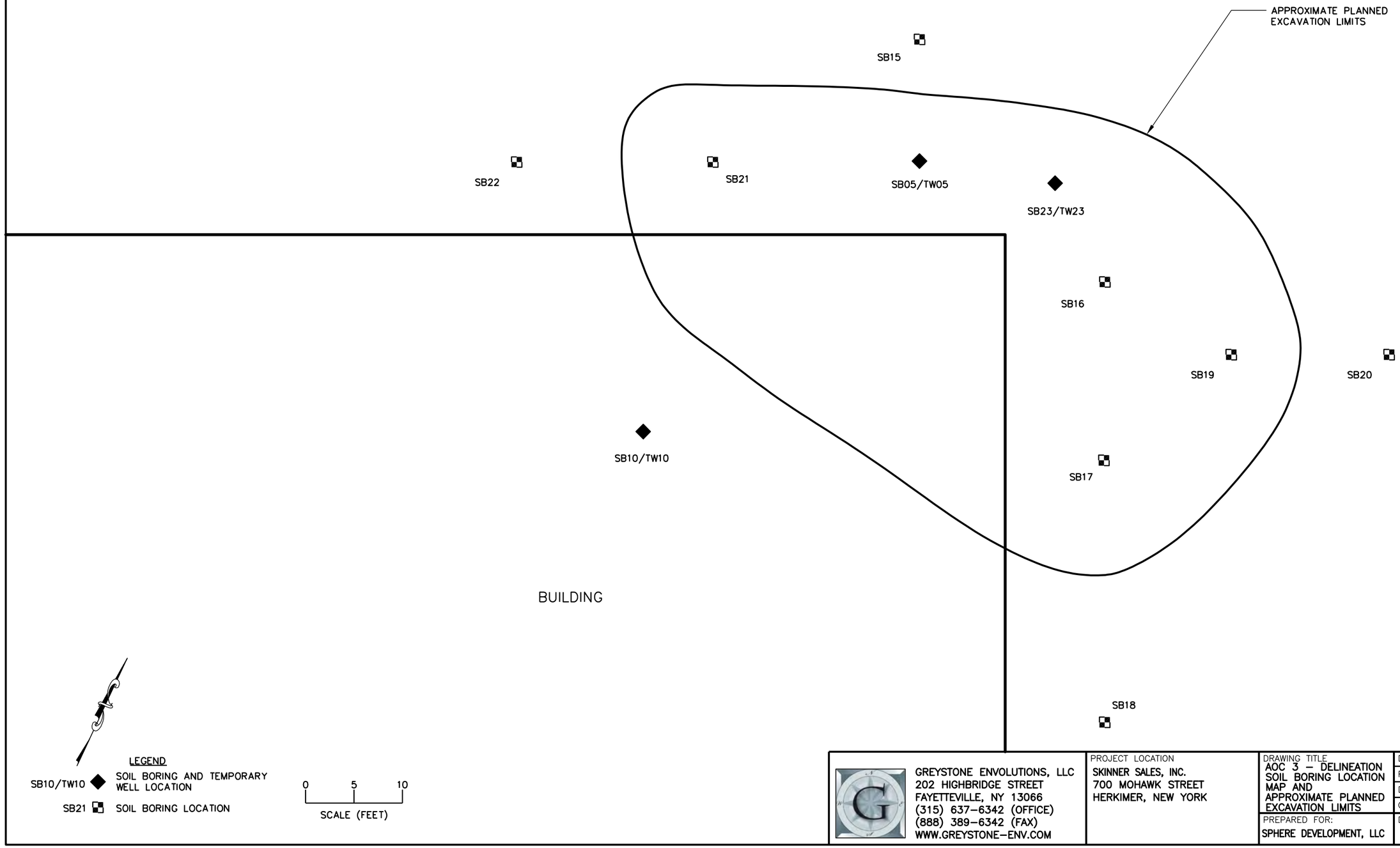
(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

PROJECT LOCATION	SKINNER SALES, INC. 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	SITE LAYOUT AND SOIL BORING LOCATION MAP
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 4



GREYSTONE ENVOLUTIONS, LLC
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FAYETTEVILLE, NY 13066
(315) 637-6342 (OFFICE)
(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

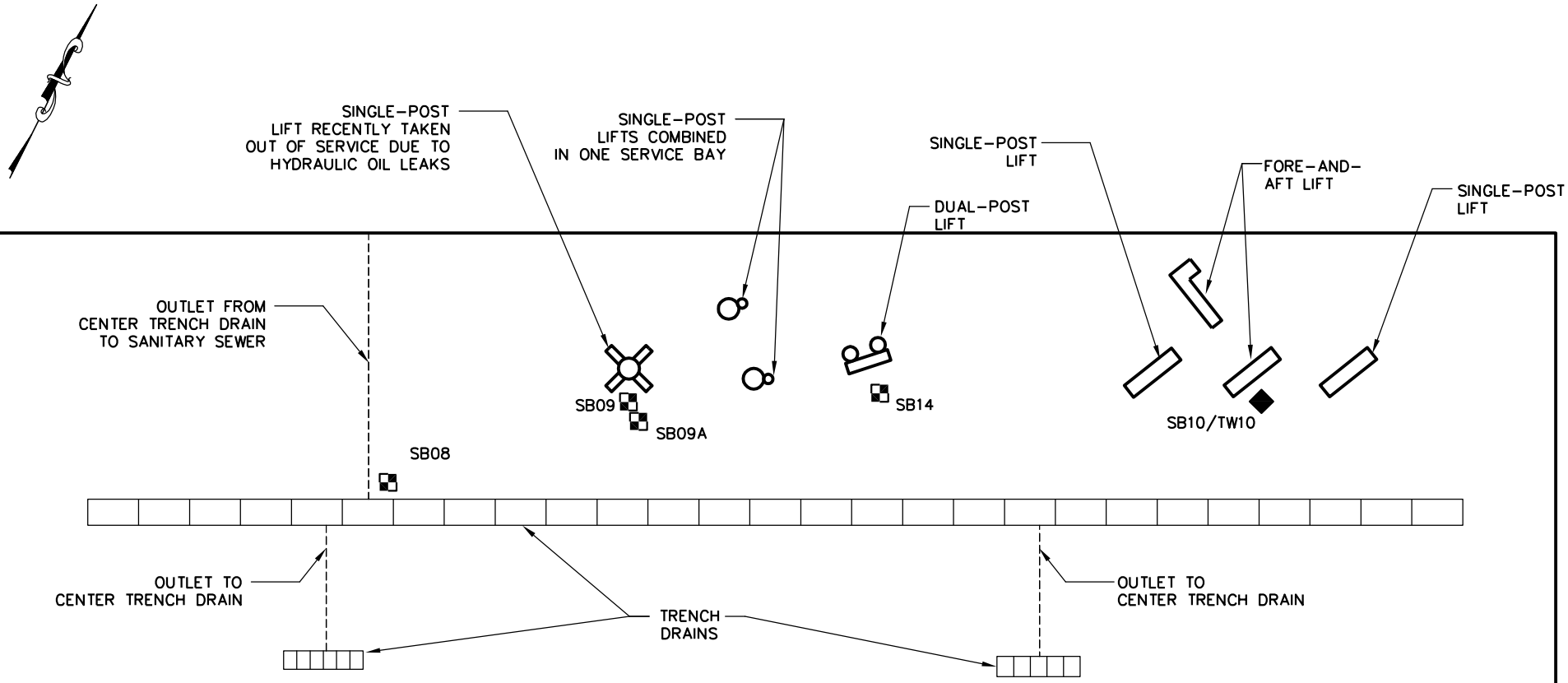
PROJECT LOCATION
SKINNER SALES, INC.
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
AOC 3 – DELINEATION SOIL BORING LOCATION MAP AND APPROXIMATE PLANNED EXCAVATION LIMITS

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: AS NOTED
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 5



LEGEND

SB10/TW10 ◆ SOIL BORING AND TEMPORARY WELL LOCATION

SB08 ■ SOIL BORING LOCATION

GREYSTONE ENVOLUTIONS, LLC
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FAYETTEVILLE, NY 13066
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(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

PROJECT LOCATION
SKINNER SALES, INC.
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
SERVICE GARAGE AREA
LAYOUT OF SUB-GRADE
HYDRAULIC LIFTS

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

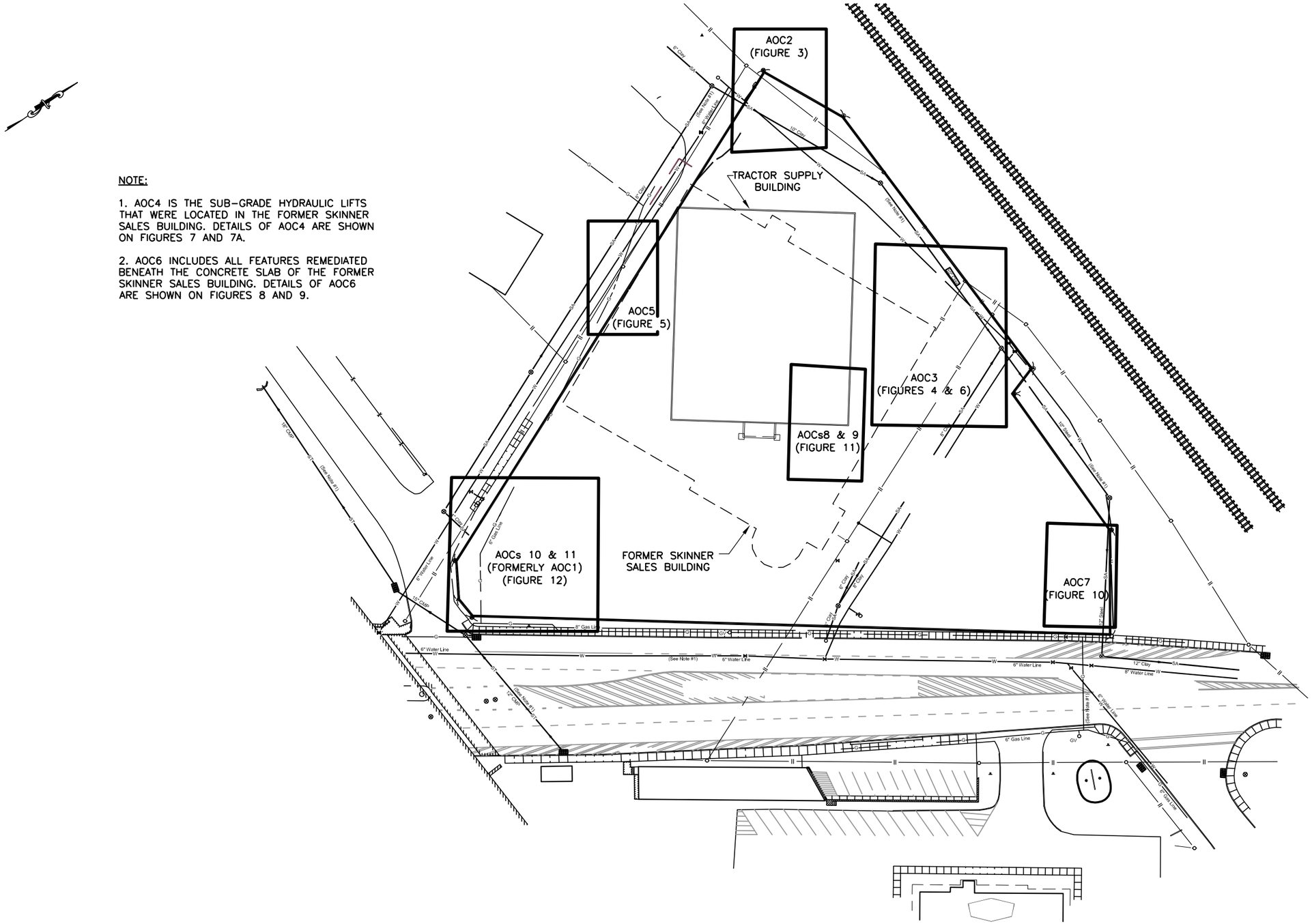
DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 6

NOTE:

1. AOC4 IS THE SUB-GRADE HYDRAULIC LIFTS THAT WERE LOCATED IN THE FORMER SKINNER SALES BUILDING. DETAILS OF AOC4 ARE SHOWN ON FIGURES 7 AND 7A.

2. AOC6 INCLUDES ALL FEATURES REMEDIATED BENEATH THE CONCRETE SLAB OF THE FORMER SKINNER SALES BUILDING. DETAILS OF AOC6 ARE SHOWN ON FIGURES 8 AND 9.



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(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

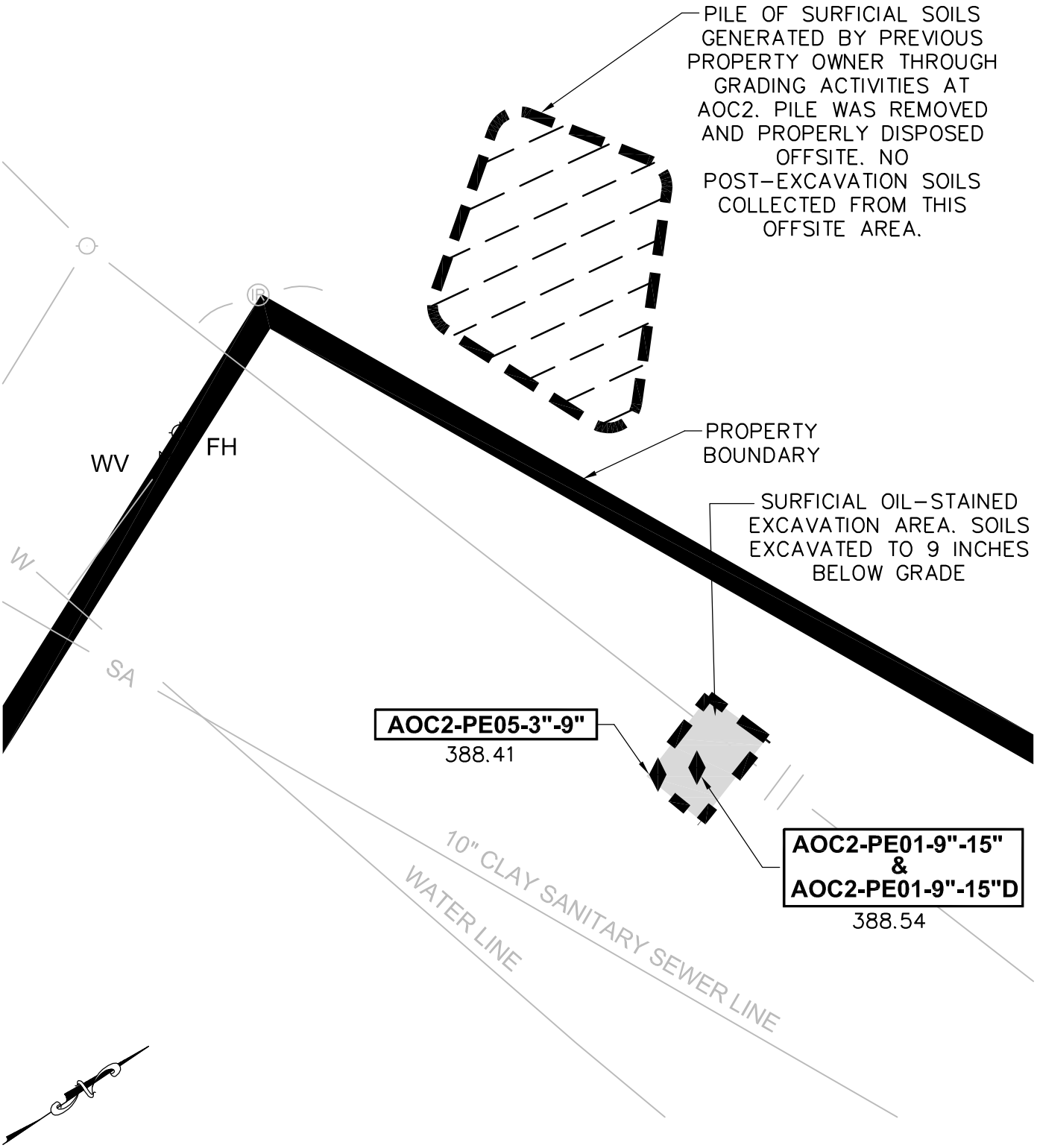
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
SITE LAYOUT MAP

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 7



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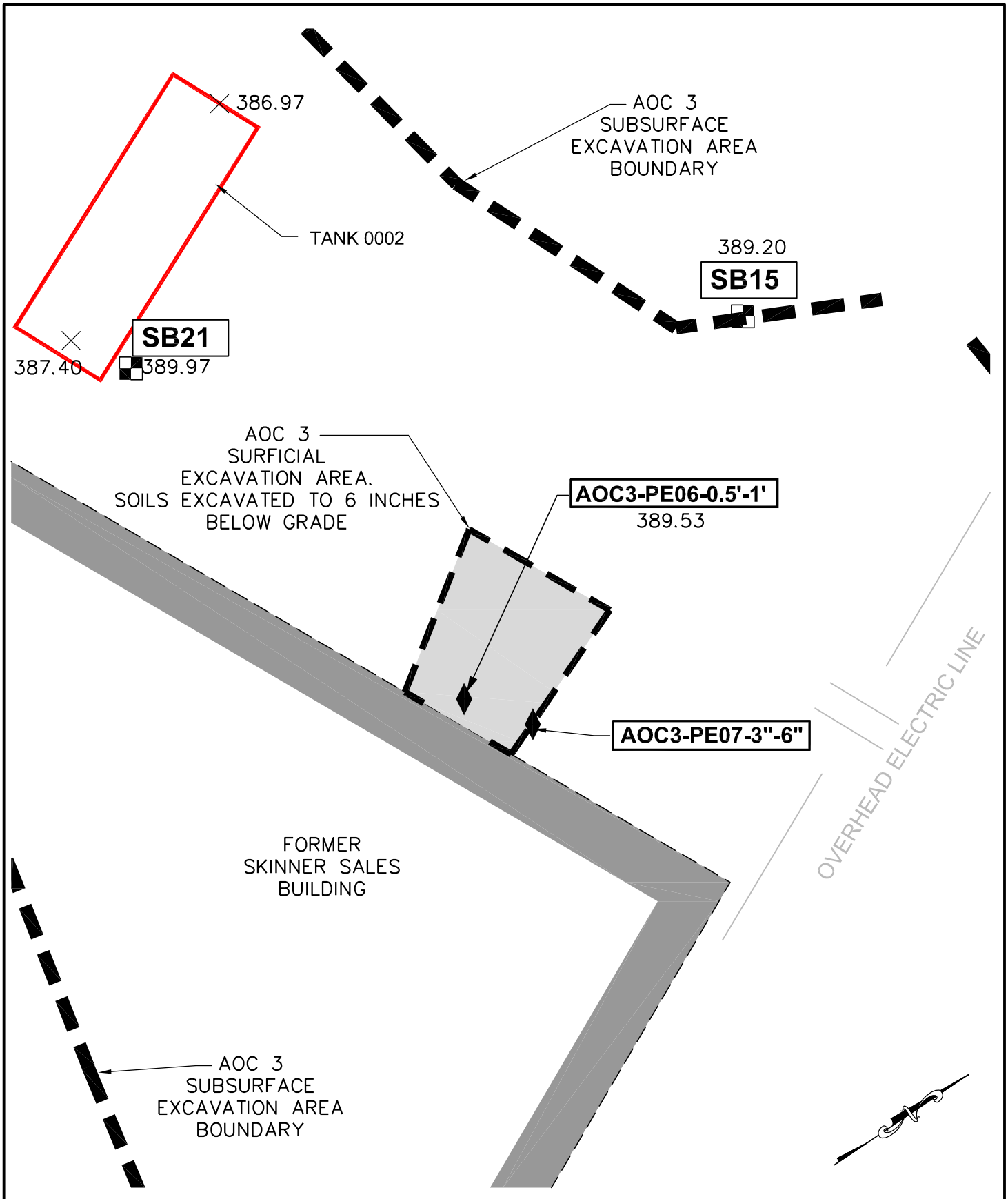
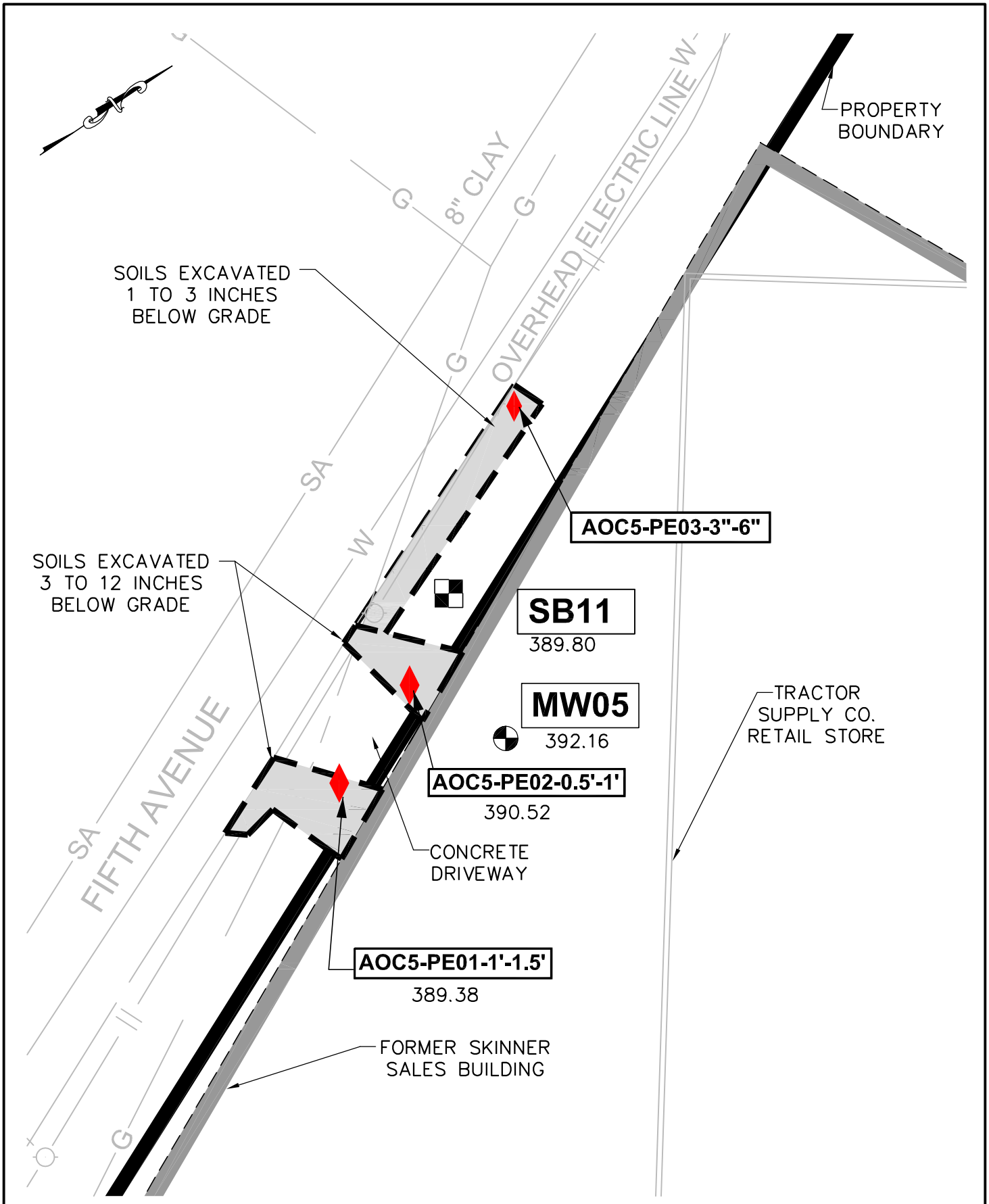
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 2 EXCAVATION DETAIL
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: 1"=10'
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 8



GREYSTONE ENVOLUTIONS, LLC 202 HIGHBRIDGE STREET FAYETTEVILLE, NY 13066 (315) 637-6342 (OFFICE) (888) 389-6342 (FAX) WWW.GREYSTONE-ENV.COM	PROJECT LOCATION SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK	DRAWING TITLE AOC 3 SURFICIAL EXCAVATION DETAIL	DATE: 11/12/12	SCALE: 1"=5'
			PROJECT NO.	12072EP
			DRAWN BY:	MTG
			CHECKED BY:	
		PREPARED FOR: SPHERE DEVELOPMENT, LLC	DRAWING NO. FIGURE 9	



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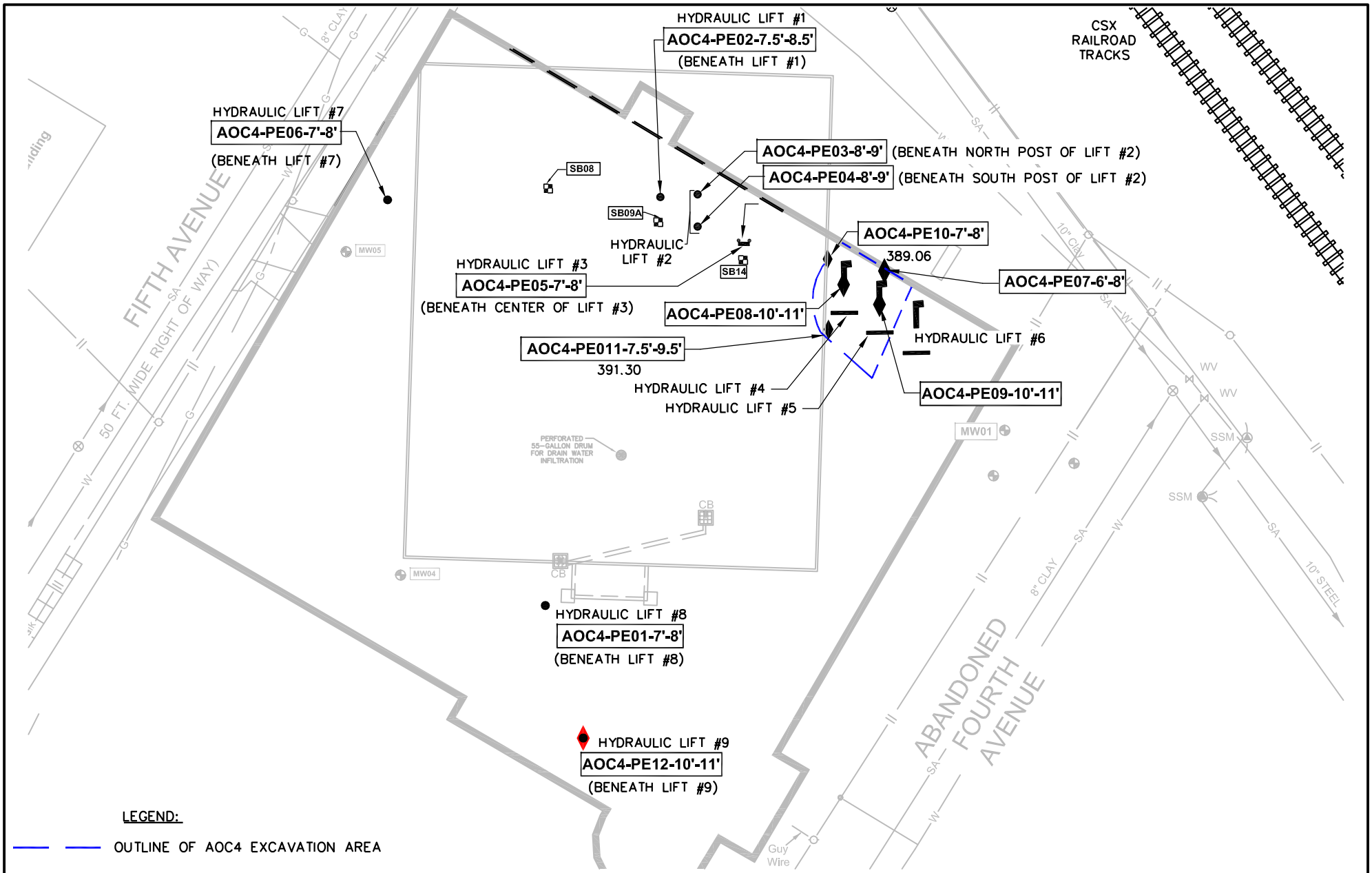
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
AOC 5
EXCAVATION DETAIL

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: 1"=10'
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 10



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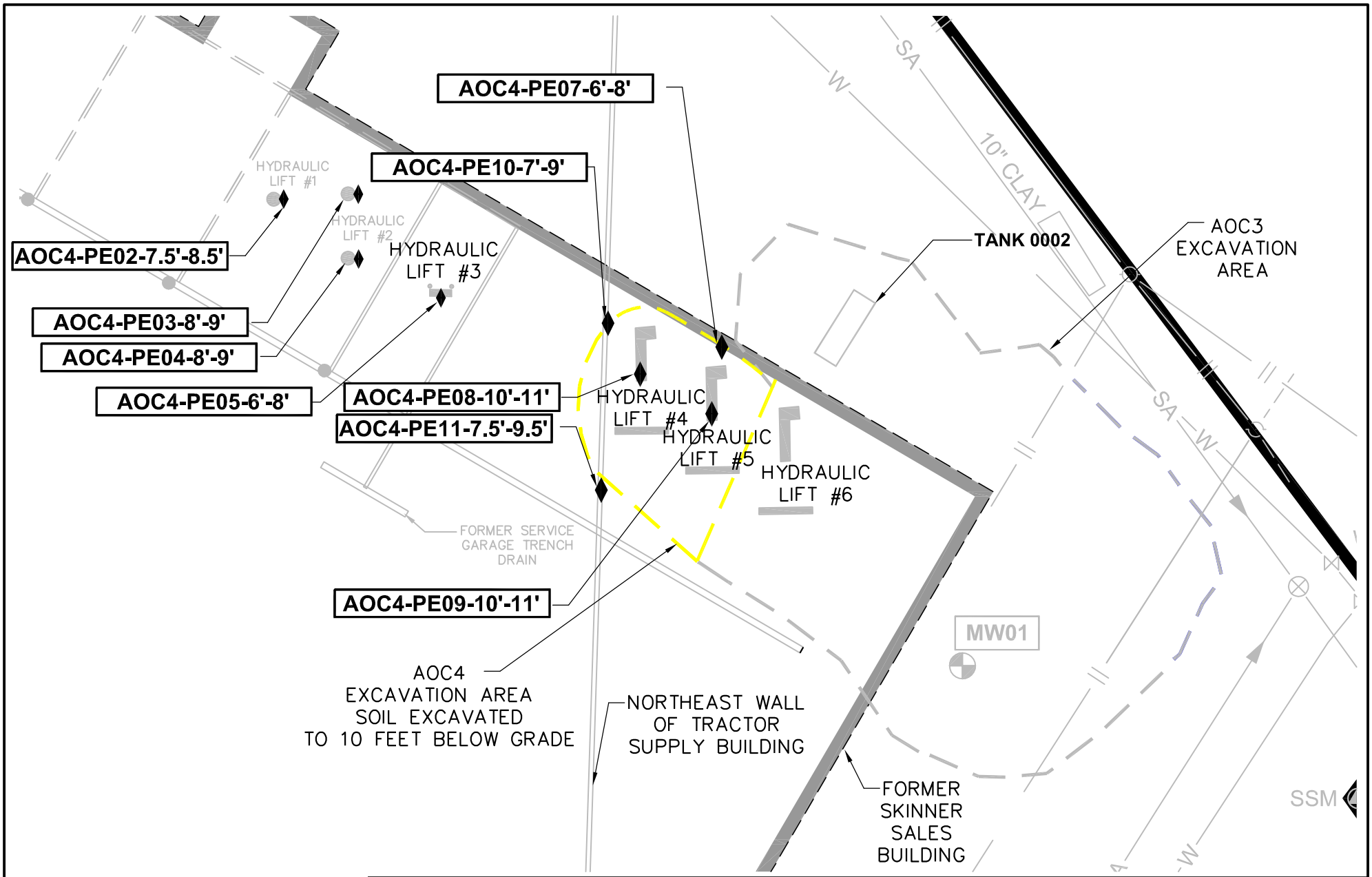
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 4 HYDRAULIC LIFT LAYOUT AND EXCAVATION DETAIL
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: 1"=40'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 11



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FAYETTEVILLE, NY 13066
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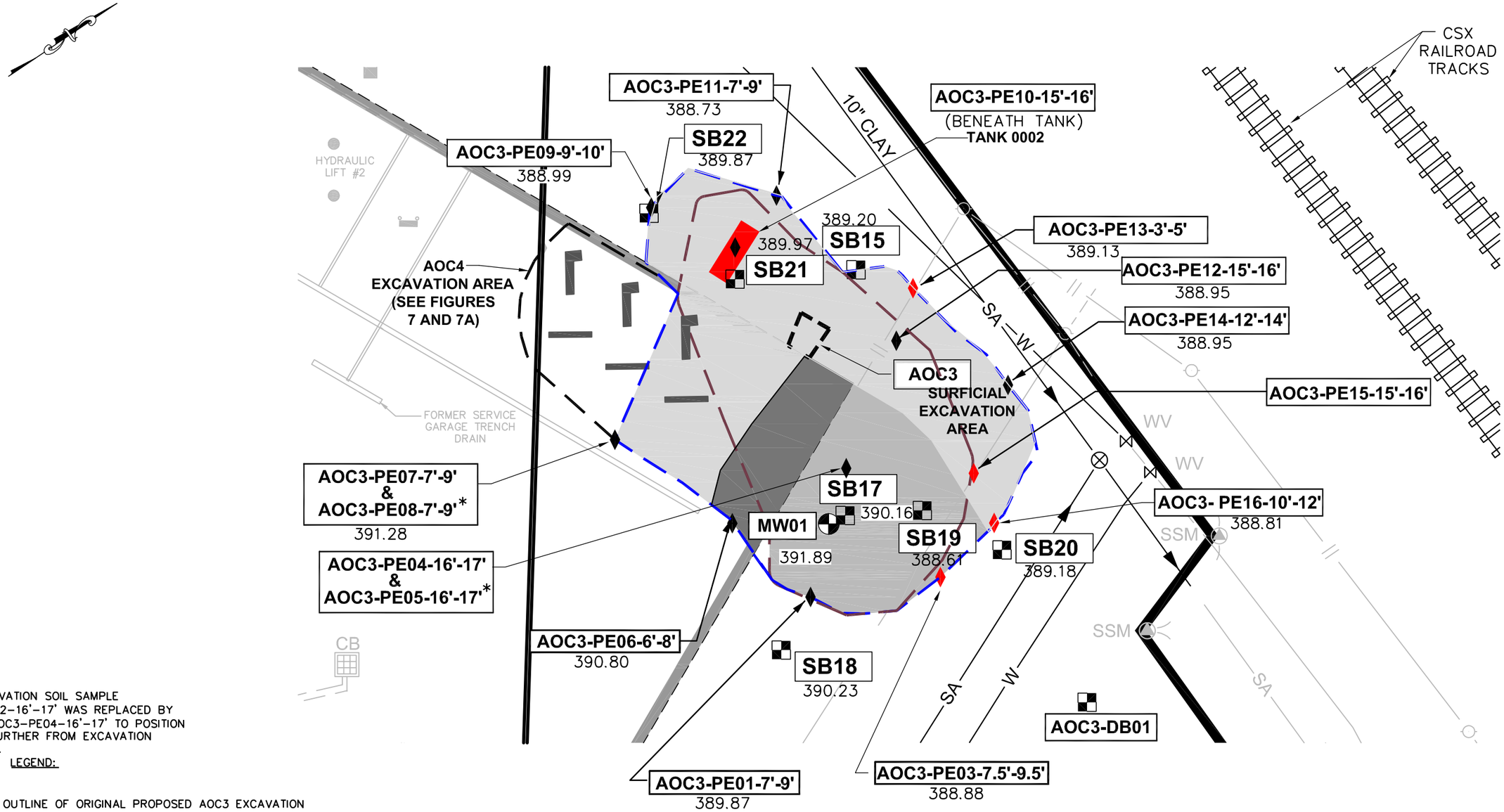
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 4 EXCAVATION DETAIL
DATE: 11/12/12	SCALE: 1"=20'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DRAWING NO.	FIGURE 11A



NOTE:
POST-EXCVATION SOIL SAMPLE AOC3-PE02-16'-17' WAS REPLACED BY SAMPLE AOC3-PE04-16'-17' TO POSITION SAMPLE FURTHER FROM EXCAVATION SIDEWALLS.

LEGEND:

- OUTLINE OF ORIGINAL PROPOSED AOC3 EXCAVATION
- OUTLINE OF COMPLETED AOC3 EXCAVATION
- OUTLINE OF AOC4 EXCAVATION AREA (DETAILS SHOWN ON FIGURES 7 AND 7A)
- SOIL EXCAVATED TO APPROXIMATELY 15 FEET BELOW GRADE
- SOIL EXCAVATED TO APPROXIMATELY 16 FEET BELOW GRADE
- SOIL EXCAVATED TO APPROXIMATELY 18 FEET BELOW GRADE

* DENOTES DUPLICATE SAMPLE

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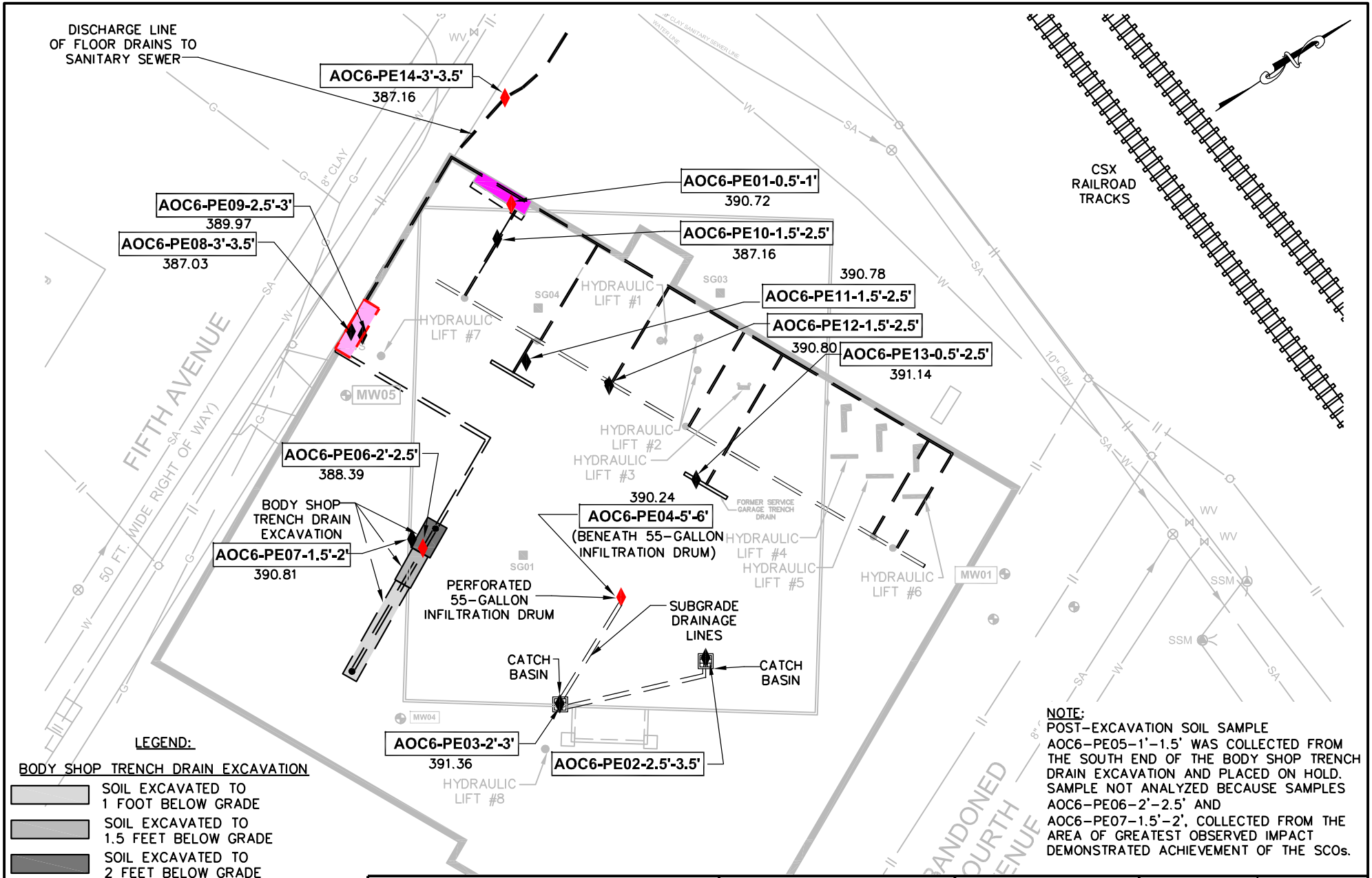
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
AOC 3
SUBSURFACE EXCAVATION
DETAIL

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 12



NOTE:
POST-EXCAVATION SOIL SAMPLE AOC6-PE05-1'-1.5' WAS COLLECTED FROM THE SOUTH END OF THE BODY SHOP TRENCH DRAIN EXCAVATION AND PLACED ON HOLD. SAMPLE NOT ANALYZED BECAUSE SAMPLES AOC6-PE06-2'-2.5' AND AOC6-PE07-1.5'-2', COLLECTED FROM THE AREA OF GREATEST OBSERVED IMPACT DEMONSTRATED ACHIEVEMENT OF THE SCOs.

LEGEND:

BODY SHOP TRENCH DRAIN EXCAVATION

- SOIL EXCAVATED TO 1 FOOT BELOW GRADE
- SOIL EXCAVATED TO 1.5 FEET BELOW GRADE
- SOIL EXCAVATED TO 2 FEET BELOW GRADE
- OIL-STAINED SOIL & CONCRETE BLOCK EXCAVATION AREA-SOILS EXCAVATED TO 3 FEET BELOW GRADE
- PAINT-STAINED SOIL EXCAVATION AREA -SOILS EXCAVATED TO 3 TO 6 INCHES BELOW GRADE

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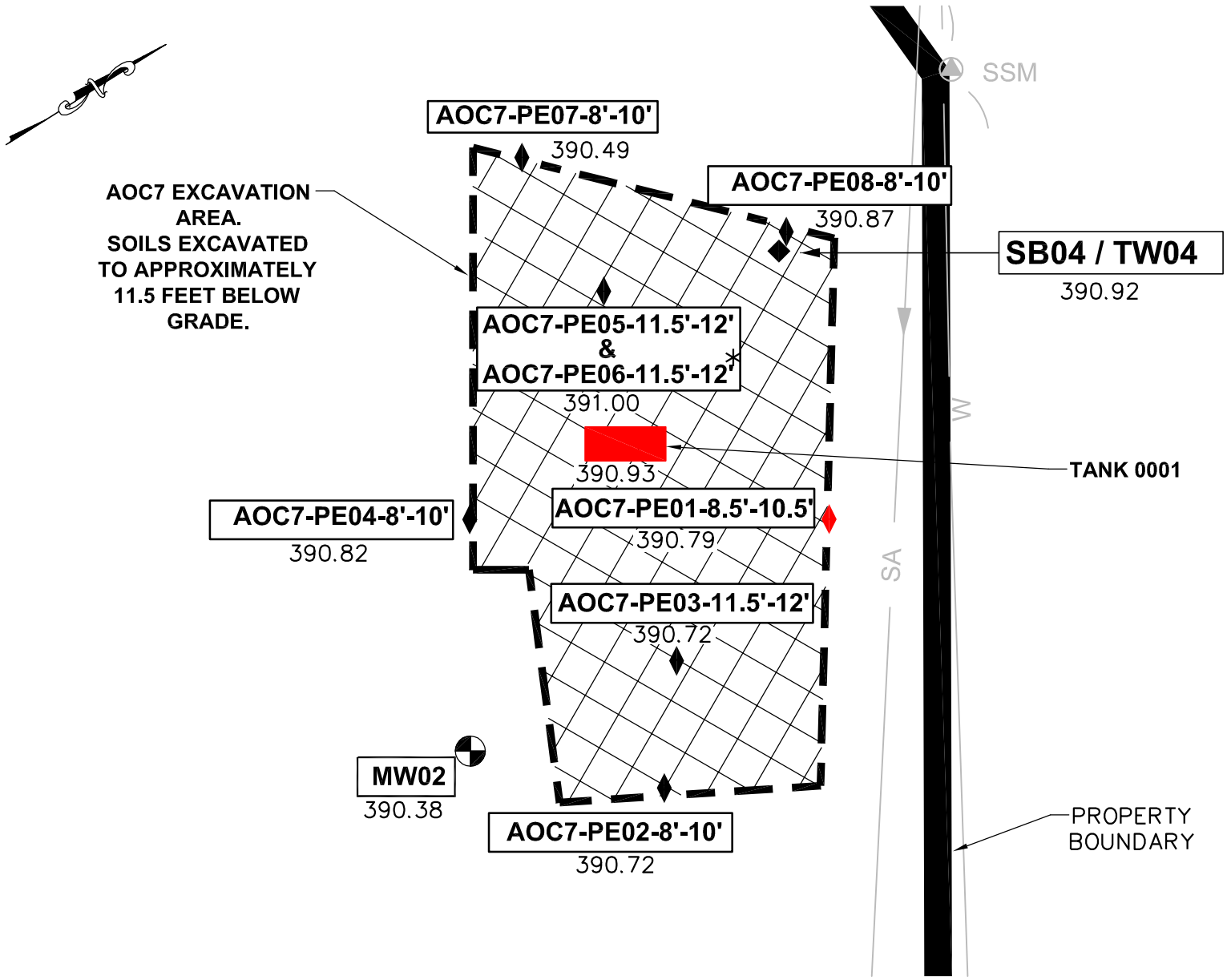
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 6 DETAIL
DATE: 11/12/12	SCALE: 1"=40'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DRAWING NO.	FIGURE 13



NOTE:

* DENOTES DUPLICATE SAMPLE

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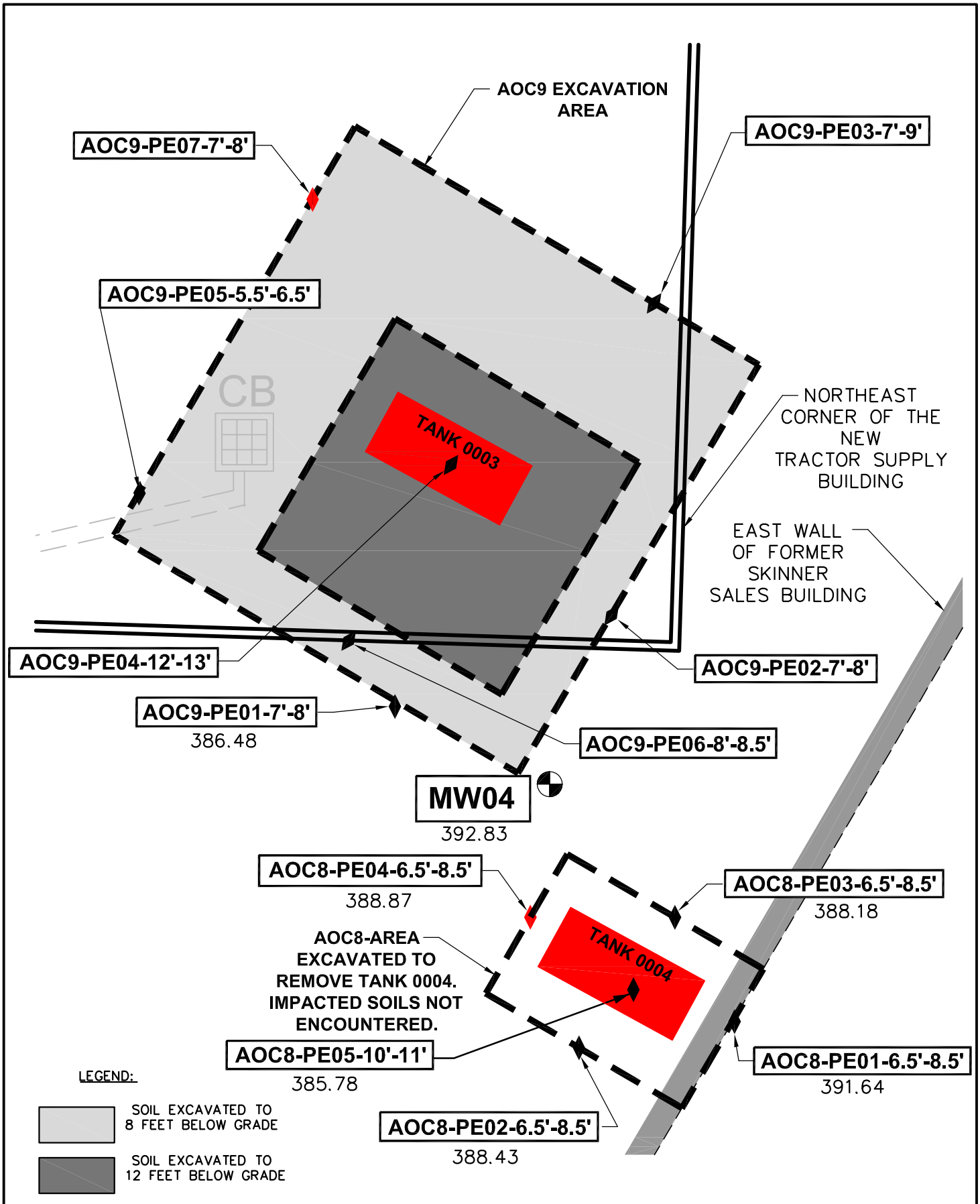
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 7 EXCAVATION DETAIL
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: 1"=10'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 14



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FAYETTEVILLE, NY 13066
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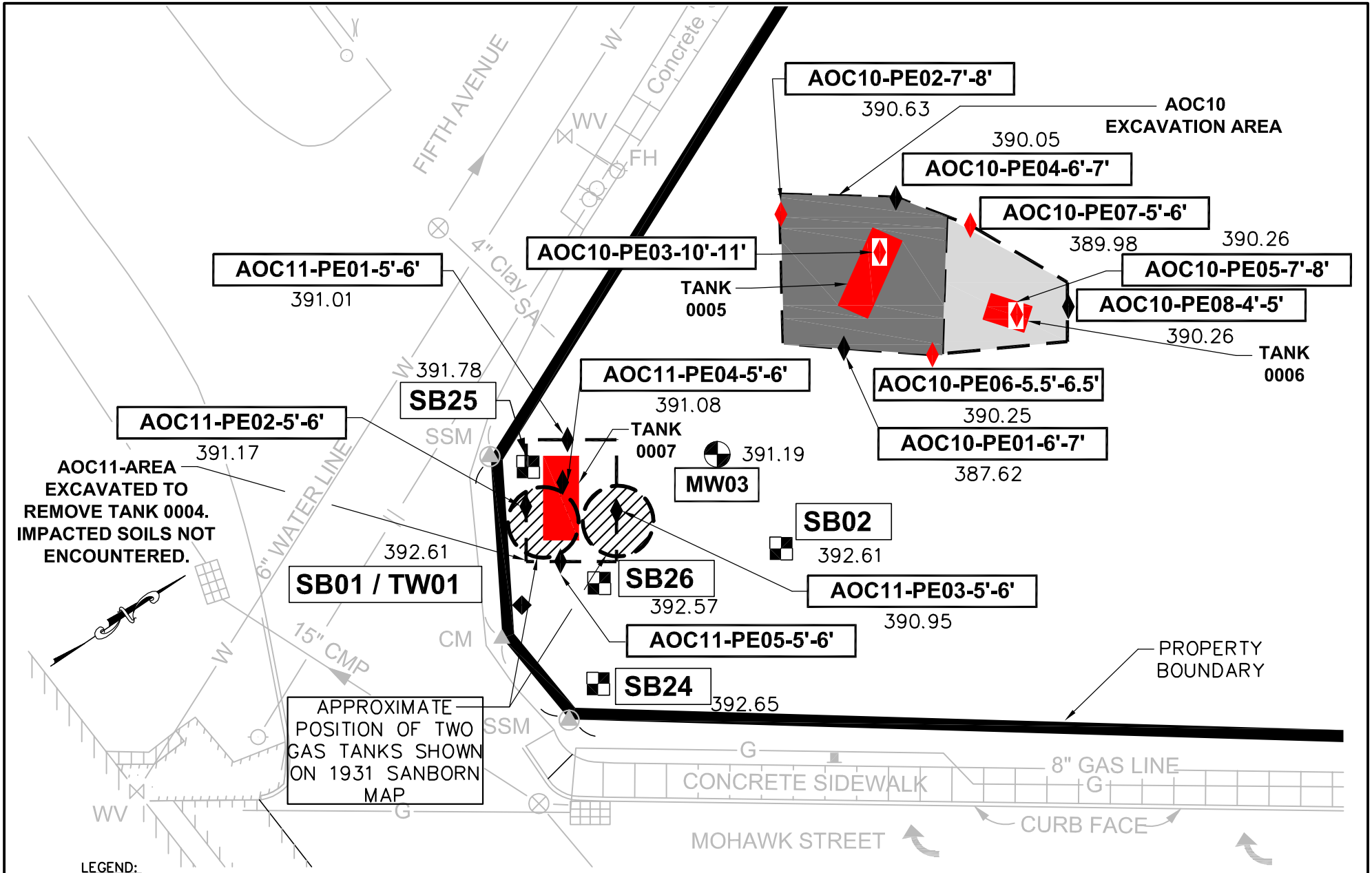
PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK
DRAWING TITLE	AOC 8 AND AOC 9 EXCAVATION DETAILS
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: 1"=10'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 15



LEGEND:

SOIL EXCAVATED TO 7 FEET BELOW GRADE

SOIL EXCAVATED TO 10 FEET BELOW GRADE

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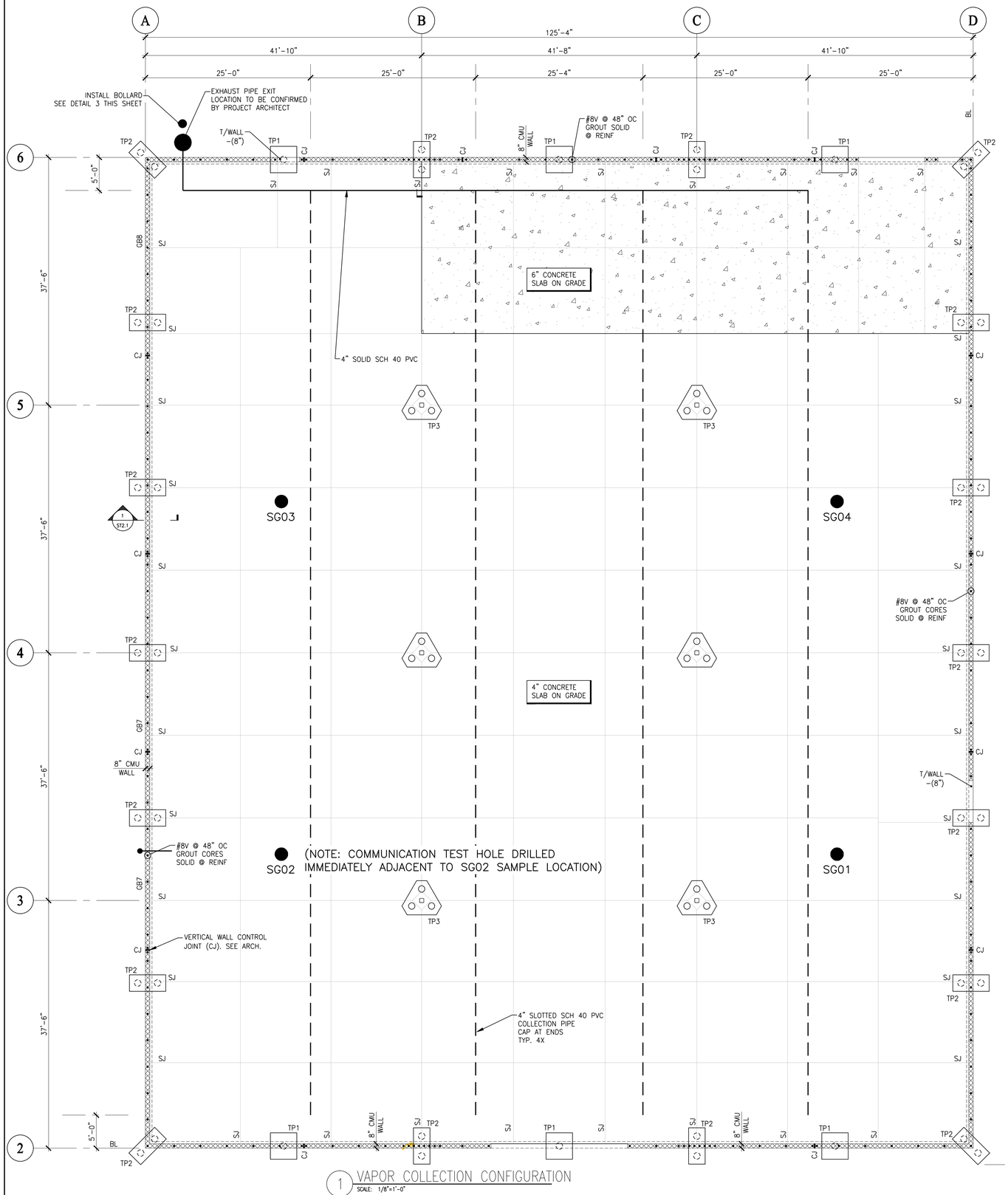
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
AOC 10 AND AOC 11
EXCAVATION DETAILS

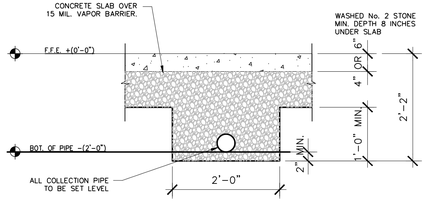
DATE: 11/12/12	SCALE: 1"=20'
PROJECT NO.	12072P
DRAWN BY:	MTG
CHECKED BY:	

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

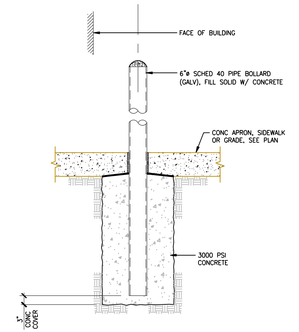
DRAWING NO.
FIGURE 16



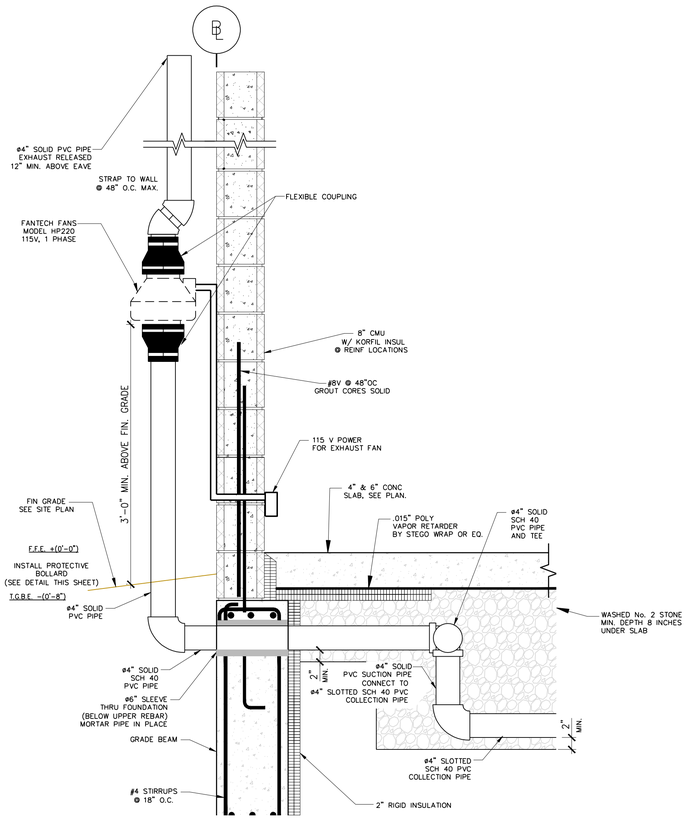
1 VAPOR COLLECTION CONFIGURATION
SCALE: 1/8"=1'-0"



2 TRENCH SECTION
SCALE: 3/4"=1'-0"



3 BOLLARD DETAIL
SCALE: 3/4"=1'-0"



4 FAN PIPING DETAIL
SCALE: 1"=1'-0"

General Notes:

General

1. The following notes apply to a vapor collection and removal system being implemented to prevent vapor intrusion into the building and to protect human health at the facility. It is an active system powered by a blower. QA/QC measures are needed during construction to insure performance and effectiveness of the installed system.

Vapor Barrier Membrane

2. Under slab vapor barrier membrane shall be manufactured by Stego Industries, or equivalent. The membrane shall have a thickness of at least 15 mils.
3. Overlap all seams a minimum of 6 inches and bond using tape provided by manufacturer.
4. Membrane edges along footings and walls shall be taped. All penetrations for piping, utilities, conduits and other materials through the membrane shall be sealed using beads of Seego Mastic.
5. Care must be taken during concrete work not to penetrate the membrane.

Piping

6. Vapor collection laterals shall consist of 4-inch diameter .010" Schedule 40 PVC 10 slot well screen. Cap all ends.
7. Vapor conveyance piping shall consist of 4-inch diameter solid Schedule 40 pipe.
8. Riser pipes shall be 4-inch diameter solid Schedule 40.
9. Use flexible couplings at the blower connections.

Blower

10. Blower shall be exterior mounted wall unit units as manufactured by Fantech. Use Model HP220 unit rated for outdoor use. Blower uses 115VAC single phase power supply.

Crushed Stone

11. Under slab stone shall be washed. Use No. 2 stone gradation with a minimum lift thickness of 8 inches.

LEGEND

SG01● SUB-SLAB SOIL GAS SAMPLE LOCATIONS
SLOTTED PIPE LATERAL
SOLID PIPE LATERAL

NO.	DATE	APPR.	

GREYSTONE ENGINEERING
4 FRANKLIN SQUARE
SARATOGA SPRINGS, NY 12866
(518) 682-2200 (OFFICE)
(518) 682-2202 (FAX)

PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

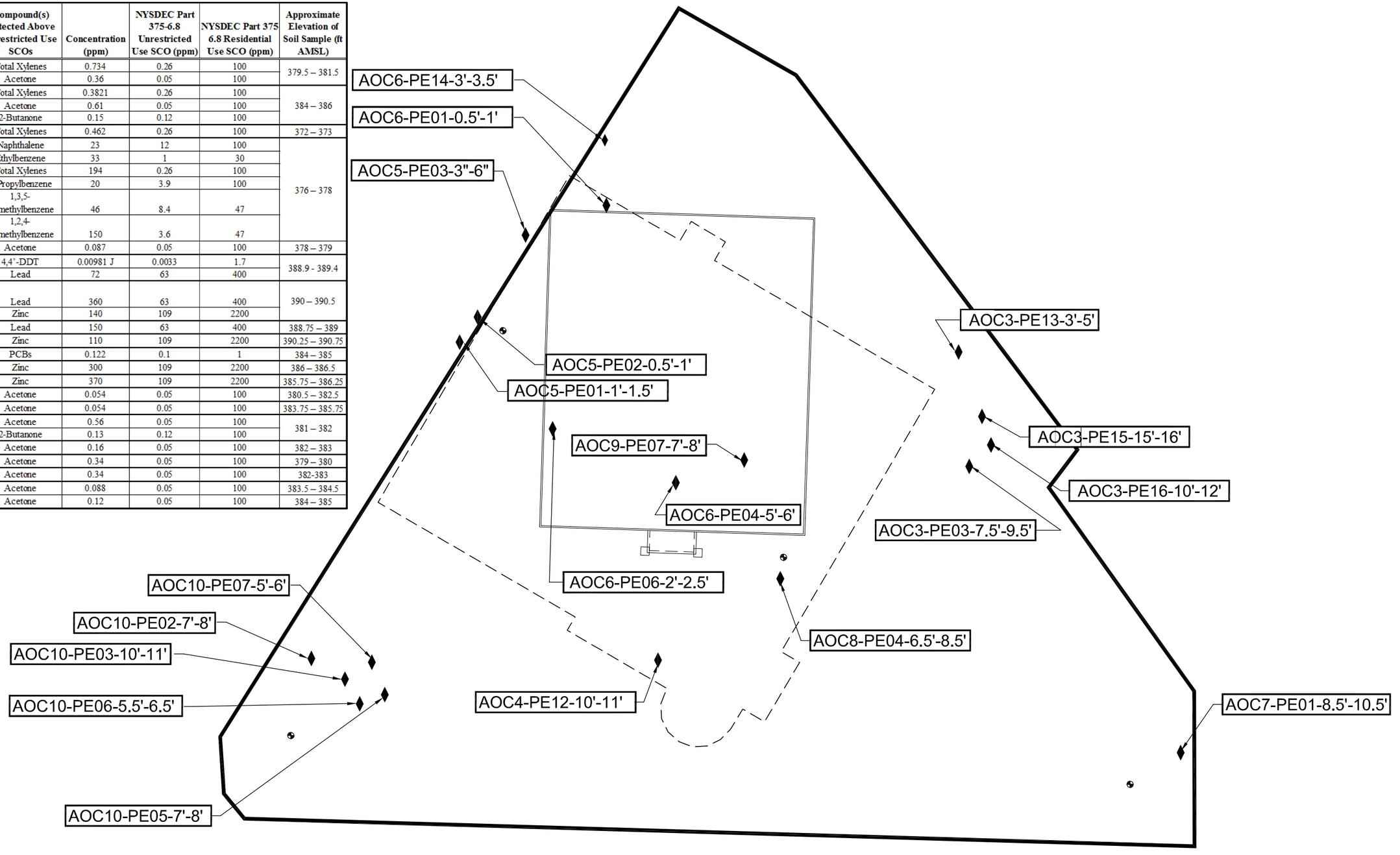
DRAWING TITLE
SUB-SLAB DEPRESSURIZATION SYSTEM ENGINEERING DESIGN

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: AS NOTED
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 17

Sample ID	Compound(s) Detected Above Unrestricted Use SCOs	Concentration (ppm)	NYSDEC Part 375-6.8 Unrestricted Use SCO (ppm)	NYSDEC Part 375 6.8 Residential Use SCO (ppm)	Approximate Elevation of Soil Sample (ft AMSL)
AOC3-PE03-7.5'-9.5'	Total Xylenes	0.734	0.26	100	379.5 – 381.5
	Acetone	0.36	0.05	100	
AOC3-PE13-3'-5'	Total Xylenes	0.3821	0.26	100	384 – 386
	Acetone	0.61	0.05	100	
	2-Butanone	0.15	0.12	100	
AOC3-PE15-15'-16'	Total Xylenes	0.462	0.26	100	372 – 373
AOC3-PE16-10'-12'	Naphthalene	23	12	100	376 – 378
	Ethylbenzene	33	1	30	
	Total Xylenes	194	0.26	100	
	n-Propylbenzene	20	3.9	100	
	1,3,5-Trimethylbenzene	46	8.4	47	
	1,2,4-Trimethylbenzene	150	3.6	47	
AOC4-PE12-10'-11'	Acetone	0.087	0.05	100	378 – 379
AOC5-PE01-1'-1.5'	4,4'-DDT	0.00981 J	0.0033	1.7	388.9 - 389.4
	Lead	72	63	400	
AOC5-PE02-0.5'-1'	Lead	360	63	400	390 – 390.5
	Zinc	140	109	2200	
AOC5-PE03-3"-6"	Lead	150	63	400	388.75 – 389
AOC6-PE01-0.5'-1'	Zinc	110	109	2200	390.25 – 390.75
AOC6-PE04-5'-6'	PCBs	0.122	0.1	1	384 – 385
AOC6-PE06-2'-2.5'	Zinc	300	109	2200	386 – 386.5
AOC6-PE14-3'-3.5'	Zinc	370	109	2200	385.75 – 386.25
AOC7-PE01-8.5'-10.5'	Acetone	0.054	0.05	100	380.5 – 382.5
AOC8-PE04-6.5'-8.5'	Acetone	0.054	0.05	100	383.75 – 385.75
AOC9-PE07-7'-8'	Acetone	0.56	0.05	100	381 – 382
	2-Butanone	0.13	0.12	100	
AOC10-PE02-7'-8'	Acetone	0.16	0.05	100	382 – 383
AOC10-PE03-10'-11'	Acetone	0.34	0.05	100	379 – 380
AOC10-PE05-7'-8'	Acetone	0.34	0.05	100	382-383
AOC10-PE06-5.5'-6.5'	Acetone	0.088	0.05	100	383.5 – 384.5
AOC10-PE07-5'-6'	Acetone	0.12	0.05	100	384 – 385



LEGEND

♦ POST–EXCAVATION SOIL SAMPLING LOCATION

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
(315) 637–6342 (OFFICE)
(888) 389–6342 (FAX)
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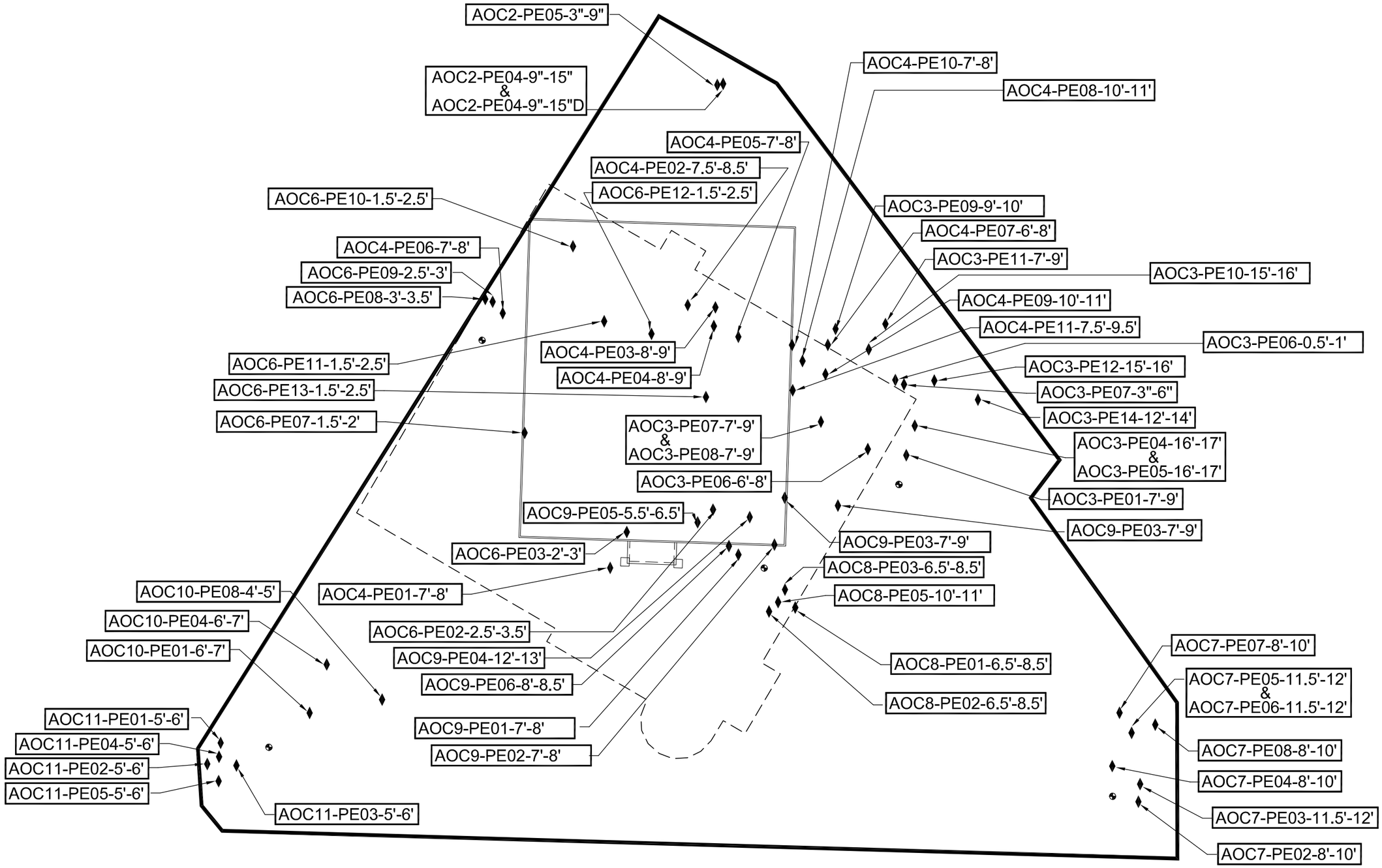
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
POST–EXCAVATION SOIL SAMPLES WITH AT LEAST ONE COMPOUND DETECTED ABOVE THE 6 NYCRR PART 375–6.8 UNRESTRICTED USE SCOs

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 18



LEGEND

♦ POST-REMEDIATION SOIL SAMPLING LOCATION

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
(315) 637-6342 (OFFICE)
(888) 389-6342 (FAX)
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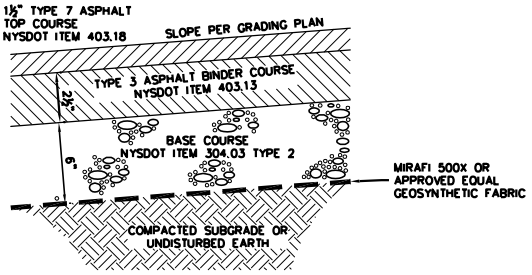
PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

DRAWING TITLE
POST-REMEDIATION SOIL SAMPLES THAT MEET THE 6 NYCRR PART 375-6.8 UNRESTRICTED USE SCOs

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

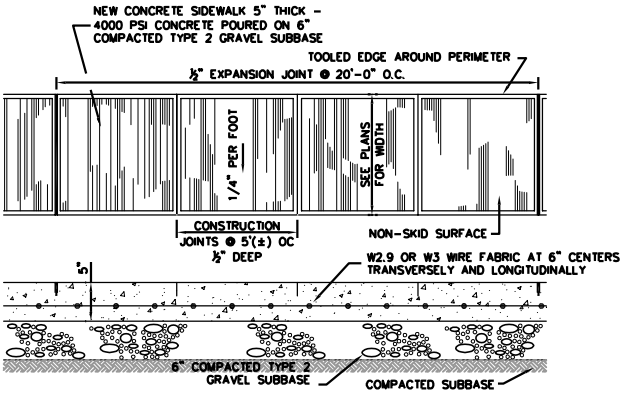
PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DRAWING NO.
FIGURE 19



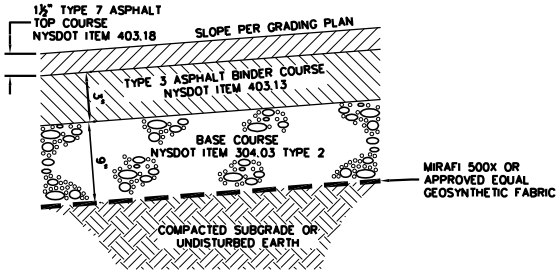
1 STANDARD PAVEMENT SECTION

SCALE: NTS
CROSS REFERENCE:



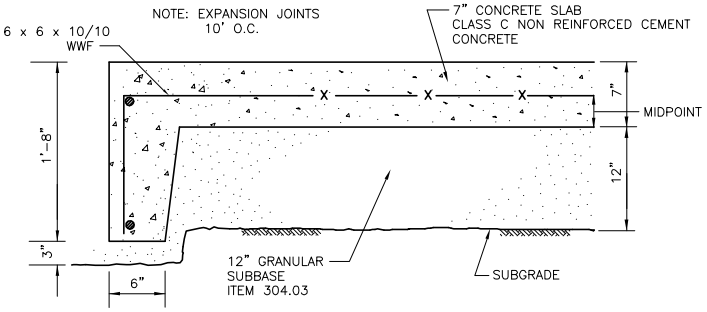
4 SIDEWALK DETAIL

SCALE: NTS
CROSS REFERENCE: NONE



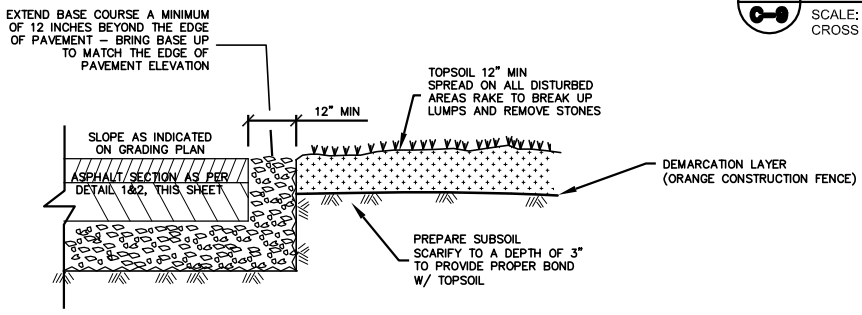
2 HEAVY DUTY PAVEMENT SECTION

SCALE: NONE
CROSS REFERENCE:



8 CONCRETE PAD DETAIL

SCALE: NTS
CROSS REFERENCE: NONE



7 TYPICAL EDGE OF PAVEMENT WITH ROLL OFF PAVEMENT

SCALE: NTS
CROSS REFERENCE: NONE

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
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(888) 389-6342 (FAX)
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PROJECT LOCATION	SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK SITE No. C622031
DRAWING TITLE	SITE COVER SYSTEM CROSS SECTIONS
PREPARED FOR:	SPHERE DEVELOPMENT, LLC
DATE: 11/12/12	SCALE: AS NOTED
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	
DRAWING NO.	FIGURE 20A

GREYSTONE ENVOLUTIONS, LLC
202 HIGHBRIDGE STREET
FAYETTEVILLE, NY 13066
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(888) 389-6342 (FAX)
WWW.GREYSTONE-ENV.COM

PROJECT LOCATION
SKINNER AUTOMOTIVE
700 MOHAWK STREET
HERKIMER, NEW YORK

SITE No. C622031

DRAWING TITLE
SITE COVER SYSTEM

PREPARED FOR:
SPHERE DEVELOPMENT, LLC

DATE: 11/12/12	SCALE: NONE
PROJECT NO.	12072EP
DRAWN BY:	MTG
CHECKED BY:	

DRAWING NO.
FIGURE 20B

APPENDIX A

EXCAVATION WORK PLAN

A-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the Site owner or their representative will notify the Department. Currently, this notification will be made to:

Peter Taylor
Regional Hazardous Waste Remediation Engineer
317 Washington Street
Watertown, New York 13601

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent, plans for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control,
- A summary of environmental conditions anticipated in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;
- A schedule for the work, detailing the start and completion of all intrusive work,
- A summary of the applicable components of this EWP,
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120,
- A copy of the contractor's health and safety plan, in electronic format, if it differs from the HASP provided in Appendix C of this document,
- Identification of disposal facilities for potential waste streams,
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

A-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based soil screening will be performed by a qualified environmental professional during all remedial and development excavations into known or potentially contaminated material (remaining contamination).

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal, material that requires testing, material that can be returned to the subsurface, and material that can be used as cover soil.

The following sections apply only to soils that contain contaminants of concern such that off-site transportation and disposal is required. The following sections do not apply to material that can be returned to the subsurface and material that can be used as cover soil.

A-3 STOCKPILE METHODS

Soil stockpiles, if generated, will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC.

A-4 MATERIALS EXCAVATION AND LOAD OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and its contractors are solely responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the Site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the Site.

Loaded vehicles leaving the Site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as needed. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the Site until the activities performed under this section are complete. Locations where vehicles enter or exit the Site shall be inspected daily during load out for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the Site are clean of dirt and other materials derived from the Site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

A-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the Site will be covered. If loads contain wet material capable of producing free liquid, truck liners will be used.

Trucks will be washed prior to leaving the Site, as needed. Truck wash waters will be collected and disposed of off-site in an appropriate manner. Truck transport routes will be developed, as appropriate, depending on the destination for the material being transported. All trucks loaded with site materials will exit the vicinity of the Site using only these approved truck routes. The most appropriate routes will be developed and will take into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the facility; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport. Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the Site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

A-6 MATERIALS DISPOSAL OFF-SITE

All soil/fill/solid waste excavated and removed from the Site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of soil/fill from this Site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this Site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and

associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Track 1 unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

A-7 MATERIALS REUSE ON-SITE

Materials meeting the Commercial Use SCOs defined in 6 NYCRR 375-6.4 and that is not found to be “grossly contaminated media” may be reused on-site. Grossly contaminated media is defined as free product, soil saturated with product, or severely contaminated soil as determined in the field based on a combination of visual observations, odors and PID screening, or material which otherwise meets the definition of "grossly contaminated media" as defined in DER-10". Appropriate sampling and analyses will be performed to demonstrate the materials meet the criteria for reuse. The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for re-use on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the Site will not be reused on-site.

A-8 FLUIDS MANAGEMENT

It is not anticipated that liquids will be generated that require offsite disposal. If generated, liquids to be removed from the Site, including excavation dewatering waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Purge water free of sheen and odor will be discharged to ground surface. Precautions will be taken to avoid the pooling of water, surface water runoff or flooding of the Site via discharge of the purge water. Impacted development water, if encountered, will be pumped through a carbon treatment system and discharged to ground surface.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

A-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the decision document. The demarcation layer, consisting of orange snow fencing material or equivalent material will be replaced to provide a visual reference to the top of the 'Remaining Contamination Zone', the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this Site Management Plan. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the 'Remaining Contamination.' A figure showing the modified surface will be included in the subsequent Periodic Review Report and in any updates to the Site Management Plan.

A-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the Site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the Site.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the Site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). Imported backfill will meet the Unrestricted Use SCOs defined in 6NYCRR 375-6.3. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this Site, will not be imported onto the Site without prior approval by NYSDEC. Solid waste will not be imported onto the Site.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

A-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

A-12 CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for full a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the periodic reports prepared pursuant to Section 5 of the SMP.

A-13 COMMUNITY AIR MONITORING PLAN

The Community Air Monitoring Plan is provided as Appendix D of the SMP.

A-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis will include limiting the size of the excavation areas and covering stockpiles of excavated materials. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted

and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the responsibility of the property owner's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

A-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include the items listed below as needed:

- Dust suppression will be achieved though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.

- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

A-16 OTHER NUISANCES

Other nuisances, including rodents or violation of local noise ordinances are not anticipated.

GREYSTONE

APPENDIX B

ENVIRONMENTAL EASEMENT

Herkimer County
Honorable Sylvia M Rowan County Clerk
109 Mary Street Suite 1111
Herkimer, New York 13350-2923

60 2012 00174567

Instrument Number: 2012- 00174567

As

Recorded On: October 19, 2012 **Easement**

Parties: SPHERE STP LLC

To

PEOPLE OF THE STATE OF NEW YORK

Billable Pages: 8

Recorded By: SPHERE STP LLC

Num Of Pages: 9

Comment:

**** Examined and Charged as Follows: ****

Easement	80.00	Coversheet	5.00	TP584 Affidavit	5.00		
Recording Charge:	**90.00**						
	Amount	Consideration Amount	RS#/CS#				
Tax-Transfer	0.00	0.00	RS 439	Basic	0.00		
HERKIMER V HERKIMER				Local	0.00	Special Additional	0.00
				Additional	0.00	Transfer	0.00
Tax Charge:	**0.00**						

STATE OF NEW YORK, COUNTY OF HERKIMER SS:
I, Sylvia M. Rowan, Clerk of the County of Herkimer of the County Court of **said County** and of the Supreme Court, both being Courts of Record having **a common** seal,

DO HEREBY CERTIFY that **I** have compared this copy with the original **filed,** recorded, or entered in this office and that the same is a correct **transcript** thereof and of the whole of said original.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed **the** seal of said County and Courts on

Date 10-19-12

Sylvia M. Rowan

Facsimile signature used pursuant to Sec. 903 County Law

Herkimer County Clerk

**** THIS PAGE IS PART OF THE INSTRUMENT ****

I hereby certify that the within and foregoing was recorded in the Clerk's Office For: Herkimer County,

File Information:

Document Number: 2012- 00174567
Receipt Number: 197615
Recorded Date/Time: October 19, 2012 10:22:15A
Book-Vol/Pg: Bk-R Vl-1459 Pg-113
Cashier / Station: J J / Cashier Station 4

Record and Return To:

SPHERE STP LLC
700 MOHAWK ST
HERKIMER NY 13350

HERKIMER COUNTY · STATE OF NEW YORK · 1791

Sylvia M. Rowan

Sylvia M Rowan Herkimer County Clerk

ENVIRONMENTAL EASEMENT GRANTED PURSUANT TO ARTICLE 71, TITLE 36 OF THE NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW

THIS INDENTURE made this 13th day of September, 2012, between Owner(s) SPHERE STP LLC, a New York limited liability company, having an office at 2836 Route 20 East, Cazenovia, County of Madison, State of New York 13035 (the "Grantor"), and The People of the State of New York (the "Grantee."), acting through their Commissioner of the Department of Environmental Conservation (the "Commissioner", or "NYSDEC" or "Department" as the context requires) with its headquarters located at 625 Broadway, Albany, New York 12233,

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to encourage the remediation of abandoned and likely contaminated properties ("sites") that threaten the health and vitality of the communities they burden while at the same time ensuring the protection of public health and the environment; and

WHEREAS, the Legislature of the State of New York has declared that it is in the public interest to establish within the Department a statutory environmental remediation program that includes the use of Environmental Easements as an enforceable means of ensuring the performance of operation, maintenance, and/or monitoring requirements and the restriction of future uses of the land, when an environmental remediation project leaves residual contamination at levels that have been determined to be safe for a specific use, but not all uses, or which includes engineered structures that must be maintained or protected against damage to perform properly and be effective, or which requires groundwater use or soil management restrictions; and

WHEREAS, the Legislature of the State of New York has declared that Environmental Easement shall mean an interest in real property, created under and subject to the provisions of Article 71, Title 36 of the New York State Environmental Conservation Law ("ECL") which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls which are intended to ensure the long term effectiveness of a site remedial program or eliminate potential exposure pathways to hazardous waste or petroleum; and

WHEREAS, Grantor, is the owner of real property located at the address of 700 Mohawk Street in the Village of Herkimer, County of Herkimer and State of New York, known and designated on the tax map of the County Clerk of Herkimer as tax map parcel numbers: Section 120.-32 Block 2 Lot 11, being the same as that property conveyed to Grantor by deed dated June 19, 2012 and recorded in the Herkimer County Clerk's Office in Liber and Page 1443 / 959. The property subject to this Environmental Easement (the "Controlled Property") comprises approximately 2.531 +/- acres, and is hereinafter more fully described in the Land Title Survey dated February 10, 2012 prepared by Bruce W. Snyer of Delta Engineers, Architeacts & Land Surveyors, which will be attached to the Site Management Plan. The Controlled Property description is set forth in and attached hereto as Schedule A; and

WHEREAS, the Department accepts this Environmental Easement in order to ensure the protection of public health and the environment and to achieve the requirements for remediation

established for the Controlled Property until such time as this Environmental Easement is extinguished pursuant to ECL Article 71, Title 36; and

NOW THEREFORE, in consideration of the mutual covenants contained herein and the terms and conditions of Brownfield Cleanup Agreement Index Number: C622031, Grantor conveys to Grantee a permanent Environmental Easement pursuant to ECL Article 71, Title 36 in, on, over, under, and upon the Controlled Property as more fully described herein ("Environmental Easement")

1. Purposes. Grantor and Grantee acknowledge that the Purposes of this Environmental Easement are: to convey to Grantee real property rights and interests that will run with the land in perpetuity in order to provide an effective and enforceable means of encouraging the reuse and redevelopment of this Controlled Property at a level that has been determined to be safe for a specific use while ensuring the performance of operation, maintenance, and/or monitoring requirements; and to ensure the restriction of future uses of the land that are inconsistent with the above-stated purpose.

2. Institutional and Engineering Controls. The controls and requirements listed in the Department approved Site Management Plan ("SMP") including any and all Department approved amendments to the SMP are incorporated into and made part of this Environmental Easement. These controls and requirements apply to the use of the Controlled Property, run with the land, are binding on the Grantor and the Grantor's successors and assigns, and are enforceable in law or equity against any owner of the Controlled Property, any lessees and any person using the Controlled Property.

A. (1) The Controlled Property may be used for:

Commercial as described in 6 NYCRR Part 375-1.8(g)(2)(iii) and Industrial as described in 6 NYCRR Part 375-1.8(g)(2)(iv) If current land use is selected, enter current use.

(2) All Engineering Controls must be operated and maintained as specified in the Site Management Plan (SMP);

(3) All Engineering Controls must be inspected at a frequency and in a manner defined in the SMP.

(4) Groundwater and other environmental or public health monitoring must be performed as defined in the SMP;

(5) Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;

(6) All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP;

(7) Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP.

(8) Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy shall be performed as defined in the SMP.

(9) Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by this Environmental Easement.

B. The Controlled Property shall not be used for Residential or Restricted Residential purposes as defined in 6NYCRR 375-1.8(g)(2)(i) and (ii), and the above-stated engineering controls may not be discontinued without an amendment or extinguishment of this Environmental Easement.

C. The SMP describes obligations that the Grantor assumes on behalf of Grantor, its successors and assigns. The Grantor's assumption of the obligations contained in the SMP which may include sampling, monitoring, and/or operating a treatment system, and providing certified reports to the NYSDEC, is and remains a fundamental element of the Department's determination that the Controlled Property is safe for a specific use, but not all uses. The SMP may be modified in accordance with the Department's statutory and regulatory authority. The Grantor and all successors and assigns, assume the burden of complying with the SMP and obtaining an up-to-date version of the SMP from:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, New York 12233
Phone: (518) 402-9553

D. Grantor must provide all persons who acquire any interest in the Controlled Property a true and complete copy of the SMP that the Department approves for the Controlled Property and all Department-approved amendments to that SMP.

E. Grantor covenants and agrees that until such time as the Environmental Easement is extinguished in accordance with the requirements of ECL Article 71, Title 36 of the ECL, the property deed and all subsequent instruments of conveyance relating to the Controlled Property shall state in at least fifteen-point bold-faced type:

This property is subject to an Environmental Easement held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the Environmental Conservation Law.

F. Grantor covenants and agrees that this Environmental Easement shall be incorporated in full or by reference in any leases, licenses, or other instruments granting a right to use the Controlled Property.

G. Grantor covenants and agrees that it shall annually, or such time as NYSDEC may allow, submit to NYSDEC a written statement by an expert the NYSDEC may find acceptable certifying under penalty of perjury, in such form and manner as the Department may require, that:

(1) the inspection of the site to confirm the effectiveness of the institutional and engineering controls required by the remedial program was performed under the direction of the individual set forth at 6 NYCRR Part 375-1.8(h)(3).

(2) the institutional controls and/or engineering controls employed at such site:

(i) are in-place;

(ii) are unchanged from the previous certification, or that any identified changes to the controls employed were approved b the NYSDEC and that all controls are in the Department-approved format; and

(iii) that nothing has occurred that would impair the ability of such control to protect the public health and environment;

(3) the owner will continue to allow access to such real property to evaluate the continued maintenance of such controls;

(4) nothing has occurred that would constitute a violation or failure to comply with any site management plan for such controls;

(5 the report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

(6) to the best of his/her knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and

(7) the information presented is accurate and complete.

3. Right to Enter and Inspect. Grantee, its agents, employees, or other representatives of the State may enter and inspect the Controlled Property in a reasonable manner and at reasonable times to assure compliance with the above-stated restrictions.

4. Reserved Grantor's Rights. Grantor reserves for itself, its assigns, representatives, and successors in interest with respect to the Property, all rights as fee owner of the Property, including:

A. Use of the Controlled Property for all purposes not inconsistent with, or limited by the terms of this Environmental Easement;

B. The right to give, sell, assign, or otherwise transfer part or all of the underlying fee interest to the Controlled Property, subject and subordinate to this Environmental Easement;

5. Enforcement

A. This Environmental Easement is enforceable in law or equity in perpetuity by Grantor, Grantee, or any affected local government, as defined in ECL Section 71-3603, against the owner of the Property, any lessees, and any person using the land. Enforcement shall not be

defeated because of any subsequent adverse possession, laches, estoppel, or waiver. It is not a defense in any action to enforce this Environmental Easement that: it is not appurtenant to an interest in real property; it is not of a character that has been recognized traditionally at common law; it imposes a negative burden; it imposes affirmative obligations upon the owner of any interest in the burdened property; the benefit does not touch or concern real property; there is no privity of estate or of contract; or it imposes an unreasonable restraint on alienation.

B. If any person violates this Environmental Easement, the Grantee may revoke the Certificate of Completion with respect to the Controlled Property.

C. Grantee shall notify Grantor of a breach or suspected breach of any of the terms of this Environmental Easement. Such notice shall set forth how Grantor can cure such breach or suspected breach and give Grantor a reasonable amount of time from the date of receipt of notice in which to cure. At the expiration of such period of time to cure, or any extensions granted by Grantee, the Grantee shall notify Grantor of any failure to adequately cure the breach or suspected breach, and Grantee may take any other appropriate action reasonably necessary to remedy any breach of this Environmental Easement, including the commencement of any proceedings in accordance with applicable law.

D. The failure of Grantee to enforce any of the terms contained herein shall not be deemed a waiver of any such term nor bar any enforcement rights.

6. Notice. Whenever notice to the Grantee (other than the annual certification) or approval from the Grantee is required, the Party providing such notice or seeking such approval shall identify the Controlled Property by referencing the following information:

County, NYSDEC Site Number, NYSDEC Brownfield Cleanup Agreement, State Assistance Contract or Order Number, and the County tax map number or the Liber and Page or computerized system identification number.

Parties shall address correspondence to:

Site Number: C622031
Office of General Counsel
NYSDEC
625 Broadway
Albany New York 12233-5500

With a copy to:

Site Control Section
Division of Environmental Remediation
NYSDEC
625 Broadway
Albany, NY 12233

All notices and correspondence shall be delivered by hand, by registered mail or by Certified mail and return receipt requested. The Parties may provide for other means of receiving and communicating notices and responses to requests for approval.

7. Recordation. Grantor shall record this instrument, within thirty (30) days of execution of this instrument by the Commissioner or her/his authorized representative in the office of the

recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

8. Amendment. Any amendment to this Environmental Easement may only be executed by the Commissioner of the New York State Department of Environmental Conservation or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

9. Extinguishment. This Environmental Easement may be extinguished only by a release by the Commissioner of the New York State Department of Environmental Conservation, or the Commissioner's Designee, and filed with the office of the recording officer for the county or counties where the Property is situated in the manner prescribed by Article 9 of the Real Property Law.

10. Joint Obligation. If there are two or more parties identified as Grantor herein, the obligations imposed by this instrument upon them shall be joint and several.

IN WITNESS WHEREOF, Grantor has caused this instrument to be signed in its name.

SPHERE STP LLC:
BY; SPHERE DEVELOPMENT LLC

By: _____

Print Name: KURT WENDLER

Title: MANAGING MEMBER Date: JULY 21, 2012

Grantor's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF MADISON)

On the 21ST day of JULY, in the year 2012, before me, the undersigned, personally appeared KURT WENDLER, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

_____
Notary Public - State of New York

PAUL M. REGAN
Notary Public State of New York
No. 02RE47988
Qualified in Madison County
Commission expires November 30, 2013

THIS ENVIRONMENTAL EASEMENT IS HEREBY ACCEPTED BY THE PEOPLE OF THE STATE OF NEW YORK, Acting By and Through the Department of Environmental Conservation as Designee of the Commissioner,

By: _____

Robert W. Schick, Director
Division of Environmental Remediation

Grantee's Acknowledgment

STATE OF NEW YORK)
) ss:
COUNTY OF ALBANY)

On the 13th day of September, in the year 2012, before me, the undersigned, personally appeared Robert Schick, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

_____
Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2014

SCHEDULE "A" PROPERTY DESCRIPTION

ALL THAT TRACT OR PARCEL OF LAND SITUATE IN THE VILLAGE OF HERKIMER, TOWN OF HERKIMER, COUNTY OF HERKIMER AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

Beginning at a concrete nail on the northwesterly highway boundary of Mohawk Street (New York State Route #28), said concrete nail standing at the intersection of the northwesterly highway boundary of Mohawk Street with the southwesterly boundary of the lands of Conrail (New York Central Railroad – Formerly); thence S35°38'31"W 450.33 feet along the northwesterly highway boundary of Mohawk Street to a metal survey marker standing on the northerly highway boundary of lands appropriated for the New York State Thruway; thence S84° 25'22"W 16.00 feet along the northerly highway boundary of lands appropriated for the New York State Thruway to a concrete monument standing on the northeasterly highway boundary of lands appropriated for the New York State Thruway; thence N59°46'10"W 27.60 feet along the northeasterly highway boundary of lands appropriated for the New York State Thruway to a metal survey marker standing on the northeasterly highway boundary of Fifth Avenue; thence N23° 50'18"W 407.84 feet along the northeasterly highway boundary of Fifth Avenue to an iron rod standing on the southeasterly boundary of lands appropriated by the People of the State of New York by Map No. 397 – Parcel No. 432; thence N63°40'28"E 64.85 feet along the southeasterly boundary of lands appropriated by the People of the State of New York by Map No. 397 – Parcel No. 432 to an iron rod standing on the southerly boundary of the lands of Conrail; thence N87° 04'16"E 222.28 feet along the southerly boundary of the lands of Conrail to a metal survey marker standing on the easterly highway boundary of Fourth Avenue (Formerly); thence S18° 54'19"E 22.35 feet along the easterly highway boundary of Fourth Avenue to a metal survey marker standing on the southerly boundary of Sidney Nusbaum and Helaine Klein Nusbaum (Reputed Owner); thence N88°28'12"E 117.72 feet along the southerly boundary of lands reputedly owned by Sidney Nusbaum and Helaine Klein Nusbaum and then along the southerly boundary of the lands of Conrail to a metal survey marker standing on the southwesterly boundary of the lands of Conrail; thence S56°10'49"E 74.61 feet along the southwesterly boundary of the lands of Conrail to the point and place of beginning.

The above described parcel containing 2.531 acres (110,265.1 sq. ft.) of land, more or less.

GREYSTONE

APPENDIX C

EXAMPLE HEALTH & SAFETY PLAN

Project # 12020EP

PROJECT HEALTH AND SAFETY PLAN	This form is intended to provide health and safety guidelines for project field work. The activities described herein should be conducted using good work practices and judgments consistent with regulatory requirements and training. The Project Manager should review this Health and Safety Plan (HASP) with all project personnel and maintain the HASP in project files.

Administrative Information	Site Name and Location Skinner Sales / Tractor Supply BCP Site #C622031 700 Mohawk Street Herkimer, New York	
	Client: Sphere STP, LLC	
	Project Name: Site Remediation	
	HASP Date 22 March 2012	Revision Number and Date 2: 9 May 2012
	Field Work Start Date 22 June 2012	Anticipate Field Work End Date 1 October 2012
	Project Manager Trevor G. Tompkins	Principal-in-Charge James F. Blasting

Site/Project General Information	Scope of Work: A detailed description of the scope of work for this project is provided in the Remedial Action Work Plan (RAWP) for the Former Skinner Sales Site, dated 9 May 2012. The following is a brief description of the remedial actions and remedial monitoring activities that will be implemented at the Site during the summer and fall of 2012 to treat impacted soils and groundwater. Site remediation activities will be completed in conjunction with site redevelopment. • In advance of the implementation of all remedial actions, a staging area will be constructed on the northeastern corner of the Site. All impacted or potentially impacted media are to be temporarily stockpiled at this staging area until they are properly disposed offsite. The staging area will be situated on a portion of the existing asphalt-paved parking lot and will be bermed and lined with polyethylene sheeting. Hay bales, boards or other appropriate materials will be used for the construction of the berm. Once in use, the staging area is to be covered by polyethylene sheeting at all times when material is not being added to the stockpile. • Surface soils with elevated concentrations of lead were identified at AOC 3 and AOC 5 and oil-staining was observed on the ground surface at AOC 2. The lead concentrations in soils from AOC 3 and AOC 5 slightly exceeded the NYSDEC Subpart 375-6 Unrestricted Use soil cleanup objectives. These surficial impacts will be excavated using hand tools, a mini-excavator, skid steer, front-end loader and/or other appropriate equipment. The final depth of the excavations will be dependent upon field observations and post-excavation sampling results, but it is

not anticipated that the excavations will be extended more than one foot below grade. The excavated materials will be placed in the onsite staging area until properly characterized for disposal at a licensed, NYSDEC-approved landfill.

- Six sets of sub-grade hydraulic lifts are located in the current service garage area. The hydraulic cylinders, hydraulic oil reservoirs and associated lines will be removed from the Site after the demolition of the roof and walls of the existing building to eliminate these potential sources of subsurface hydraulic oil releases. To permit lift removal, the concrete floor and soils overlying and surrounding the lifts will be removed using appropriate equipment including but not limited to an excavator, hoe-ram, jack-hammer and/or concrete saw. The oil-filled equipment will be emptied using a drum vacuum, vacuum truck or via gravity drainage into a drum through a hole tapped into the equipment. An excavator will be used to remove the equipment from the ground and to excavate petroleum-impacted soils, if encountered. The excavated materials will be transferred to the onsite staging area and stored in a segregated pile pending waste characterization results. The excavations will be extended to remove all soils with petroleum-like odors, staining or elevated PID screening results. Post-excavation soil samples will be collected in accordance with applicable regulations to document successful remedial implementation. The excavated materials will be properly disposed offsite based on waste characterization sampling results.
- Subsurface impacts to soils and groundwater were identified in association with a former used oil underground storage tank (UST) that was reportedly located near the northeastern corner of the building currently on the Site. The primary COCs in this AOC are petroleum-related VOCs including ethylbenzene, xylenes, n-propylbenzene, 1,2,4-trimethylbenzene and 1,3,5-trimethylbenzene. The upper four feet of non-impacted soils in this area will be excavated and handled as "clean" unless field observations indicate otherwise. Soils from across an approximate 2,600 square-foot area will be excavated from four feet below grade to the top of the water table, encountered at approximately 11 feet below grade, and properly disposed offsite. During this phase of the remediation, the excavated soils will be directly loaded onto properly permitted dump trucks or dump trailers for transport to a licensed, NYSDEC-approved landfill. It is estimated that approximately 1,200 tons of petroleum-impacted soils will be excavated and disposed offsite from this AOC. In addition, zero valent iron and sodium persulfate will be introduced into the open excavation and mixed into the upper five feet of saturated soils to treat VOC-impacted groundwater.
- Upon completion of the remedial actions and site redevelopment, three permanent groundwater monitoring wells will be installed onsite. The wells will be installed to depths of 18 to 20 feet below grade using hollow stem auger drilling techniques.

General Site Description:

The Skinner Sales automobile dealership is located on a triangular-shaped 2.531-acre parcel at 700 Mohawk Street in the Village of Herkimer, New York. Currently, the Site is nearly 100% developed with a 36,566-square-foot commercial building operated as a car dealership, auto body shop and automobile service/repair center, and asphalt and gravel-paved parking areas. The Site appears to have been operated in some capacity as an automobile dealership and/or repair garage since at least 1923. The anticipated remediation activities will be coordinated with demolition of the existing building and redevelopment of the Site to take advantage of the best opportunity to access the various AOCs.

Hazard Assessment Summary:

Hazards include:

	▪ Heavy equipment operation. ▪ Truck traffic associated with remediation and redevelopment activities. ▪ Slips, trips and falls. ▪ Degraded air quality related to potential mobilization of volatile organic compounds (VOCs) during excavation activities. ▪ Open-hole excavations. ▪ Underground and overhead utilities.

Personal Protective Equipment Req = Required Rec = Recommended NA = Not Applicable	Equipment	Req	Rec	NA	Equipment	Req	Rec	NA
	Steel Toe Boots	☒	☐	☐	Hard Hat	☒	☐	☐
	Coveralls or Long Sleeve Shirt & Pants	☒	☐	☐	Safety Glasses with Side Shields	☒	☐	☐
	Hearing Protection	☐	☒	☐	Other: Reflective Safety Vest	☒	☐	☐
	Tyvek coveralls, boot covers, chemical gloves (as needed)	☐	☒	☐	Dust mask (N95/ P100) for dust exposure	☐	☒	☐

Safety Precautions	Safety Precautions:
	
	Additional Safety Precautions:
	
	▪ Establish eye contact with equipment operator when approaching heavy machinery.
	▪ All equipment should be inspected for proper operation prior to use on a daily basis.
	• Any areas where excavation will be conducted (inside or outside) must be screened for underground utilities prior to excavations.
	• All areas were elevated equipment will be used (i.e., backhoe, excavator, drill/auger) must be surveyed for overhead utilities (inside and outside) prior to work in the area. Equipment must not be used within 10 feet of any overhead utilities.
	▪ Evaluate all excavation locations (inside and outside) to ensure the excavation does not compromise the integrity of the physical structure (building) or any surrounding structures.
	▪ For all excavations (exceeding 4 feet in depth):
	  • All excavations will be conducted under the authority of a "competent person". The competent person will authorize all excavations and be responsible for routine (daily) inspection of the excavations.
	  • If unknown material (i.e., chemical drums, utilities, etc.) are encountered during the excavation, work will be stopped immediately to determine the best (safest) means to continue. In all cases, work will proceed slowly and cautiously under the direction of the project manager and competent person.
	  • Materials from the excavation will be staged at least 2' from the excavation edge.
	  • Workers will not be allowed within 2' of the excavation edge, unless the excavation is secured (i.e., sloped, shored, braced, etc.) to prevent cave in.
	  ▪ All open excavations, except during the actual excavation, will be provided with warning barriers (i.e., fencing, warning tape, etc.) 2' from

	the excavation edge. Excavations left open over night will be provided with a secure warning barrier and inspected by the competent person at the end of the day and the start of work the next day. ▪ No one is permitted to enter excavations deeper than 4' below grade, except if properly protected from cave-ins by sloping and/or shoring. If the excavation must be entered, it must be done so following OSHA's confined space requirements (29 CFR 1910.146) and OSHAs excavation requirements (29 CFR 1926.650). ▪ Post excavation samples from excavations deeper than 4' are to be collected from the bucket of the excavator. ▪ Although the lead concentrations only slightly exceeded the Unrestricted Use SCOs at AOCs 3 and 5, visible dust generation will be minimized and controlled (e.g. wet methods) as feasible and appropriate when excavating the surficial soils at these AOCs. ▪ When complete, excavations will be backfilled with appropriate materials to achieve desired engineering requirements of the redevelopment. Excavations will also be secured using fencing during non-work hours as an additional safety precaution. ▪ Although not anticipated, if work is conducted inside: • Ensure there is a safe path of travel for equipment in terms of clearance overhead in the building. • Concrete cutting creates the potential for dust and silica exposure hazards. Implement dust controls (i.e., wet methods), as needed, during concrete cutting. If dust cannot be controlled, employees should use a disposable N95/P100 dust mask for protection. • Any time gas powered equipment or machinery is run in the building, proper ventilation must be provided to control exhaust. Open garage doors, installing fans for air movement and/or running a vent pipe from the machine exhaust outside, as appropriate. ▪ Air quality will be monitored with a photoionization detector (PID) during excavation and drilling operations. PID readings up to 25 ppm are permitted in the work area before respiratory protection (full face air purifying respirators with organic vapor cartridges) is required. In this instance, stop work and evaluate other control or mitigation options before implementing respiratory protection. ▪ If the use of sodium persulfate generates dust, employees should use a disposable N95/P100 dust mask for protection. ▪ Maintain awareness of surroundings, especially vehicle and/or truck traffic at the facility and in the vicinity of the excavations as well as overhead features within the excavation areas. Traffic cones or other traffic control devices may be needed to control onsite traffic. ▪ Install and maintain safety fence around the excavation areas to establish a work zone to ensure safe distance of operation, keep unauthorized personnel away from the excavation areas and, to the extent possible prevent the spread of contaminants. ▪ Personnel decontamination will be conducted, as necessary, based on the activities conducted and contaminants encountered. ▪ Fire extinguisher and first aid kit.
	***Daily tailgate safety meetings will be conducted prior to any field work to discuss the day's activities and safe work practices*.**

Training and Medical	All personnel involved in environmental remediation activities must have completed 40 hour HAZWOPER training, including the required eight hour annual refresher, as well as have proper medical surveillance. Should respiratory protection be required, personnel must have current respirator screening and fit testing certifications.

Incident Investigation	If there are any health or safety incidents or concerns, alert the Project Manager and client immediately.

Emergency Contact Complete this section if medical and emergency response support is not KNOWN to be fully available through on-site client personnel	Name and Address of Nearest Hospital: **Faxton St. Luke's Healthcare: St. Luke's Campus** 1656 Champlin Avenue, Utica, NY 13502
	Hospital Phone Number: 911 (Emergency) / (315) 624-6000
	Route To the Nearest Hospital: 1. Make right from site going **south** on **Mohawk St/Route 28 S (0.3 mi)** 2. Turn **right** onto **Route 5S W (14.8 mi)** 3. Merge onto **Route 5W / Route 8 S / Route 12 S** toward **New Hartford (1.9 mi)** 4. Take the **Burrstone Road Ramp** toward **Utica College (0.3 mi).** 5. Keep **left** at fork in ramp. 6. Turn **left** onto **Burrstone Road (0.3 mi).** 7. Turn **right** onto **Champlin Avenue (0.3 mi) –** Hospital is on the **left** at 1656 Champlin Avenue.

Other Contact Information

Agency	Contact	Location	Phone Number
Police Dept	NA	NA	911
Fire Dept	NA	NA	911
Ambulance	NA	NA	911
Facility Contact	NA	NA	NA
Client Contact	Kurt Wendler	Cazenovia, NY	315-655-5535 (o) 315-569-6520 (m)
Project Manager	Trevor Tompkins	Fayetteville, NY	315-637-6342 (o) 315-663-7232 (m)
Project H&S Officer	Trevor Tompkins	Fayetteville, NY	315-637-6342 (o) 315-663-7232 (m)

Acknowledgement	I have read this Health and Safety Plan (HASP), understand its content, and have been given opportunity to ask questions.		
Printed Name	Signature	Title	Date

Health and Safety Plan Evaluation (Complete after the Field Work is done- place in the file and send suggested improvements to the H&S Leader)	To evaluate the effectiveness of this health and safety plan and make future plans responsive to unexpected situations, the Project Manager should complete the following.							
	Actual Dates of the Field Tasks:	Was the HASP followed as Presented?				Was the HASP Adequate?		
		Yes	☐	No	☐	Yes	☐	No ☐
	Describe in detail any changes to the H&S Plan while on-site:							
	Any other Potential Comments toward Continual Improvement?							

Signatures	Project Manager	Date:
	Project Health and Safety Officer (If other than PM)	Date:
	Site Safety Officer (If other than the PM)	Date:

Notes: Attached is a copy of the MSDS for Sodium Persulfate.

GREYSTONE

APPENDIX D

COMMUNITY AIR MONITORING PLAN

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

COMMUNITY AIR MONITORING PLAN

Former Skinner Sales Site
BCP Site #C622031
700 Mohawk Street
Herkimer, New York

9 May 2012

Prepared for:
Sphere STP, LLC
2836 Route 20 East
Cazenovia, NY 13035

Prepared by:
GREYSTONE ENVOLUTIONS, LLC
202 Highbridge Street
Fayetteville, NY 13066

Greystone Project No.:12020EP

GREYSTONE

TABLE OF CONTENTS

GREYSTONE

1.0 PURPOSE

This document represents the Community Air Monitoring Plan (CAMP), which is Appendix F of the Remedial Action Work Plan (RAWP) for the Skinner Sales automobile dealership located at 700 Mohawk Street in Herkimer, New York (the "Site"). The purpose of this CAMP is to provide a measure of protection for the community from potential airborne contamination releases as a result of site activities. In addition, a CAMP helps to confirm that work activities did not spread contamination off-site through the air.

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2.0 APPROACH

Real-time, continuous air monitoring for Volatile Organic Compounds (VOCs) and particulates (i.e. dust) as well as monitoring for nuisance odors will be conducted during ground intrusive activities and particulate monitoring will be conducted during demolition of contaminated or potentially contaminated structures.

Periodic air monitoring for VOCs will be conducted during non-intrusive activities such as the collection of soil samples or the collection of groundwater samples from monitoring wells. Periodic monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location.

3.0 PROCEDURE

The following procedures will be followed during implementation of this CAMP.

VOC Monitoring, Response Levels, and Actions

VOCs will be monitored within each work area and at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified during all intrusive activities. Upwind concentrations will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present, such as a Photoionization Detector (PID). The equipment will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. Corrective actions may include use of water, gelatin, cellulose or foam based suppressants, and or discontinuation of the work and securing the area under cover (soil or plastic). After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

GREYSTONE

Particulate Monitoring, Response Levels, and Actions

If dry and dusty conditions are present during site work and dust is generated, particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. In addition, fugitive dust migration should be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Dust suppression techniques may include the application of water across the area or usage of commercially available dust suppressant agents (wetting agents, foam, cellulose, etc.). Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

Odor Control Plan

An odor control plan will be implemented to control emissions of nuisance odors offsite during ground intrusive activities. Specific odor control methods to be used on a routine basis will include limiting the size of the excavation areas and covering stockpiles of excavated materials. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected.

All necessary means will be employed to prevent onsite nuisance odors. These measures may include one or more of the following: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances may include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

GREYSTONE

APPENDIX E

MONITORING WELL CONSTRUCTION LOGS

MONITORING WELL: MW01

Depth (Ft)	Split Spoon	Blow Count	Recovery (Ft)	PID (ppm)	Started: 8/6/12 13:09 Finished: 8/6/12 16:40 Drilling Method: 4 1/4" Hollow Stem Auger Casing Elevation: Ft AMSL Coordinates: E-360220.918 N-1525254.085 Soil Description	Well Information	Comments
0							Eight-Inch Diameter Flush Mount Cover
	None Collected			0.5	Fine to medium gravel fill.		Portland Cement Grout
5					Soil cuttings present from 5.0' to the bottom of the borehole consisted of # 3 stone that was used as backfill material at AOC3.		Hydrated Bentonite Seal
10							Two-Inch Diameter Schedule 40 PVC Riser
15							Filter Pack of #0 Silica Sand
20					Note: Soil description based on soil cuttings from the auger flights.		Two-Inch Diameter 0.01-Inch Slot PVC Well Screen
25							End of Borehole
30							

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

Project: Former Skinner Automotive Site
NYSDEC BCP # C622031
Location: 700 Mohawk St. Herkimer, NY
Logged By: TGT
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MONITORING WELL: MW02

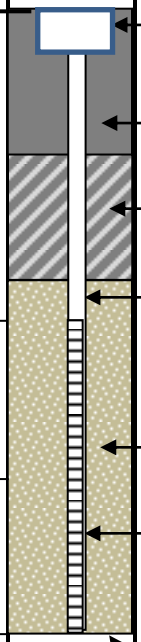
Started: 8/6/12 08:36 Finished: 8/6/12 10:33
Drilling Method: 4 1/4" Hollow Stem Auger
Casing Elevation: Ft AMSL
Coordinates: E-360407.744 N- 1525241.607

Depth (Ft)	Split Spoon	Blow Count	Recovery (Ft)	PID (ppm)	Soil Description	Well Information	Comments
0							Eight-Inch Diameter Flush Mount Cover
				1.0	Brown sand, gravel and cobbles.		Portland Cement Grout
5				1.1			Hydrated Bentonite Seal
10	1	2-2-3-3	1.5	1.2	Brown silt with medium stiff consistency and low plasticity; moist.		Two-Inch Diameter Schedule 40 PVC Riser
	2	2-2-3-3	1.7	1.4	Brown medium sand; wet.		Filter Pack of #0 Silica Sand
15					Brown sand, gravel and cobbles.		Two-Inch Diameter 0.01-Inch Slot PVC Well Screen
20					Note: Soils from 0 ' – 10' and 14' – 20' were characterized using soil cuttings from the auger flights; soil from 10' – 14' were characterized using split spoon samples.		End of Borehole
25							
30							

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

Project: Former Skinner Automotive Site
NYSDEC BCP # C622031
Location: 700 Mohawk St. Herkimer, NY
Logged By: TGT
Sheet: 1 of 1

MONITORING WELL: MW03

Depth (Ft)	Split Spoon	Blow Count	Recovery (Ft)	PID (ppm)	Started: 8/7/12 10:01 Finished: 8/7/12 12:11 Drilling Method: 4 1/4" Hollow Stem Auger Casing Elevation: Ft AMSL Coordinates: E-360161.579 N-1524930.189 Soil Description	Well Information	Comments
0	None Collected			0.6	Dark brown fine to medium sand and gravel with some cobbles.		Eight-Inch Diameter Flush Mount Cover Portland Cement Grout Hydrated Bentonite Seal Two-Inch Diameter Schedule 40 PVC Riser Filter Pack of #0 Silica Sand Two-Inch Diameter 0.01-Inch Slot PVC Well Screen End of Borehole
5				0.5			
10				1.2			
15				1.3			
20							
25							
30							

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

Project: Former Skinner Automotive Site
NYSDEC BCP # C622031
Location: 700 Mohawk St. Herkimer, NY
Logged By: TGT
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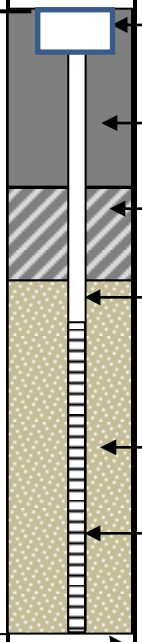
MONITORING WELL: MW04

Depth (Ft)	Split Spoon	Blow Count	Recovery (Ft)	PID (ppm)	Started: 8/7/12 08:15 Finished: 8/7/12 09:30 Drilling Method: 4 1/4" Hollow Stem Auger Casing Elevation: Ft AMSL Coordinates: E-360226.062 N-1525169.034 Soil Description	Well Information	Comments
0	None Collected			1.8	Dark gray to brown fine to medium sand with some gravel and cobbles; moist.		Eight-Inch Diameter Flush Mount Cover Portland Cement Grout Hydrated Bentonite Seal Two-Inch Diameter Schedule 40 PVC Riser Filter Pack of #0 Silica Sand Two-Inch Diameter 0.01-Inch Slot PVC Well Screen End of Borehole
5				0.8			
10				0.6			
15				0.7			
20					Note: Soil description based on soil cuttings from the auger flights.		
25							
30							

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

Project: Former Skinner Automotive Site
NYSDEC BCP # C622031
Location: 700 Mohawk St. Herkimer, NY
Logged By: TGT
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MONITORING WELL: MW05

Started: 8/6/12 11:04 Finished: 8/6/12 13:42
Drilling Method: 4 1/4" Hollow Stem Auger
Casing Elevation: Ft AMSL
Coordinates: E-360062.411 N- 1525121.870

Depth (Ft)	Split Spoon	Blow Count	Recovery (Ft)	PID (ppm)	Soil Description	Well Information	Comments
0							Eight-Inch Diameter Flush Mount Cover
					Brown sand with little silt, concrete and cobble fragments.		Portland Cement Grout
5	1	12-13-9-5	0.7	0.2			
	2	2-1-1-2	1.0	0.2	Brown fine sand and gravel.		Hydrated Bentonite Seal
	3	4-3-3-2	0.9	0.2	Brown silt/clay with little fine sand.		
10	4	3-4-4-5	0.2	0.1			Two-Inch Diameter Schedule 40 PVC Riser
	5	3-5-4-2	2.0	0.4	Light orange-brown silt with little fine sand.		
	6	3-5-4-2	1.2	4.8	Orange-brown fine sand with trace silt; very moist to wet at 13.8'.		Filter Pack of #0 Silica Sand
15	7	3-5-4-2	1.0	4.5	Brown to dark brown silt/clay with little to some fine to medium sand, concrete and cobble fragments; moist to wet at 15.5'.		Two-Inch Diameter 0.01-Inch Slot PVC Well Screen
	8	3-5-4-2	0.8	0.5	Brown cobbles with little to some sand.		End of Borehole
20					Note: Soils from 0' - 4' were characterized using soil cuttings from the auger flights; soils from 4' - 20' were characterized using split spoon samples.		
25							
30							

GREYSTONE ENVOLUTIONS
Environmental Solutions for Business

Project: Former Skinner Automotive Site
NYSDEC BCP # C622031
Location: 700 Mohawk St. Herkimer, NY
Logged By: TGT
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GREYSTONE

APPENDIX F

GROUNDWATER SAMPLING LOG

Greystone Envolutions **Sheet __ of __**

Low Flow Sampling Data Sheet

Site: _____ Field Personnel: _____

Date: _____

Weather: _____

Monitoring Well #: _____ Well Depth: _____ Depth to Water: _____ One Well Volume: _____

Well Permit #: _____ Well Diameter: _____ Inches Three Well Volumes: _____

PID Readings (ppm):

Background: _____ Pump Intake Depth: _____ ft below TOC

Beneath Outer Cap: _____ Make/Model of Pump: _____

Beneath Inner Cap: _____

Time	pH (pH units)		Specific Conductivity		Redox Potential (mv)		Dissolved Oxygen (mg/l)		Turbidity (NTU)		Temperature (°C)		Depth to Water (ft)	
	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change	Reading	Change

Notes/Observations: _____

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APPENDIX G

RAWP - SAMPLING AND ANALYSIS PLAN

GREYSTONE ENVOLUTIONS

Environmental Solutions for Business

SAMPLING AND ANALYSIS PLAN (FOR RAWP)

Former Skinner Sales Site
BCP Site #C622031
700 Mohawk Street
Herkimer, New York

9 May 2012

Prepared for:
Sphere STP, LLC
2836 Route 20 East
Cazenovia, NY 13035

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202 Highbridge Street
Fayetteville, NY 13066

Greystone Project No.:12020EP

GREYSTONE

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APPENDICES

1.0 INTRODUCTION

This document represents the Sampling and Analysis Plan (SAP), which is Appendix C of the Remedial Action Work Plan (RAWP) for the Skinner Sales automobile dealership located at 700 Mohawk Street in Herkimer, New York (the "Site"). This SAP describes the sampling program and procedures to be followed during all sample collection and handling tasks and other investigative tasks associated with this project

.

2.0 SAMPLING ACTIVITIES AND PROCEDURES

Soil, groundwater, backfill and waste characterization samples will be collected from the Site during and after the implementation of the proposed remedial actions and analyzed to evaluate whether the remedial objectives outlined in the RAWP have been achieved. Detailed field sampling procedures, proposed sampling locations, and analyses are described in the following sections of this SAP. A detailed summary outlining the sampling program is presented in the accompanying Quality Assurance Project Plan (QAPP) on Table 6-1 of that document (See Appendix D of the RAWP). Detailed sample collection/handling and record keeping procedures are presented in Appendix A of this document.

2.1 Analytical Procedures

Soil and groundwater sampling and analyses to be completed for evaluation of achievement of remedial objectives may include the following: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, herbicides and polychlorinated biphenyls (PCBs). Laboratory analytical procedures will adhere to NYS Analytical Services Protocol (ASP) methodologies and/or to USEPA SW-846 methodologies as appropriate. Samples collected during and after the completion of the remedial actions will be analyzed by a NYS Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified analytical laboratory that participates in the Contract Laboratory Program (CLP). Alpha Analytical, Inc. (Alpha) will be utilized for all analytical work.

2.2 Remedial Action Sampling Tasks

2.2.1 Excavation Monitoring

The RAWP describes proposed excavation activities to address surface and/or subsurface impacts to soils at AOCs 2, 3 and 5. In addition, soils from other portions of the Site,

including AOCs 4 and 6, may need to be excavated if subsurface impacts are encountered during building demolition and site redevelopment. Prior to the commencement of excavation activities, all areas are to be screened for the presence of underground and overhead utilities. Dig Safely New York will be contacted at least five business days prior to commencing ground intrusive activities to complete a public utility mark-out. Private utilities not included in the Dig Safely mark-out were identified and marked out during the Phase II site investigation activities. There are no underground or overhead utilities in the proposed excavation areas. Excavation safety is discussed further in the Health and Safety Plan (HASP) provided as Appendix E of the RAWP.

Excavations will be advanced until field observations of staining and odors, field screening and/or post-excavation soil samples indicate that remedial objectives have been met or approximated. As described in the HASP, all excavation work will be conducted under the authority of a "competent person" (the competent person will be an employee of the remediation contractor hired to complete the excavations). The competent person will direct excavation activities and utilize sidewall sloping, sheeting or shoring as appropriate to prevent sidewall collapse.

Greystone's onsite geologist will log all excavations in detail and the excavated material will be field screened (using head space screening techniques described below) with a photoionization detector (PID) to monitor for the potential presence of VOC vapors. Excavated material will either be placed in a bermed and lined onsite staging area pending proper offsite disposal or direct-loaded onto properly permitted dump trucks or dump trailers to be transported and disposed at a licensed, NYSDEC-approved landfill. It is not anticipated that it will be necessary to dewater any of the excavation areas to remove soils below the top of the water table. If a situation develops where dewatering becomes necessary, a vacuum truck or frac tank will be mobilized to the Site for storage

of water. Water pumped into the vacuum truck or frac tank will be characterized to determine proper disposal (e.g. waste water treatment plant, discharge to ground, etc.).

The limits of the excavations will be marked out to allow for surveying or will be measured and mapped using appropriate permanent Site features (ex. survey pins at property corners). The excavations will be backfilled with appropriate materials to achieve the desired engineering requirements of the planned redevelopment for the area of the Site and that will meet the requirements of DER-10 Chapter 5.4(e). Presently, it is anticipated that number 2 crushed stone or other similar self-compacting backfill will be utilized to backfill the large excavation areas beneath the footprint of proposed structures. Sampling activities to confirm the backfill materials meet the requirements of DER-10 Chapter 5.4(e) are described in Sections 5.3, 5.3.1, 5.3.6, and 5.4 of the RAWP and Section 2.2.2 of this SAP.

2.2.2 Soil and Backfill Sampling

For safety purposes, soil samples may be collected using heavy equipment (i.e., backhoe/trackhoe shovel) to extract the soil sample and avoid entering the excavation. Soil samples from various areas and depths of the excavation will be placed and sealed in a labeled plastic bag for PID screening. These samples will be allowed to equilibrate for a minimum of ten minutes before the PID is used to measure the concentration of VOC vapors in the headspace of the plastic baggie. Based on the PID readings, the sample typically having the highest PID reading will be selected for laboratory analysis. However, other criteria such as evidence of staining, odors, waste material encountered, sample depth and/or the history of an area will also be factored into the selection of samples. Samples will be selected for analysis from the excavations as follows.

- AOC 2 – Surficial Oil Staining on Unpaved Ground Surface on Northwestern Portion of the Site: One post-excavation soil sample will be composited from soils collected from the base of each of the individual excavations and analyzed for TCL SVOC, Target Analyte List (TAL) metals, herbicides, pesticides and PCB laboratory analyses. One post-excavation soil sample will also be collected from the base of the excavation where the greatest evidence of impact was observed prior to remediation and analyzed for TCL VOCs. A second soil sample will be collected from three to six inches below grade from the area immediately down topographic slope from AOC 2, as shown on Figure 3A of the RAWP, and analyzed for TCL VOCs and TCL SVOCs. This sample will be collected from the sidewall of one of the individual excavations if possible.

- AOC 3 –Surficial Oil Staining Beneath Air Compressor Blow-Down: One soil sample will be collected from the base of the final surficial oil staining excavation area (associated with the compressor blowdown) and analyzed for TCL VOCs, TCL SVOCs, TAL metals and PCBs. A second soil sample will be collected from three to six inches below grade from the sidewall of the excavation or immediately down topographic slope from the excavation and analyzed for the same parameters. The proposed sampling locations are shown on Figure 3B of the RAWP.

- AOC 3 – Former Used Oil UST: The estimated perimeter of the final used oil UST excavation will be approximately 190 linear feet. In accordance with the sampling frequencies specified in DER-10 Chapter 5.4(b)5, seven post-excavation sidewall samples will be collected (one sample every 30 linear feet). The footprint of the final excavation is projected to cover approximately 2,600 square feet such that three post-excavation bottom samples will be collected (one sample every 900 square feet). All ten of the post-excavation soil samples will be analyzed for TCL VOCs and TCL SVOCs to demonstrate that the Commercial

Use SCOs have been met. Two of the samples will also be analyzed for TAL metals and PCBs. The number of post-excavation soil samples will be increased or decreased as appropriate based on the size of the final excavation to meet the requirements of DER-10 Chapter 5.4(b)5 (i.e. sidewall samples every 30 linear feet and bottom samples every 900 square feet). Figure 3B of the RAWP shows the anticipated soil sampling locations. However, in accordance with DER-10 Chapter 5.4(b)7, samples will be collected from the areas and depths of highest expected contamination. This may require changes to the sample locations. Composited samples will not be collected.

- AOC 4 – Sub-Grade Hydraulic Lifts: In the absence of observed subsurface impacts, one post-excavation soil sample will be collected from each of the sub-grade hydraulic lift excavations (six total) and analyzed for TCL VOCs, TCL SVOCs and PCBs consistent with the sampling protocols defined in DER-10 Chapter 5.5(c)3.iii. The proposed sample locations are shown on Figure 3D. Additional samples may be collected, as necessary, at the request of the NYSDEC. If there is evidence of release from the lifts, lines or reservoir tanks, and excavation activities are conducted, sampling will be completed in accordance with the procedures for small excavation areas defined in DER-10 Chapter 5.4(b)5.

- AOC 5 – Green-Colored Sand from Sand Blasting Activities: A post-excavation soil sample will be collected from each of the two excavation areas (one on each side of the concrete driveway) at AOC 5 and analyzed for TAL Metals. One of these samples will also be analyzed for pesticides and herbicides. A third sample will be collected immediately down topographic slope from the excavation at a depth of three to six inches below grade and analyzed for the TAL metals. Most likely, this sample will need to be collected along the shoulder of 5th Avenue, south of AOC 5, but if possible the sample will be collected from an excavation

sidewall. The proposed post-excavation soil sampling locations are shown on Figure 3C of the RAWP.

- AOC 6 – Interior Trench Drains and Trench Drain Outlets: Remedial actions are not currently planned for AOC 6. If subsurface impacts are encountered at this AOC during demolition or redevelopment activities and remedial activities are completed, post-excavation samples will be collected for TCL VOCs, TCL SVOCs and TAL metals in accordance with the sampling frequencies specified in DER-10 Chapter 5.4(b) .

  If subsurface impacts are not encountered, at least eight samples will be collected adjacent to or beneath features that may have functioned as sources of impacts to the subsurface. Based on findings from the previous investigations, it is anticipated that a sample will be collected next to each of the catch basin features in Showroom #2, two samples will be collected beneath the trench drain in the body shop, two samples will be collected beneath the large central trench drain in the service garage and one sample will be collected beneath each of the two smaller trench drains in the service garage. Samples will be analyzed for TCL VOCs, TCL SVOCs and TAL metals. In addition, two of the samples will also be analyzed for PCBs. The proposed sample locations are shown on Figure 3E of the RAWP. Samples will be collected adjacent to other potential source features, if encountered, for site characterization purposes.

- Imported Backfill: Number 2 crushed stone or similar self-compacting material will be imported to the Site for backfilling excavation areas. Consistent with DER-10 Chapter 5.4(e)5, the number 2 crushed stone will consist of virgin material obtained from a properly permitted mine or quarry. Documentation (e.g.

bills of lading, permits, certifications, etc.) will be obtained to demonstrate that the number 2 crushed stone is being obtained from an appropriate mine or quarry.

When remediation activities are complete a cover system will be installed on the Site as an engineering control to prevent exposure to potentially impacted soils left on the Site. A soil cover will be installed over approximately 25% of the Site. The soil cover will be a minimum of 12-inches thick and will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d). Based on current estimates, the soil cover will be installed over approximately 27,500 square feet of the Site. As such, approximately 1,000 cubic yards of imported top soil will be required for the 12-inch-thick soil cover. Given this volume, seven discrete samples will be collected from the imported fill and analyzed for TCL VOCs and two composite samples will be collected from the imported fill and analyzed for TCL SVOCs, TAL metals, PCBs and pesticides in accordance with DER-10 Table 5.4(e)10.

- Crushed Concrete: Portions of the concrete building slab that do not have visible oil staining will also be crushed and used for backfill on the Site. Assuming an average concrete thickness of four inches, it is estimated that 450 cubic yards of crushed concrete will be generated from the building slab. In accordance with DER-10 Table 5.4(e)10, two composite samples of the crushed concrete will be collected and analyzed for TCL SVOCs and PCBs to demonstrate it meets the Commercial Use SCOs from 6 NYCRR Part 375-6.8.

- Crushed Concrete and Cinder Block: The paint on the existing building's concrete block walls will be tested for the presence of lead to determine if the

concrete and cinder block walls can be crushed and used as fill. A sampling program is to be implemented by a Certified Inspector or Certified Risk Assessor and samples collected for laboratory analyses are to be analyzed by a National Lead Laboratory Accreditation Program (NLLAP)-certified laboratory. Fragments or chips of lead paint will be removed from the walls of different areas of the building and analyzed for lead by USEPA Method 6010. The number of samples will be dependent on the amount of variation in the paint applied to the building. The results of this testing will be evaluated to determine the proper final disposition of the concrete block demolition debris, either as part of the final site cover system, as fill beneath the final cover system or disposed offsite at a licensed NYSDEC-approved landfill. The following criteria will be used to determine the proper management of the painted concrete block:

- Lead Not Detected or Detected Less than 1,000 ppm in Paint: No additional analyses required and block may be sized (i.e. crushed) and utilized as backfill on the Site.
- Lead Detected above 1,000 ppm in Paint: Prepare a representative sample of crushed concrete/cinder block coated with the lead-containing paint and analyze. If the detected lead concentration is less than 1,000 ppm in this sample, the crushed concrete block may be used as backfill. If lead is present at a concentration greater than 1,000 ppm in the crushed concrete block, the material is to be disposed offsite at an appropriate licensed facility.

The sampling frequency from the concrete/cinder block rubble utilized as backfill will be consistent with the program defined for backfill in DER-10 Chapter 5.4(e) if sampling is needed. Currently, it is estimated that the volume of concrete/cinder block rubble will not exceed 1,000 cubic yards. As such, two composite samples of the concrete/cinder block rubble would be collected if necessary and analyzed for lead by USEPA Method 6010.

- AOC 3 – Soils to be Reused for Fill: Soils from ground surface to approximately four feet below grade in AOC 3 will be excavated and stockpiled onsite for re-use as backfill if it meets the requirements of DER-10 chapter 5.4(e). It is estimated that 385 cubic yards of soil will be excavated from ground surface to four feet below grade at AOC 3. As such, in accordance with DER-10 Table 5.4(e)10, two composite samples will be collected and analyzed for TCL SVOCs, TAL metals and PCBs and four discrete samples will be collected and analyzed for TCL VOCs to determine if the soils meet the Restricted Commercial Use SCOs defined in 6 NYCRR Part 375-6.8.

- Waste Characterization: Samples will be collected of the waste materials generated for offsite disposal in accordance with the requirements of the facilities selected to receive the wastes.

2.2.3 Monitoring Well Installations

Shallow overburden monitoring wells will be installed at five locations on the Site. One well will be installed within or immediately downgradient of AOC 3, the second well will be installed at the downgradient southern corner of the Site in AOC 1; the third well will be installed southeast of AOC 3 near Mohawk Street; the fourth well will be installed immediately south-southeast of AOC 3 near the southeast corner of the proposed building; and the fifth well will be installed along the southwest side of the proposed building (Figure 6, Appendix A of the RAWP). This monitoring well configuration will permit monitoring of the efficacy of the in-situ chemical oxidation treatments, will identify if site-related contaminants of concern are migrating to the property boundaries, and will allow contouring of groundwater elevations to verify the direction of shallow groundwater flow. Additional groundwater monitoring wells will be installed at the

Department's request if groundwater sample analyses and/or groundwater flow direction calculations indicate that additional monitoring wells are required.

Boreholes for each of the wells will be completed using 4.25-inch inside diameter hollow stem auger (HSA) drilling techniques. The wells will be constructed in accordance with NYSDEC protocols under the supervision of Greystone's onsite geologist. Split-spoon soil samples will be collected continuously from five feet below grade to the completion depth (anticipated at 18-20 feet below grade) at proposed monitoring well locations MW02, MW04 and MW05 (extensive soil sampling has already been conducted at AOC 1 and AOC 3; therefore, soil sampling will not be conducted at these locations during well construction). Soil samples will be logged and field screened with a PID to monitor for the potential presence of VOC vapors. Each of the monitoring wells will be constructed of two-inch-diameter PVC riser and ten feet of two-inch-diameter, 0.01-inch slotted PVC well screen. The well screen will be installed to "straddle" the top of the water table in the shallow, unconfined groundwater unit. The actual depth of the wells will be dependent on observed field conditions.

A sand pack will be installed around the well screens and will extend one to two feet above the top of the screens. A one-foot to two-foot thick seal of hydrated bentonite pellets will be installed above the sand pack and cement/bentonite grout will be utilized to backfill the remainder of the well annulus. The wells will be completed with a steel protective flush-mount cover. Following installation, reference points will be marked on the top of the PVC at each well location to allow for surveying. All soil cuttings will be placed in drums or staged on, and covered with, plastic sheeting pending proper management.

2.2.4 *Monitoring Well Development*

Well development will begin no sooner than 24 hours after final completion of each monitoring well. For development, the monitoring wells will be pumped at the highest sustainable rate at which the wells can yield water without significantly depressing the water level. Each well will be developed until the turbidity of the water is below 50 NTU (if possible). Development water free of sheen and odor will be discharged to ground surface. Precautions will be taken to avoid the pooling of water, surface water runoff or flooding of the Site or surrounding properties during development. Impacted development water, if encountered, will be pumped through a carbon treatment system and discharged to ground surface.

2.2.5 *Groundwater Sampling*

Groundwater sampling will be conducted to monitor the efficacy of the in-situ groundwater remediation process and to demonstrate that site-related COCs are not migrating offsite. Groundwater sampling will be conducted no sooner than one week after final development of each of the newly installed monitoring wells. Each monitoring well will be purged using low flow techniques. Field parameters (pH, temperature, conductivity, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity) will be monitored during purging using a multi-parameter water quality meter equipped with a flow-thru cell. Groundwater elevation data will also be collected before, during and after the purging. Each well will be purged until the field parameters stabilize or until the equivalent of at least three well volumes has been removed. Stabilization criteria are provided in Appendix A of this document. Following purging, groundwater samples will be collected directly from the low flow tubing. Purge water will be pumped through a carbon treatment system and discharged to ground surface.

It is anticipated that the initial/baseline groundwater sampling event will be conducted around 1 August 2012. Each of the onsite monitoring wells will be sampled for TCL VOCs (USEPA Method 8260), TCL SVOCs (USEPA Method 8270) and TAL metals (USEPA Method 6010/7470). Proposed monitoring well MW01, to be installed within or immediately downgradient of AOC 3, will also be sampled for total and dissolved iron (USEPA Method 6010) and sulfate (USEPA Method 9038) for purposes of monitoring the availability of terminal electron acceptors remaining from the in-situ chemical oxidation treatments. Additional analyses, such as PCBs (USEPA Method 8082), pesticides (USEPA Method 8081) and herbicides (USEPA Method 8151), may be performed depending on the post-excavation soil sampling results.

For the first year, the full network of onsite monitoring wells will be sampled for the above listed parameters on a quarterly basis. In order to meet certain project requirements, the first quarterly event will be "moved up" a month and completed in mid-October 2012. The subsequent events will be completed in February, May and August of 2013. During the first year of monitoring, the data will be evaluated to determine if it would be appropriate to reduce the sampling frequency and the number of wells sampled onsite and/or reduce the number of analytical parameters. In addition, the progress of the in situ chemical oxidation treatments will also be re-evaluated after a year. If the sampling indicates that the chemical oxidation process is not progressing as anticipated and the concentrations of iron and sulfate indicate the chemical oxidants have been fully utilized, additional options for further treatment including follow-up injections, will be evaluated.

2.2.6 Surveying

The horizontal locations of the previously installed soil borings and the soil excavation areas, when completed, will be surveyed by a New York State (NYS) licensed land

surveyor. In addition, the horizontal and vertical locations of all monitoring wells will be recorded to the nearest 0.01-foot. Top-of-PVC casing elevations for each monitoring well will also be recorded to the nearest 0.01-foot.

3.0 DATA EVALUATION

Soil and backfill sampling results will be compared to the applicable Soil Cleanup Objectives (SCOs) stated in New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 375-6.

Groundwater sampling results will be compared to the NYSDEC Part 703: Surface Water and Groundwater Quality Standards and Groundwater Effluent Limitations (GWQS). In the absence of a GWQS defined in Part 703, the concentrations of detected analytes will be compared to the water quality standards and guidance values stated in the NYSDEC Division of Water Technical and Operational Series 1.1.1 (TOGS) titled Ambient Water Quality Standards and Guidance Values, if provided.

4.0 DOCUMENTATION PROCEDURE

Greystone will maintain complete documentation of all remediation activities so that decision processes, actions and results can be recreated as needed. As such, a history of the project will be maintained. Documentation of the activities for various aspects of the project will be accomplished as presented below.

4.1 Field Activities

Field Notebook – Greystone will maintain a bound field notebook that will document dates, times and duration of all field activities. The field notebook will be maintained by the Site Manager. All notebook entries will be made in ink on consecutive pages.

Photographs - Photographs will be taken of all significant site activities.

Calibration Records - Calibration activities for all field instrumentation will be maintained in the field notebook.

Geologic Logs - Observations pertaining to site geology made during all sub-surface drilling or excavations activities will be recorded in the field notebook.

Safety Forms - Sign-in forms, levels of personal protection, air-monitoring results, incidents reporting forms and other safety-related forms will be maintained in the field notebook, as necessary.

4.2 Environmental Sampling

Chain-of-Custody Forms - All sample handling will be recorded on chain-of custody forms and associated labels.

4.3 Management Reports

Monthly Reports - Monthly progress reports will be issued starting with the date the Brownfield Cleanup Agreement (BCA) is executed and ending with the issuance of a Certificate of Completion. Monthly progress reports will adhere to the requirements of DER-10 Section 5.7.

4.4 Final Report

A draft Engineering Report will be submitted to NYSDEC for review subsequent to completion of remediation, receipt and validation of all confirmation sampling results, and receipt of waste manifests. Due to site development work, the draft Engineering Report may be submitted prior to groundwater monitoring well installation and sampling (monitoring wells cannot be installed until paving is completed). A Final Engineering Report (FER) will be submitted upon receipt of NYSDEC comments on the draft Engineering Report and subsequent to groundwater monitoring well installation and sampling. The NYSDEC-provided template will be utilized for development of the FER.

The draft and Final Engineering Reports will in general include the following information as outlined in the Table of Contents of the NYSDEC FER template:

CERTIFICATIONS

TABLE OF CONTENTS

LIST OF ACRONYMS

FINAL ENGINEERING REPORT

1.0 BACKGROUND AND SITE DESCRIPTION

2.0 REMEDIAL ACTION OBJECTIVES

Appendices will include a copy of the environmental easement, the final Site Management Plan, Site and "as-built" drawings, data summary tables, laboratory reports, Data Usability Summary Reports, waste manifests, Site photographs and other support documents as required by DER-10 Section 5.8.

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SAP - APPENDIX A

GENERAL SAMPLING PROCEDURES FOR FIELD INVESTIGATION

GENERAL SAMPLING PROCEDURES

1.0 INTRODUCTION

During the course of the remedial action program, the applicable procedures listed below will be followed for sample collection:

- Accurate and detailed field notes will be maintained including detailed descriptions of sample collection and handling procedure and sample characteristics.
- Sampling procedures will be performed with the overall intent of collecting representative samples and minimizing sample disturbance.
- Laboratory-supplied sample bottles (pre-preserved as applicable) will be labeled with the sample location, identification number, and date and time of sampling prior to being filled with sample material.
- All sample collection, handling and shipping information will be recorded in the field notebook and chain of custody documents as appropriate.

2.0 GENERAL SAMPLE COLLECTION PROCEDURES

All non-dedicated sampling equipment will be suitably cleaned before entry to the Site, between sampling locations and intervals, and prior to departure from the site.

1. All samples containers will be labeled with: 1) site name; 2) project number; 3) sample number; 4) location description 5) sample interval; 6) date; 7) time of collection; and 8) initials of sampler.
2. The sample collector will record descriptions of soil samples as to 1) soil type; 2) color; 3) odor; 4) moisture content; 5) texture; 6) grain size, shape and angularity; 7) consistency; and 8) any other observations, particularly relating to waste materials or unnatural materials. For water samples, the sample collector will describe 1) color; 2) odor; 3) visual turbidity; and 4) any observed phase separation.

3. Sample containers will be capped immediately after filling and placed into a chilled cooler containing sufficient ice or cold packs to cool the samples to 4°C for transport to the laboratory.
4. All equipment used to collect samples for analysis will be either decontaminated before each use at a particular sample location or will be dedicated/disposable such that decontamination will not be required.

3.0 SOIL/BACKFILL SAMPLE COLLECTION PROCEDURES

The applicable procedures noted below will be followed during collection of soil samples:

1. Soil samples will be collected using dedicated sampling equipment, a trowel or stainless steel spoon or a clean nitrile-gloved hand. Other equipment used during sampling such as bowls and mixing spoons will be made of stainless steel.
2. All samples will be screened immediately upon sample retrieval with a PID. Samples will be collected directly from the sampling tool into the appropriate laboratory-supplied sample containers. Sample container, preservation and holding time information for the anticipated soil sample analyses is provided in the table below. Samples for VOCs will be collected so that there is "zero headspace" in the sample container. Composite samples for all parameters aside from VOCs will be mixed/homogenized in a decontaminated stainless steel pan or bowl (VOCs cannot be mixed and will be transferred directly from the sampling tool). Soil samples will not require preservation except for maintaining the media to approximately 4°C.

Sample Container, Preservation and Holding Times for Anticipated Soil Sample Analyses

	TCL VOCs	TCL SVOCs	PCBs	TAL Metals	Pesticides/ Herbicides
Container	4 oz Amber Glass Jar	4 oz Amber Glass Jar	4 oz Amber Glass Jar	8 oz Amber Glass Jar	4 oz Amber Glass Jar
Preservation	Zero Headspace & Cooled to	Cooled to 4°C	Cooled to 4°C	Cooled to 4°C	Cooled to 4°C

	4°C				
Holding Time	14 Days	14 Days	14 Days	28 Days	14 Days

3.1 Materials

The following materials will be available during sampling activities:

- Health and safety equipment (PPE, PID, etc.);
- Sample retrieval device (trowel, bailers, spoons, etc.);
- Stainless steel spatulas, bowls and scoops;
- Polyethylene sheeting;
- Sample containers and chain-of-custody forms;
- Transport container with cold source (i.e., cooler with ice or cold packs);
- Field notebook;
- Decontamination supplies; and
- Aluminum foil and Zip-lock type bags.

4.0 GROUNDWATER SAMPLE COLLECTION PROCEDURES

Purging and sampling methods will utilize low-flow techniques to yield representative groundwater samples. Prior to sampling, all wells will be purged until field parameters including pH, temperature, conductivity, DO, ORP, and turbidity have stabilized or at least the equivalent of three well volumes have been removed. Although not anticipated, wells with low recovery rates will be evacuated to near dryness once and allowed to recover sufficiently for samples to be collected. Wells with low recovery rates will be characterized as those wells where purging at a rate of 1,000 ml/min or less dewaters the well. All measuring equipment will be properly calibrated and decontaminated between wells.

4.1 Materials

The following materials will be available for groundwater sampling activities.

- Water level indicator (accurate to 0.01 foot);

- New dedicated bailers;
- Polypropylene/nylon rope;
- Multi-parameter water quality meter with capabilities to measure pH, DO, temperature, ORP, conductivity and turbidity;
- A flow-thru cell;
- PID;
- Sample bottles/labels;
- Chain-of-custody forms;
- Thermally insulated container with cold source;
- Sample preservation (may be added to bottle by analytical laboratory);
- A 0.45 micron polypropylene filter for dissolved iron samples from MW-01 only;
- Field book;
- PPE as needed (gloves, etc.); and
- Decontamination supplies (detergent, water, hexane, methanol and/or nitric acid rinses (if necessary), buckets, brushes, etc.).

4.2 Groundwater Sampling Protocol

Groundwater sampling protocol is described below.

- Open well casing and monitor headspace for VOCs. If greater than 5 ppm detected, allow well to vent for 5 to 10 minutes. Re-measure headspace for VOCs. If sustained readings of 5 ppm or greater are present, a respirator with organic vapor cartridges is to be donned and worn throughout the remaining steps of this procedure. Record PID readings in field book.
- A water level indicator will be used to accurately measure the depth to groundwater from a surveyed datum on the top of the PVC well casing. This measurement will be used in conjunction with the total depth of the well to calculate the standing volume of water in the well as well as to establish the water table elevation for groundwater flow direction purposes.
- Prior to sampling, the wells will be purged until field parameters (pH, temperature, conductivity, DO, ORP, and turbidity) have stabilized or at least the

equivalent of three well volumes has been purged. The indicator parameters will be considered stabilized when three consecutive readings collected five minutes apart meet the following criteria

- pH is within +/- 0.1 pH unit;
- temperature range is within +/- 3%;
- specific conductance range is within +/- 3%;
- dissolved oxygen concentration is within +/-10%;
- ORP is within +/- 10 mV; and
- turbidity is within +/- 10% (ideally less than 10 NTU)

Field parameter measurements will be made and recorded in the field book along with the actual volume removed. Wells with low recovery rates will be evacuated to near dryness once, then allowed to recover sufficiently for samples to be collected. Wells with low recovery rates will be characterized as those wells where pumping at a rate of 1000 ml/minute or less dewaters the well.

- Within eight hours of purging or as soon as the well has sufficiently recovered, groundwater samples will be collected directly from the low-flow tubing. The laboratory-supplied vials for VOC analysis will be filled first. Care will be taken not to agitate the sample when transferring it into the laboratory-supplied vials. Samples for any additional parameters will be collected subsequent to the VOC samples. Assuming adequate recharge, all samples will be collected within eight hours of purging.
- VOC samples will be collected in 40 ml glass vials with zero headspace and will be preserved with hydrochloric acid to a pH of less than two (in accordance with the instructions provided in the Region II CERCLA QA Manual, Revision 1, October, 1989, p. 31). The sample bottles for all other analytical parameters will be properly preserved (e.g. metals samples will be preserved with nitric acid). Sample container, preservation and holding time information for the anticipated groundwater sample analyses is provided in the table below. Care will be taken to not overfill the bottles during sample collection thereby ensuring proper sample preservation.

Sample Container, Preservation and Holding Times for Anticipated Groundwater Sample Analyses

	TCL VOCs	TCL SVOCs	TAL Metals	Sulfate
Container	(2) 40 mL VOA Vials	(2) 1 Liter Amber Glass Jars	500 mL Plastic Container	250 mL Plastic Container
Preservation	Zero Headspace, HCl & Cooled to 4°C	Cooled to 4°C	HNO_3 & Cooled to 4°C	Cooled to 4°C
Holding Time	14 Days	7 Days	28 Days	28 Days

- Pumping rates during purging and sample collection will be managed appropriately to maintain minimal turbidity for the collection of total metals samples (if needed).
- Sample containers will be capped immediately after filling and placed into a chilled cooler for transport to the laboratory.
- Sampling will progress from the least contaminated well to the most contaminated well, based on the results of previous sampling and analysis. Samples will be properly preserved, stored on ice and transported to the laboratory under proper chain-of-custody protocol.

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APPENDIX H

RAWP - QUALITY ASSURANCE PROJECT PLAN

GREYSTONE ENVOLUTIONS

Environmental Solutions for Business

QUALITY ASSURANCE PROJECT PLAN (FOR RAWP)

Former Skinner Sales Site
BCP Site #C622031
700 Mohawk Street
Herkimer, New York

9 May 2012

Prepared for:
Sphere STP, LLC
2836 Route 20 East
Cazenovia, NY 13035

Prepared by:
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202 Highbridge Street
Fayetteville, NY 13066

Greystone Project No.:12020EP

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1.0 INTRODUCTION

This document represents the Quality Assurance Project Plan (QAPP), which is Appendix D of the of the Remedial Action Work Plan (RAWP) for the Skinner Sales automobile dealership located at 700 Mohawk Street in Herkimer, New York (the "Site"). This QAPP describes the field and laboratory Quality Assurance (QA) and Quality Control (QC) measures to be implemented during the project. This QAPP was prepared in accordance with the New York State Department of Environmental Conservation (NYSDEC) DER-10: Technical Guidance for Site Investigation and Remediation (DER-10) dated May 2010 and with EPA's guidance document entitled "EPA Requirements for Quality Assurance Project Plans", which is dated March 2001.

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2.0 SITE GOALS

As described in the RAWP, the primary objective of site remediation is to implement an approach that is protective of public health and the environment. Remedial action objectives for this Site consider the following: groundwater is not used for drinking water (the Site and vicinity are supplied by public water supply), surface water does not exist onsite, the Site is, and will continue to be, fully developed for commercial use, and there are no sensitive populations on or near the Site.

As such, remedial action objectives for this Site are as follows:

- Protect public health and the environment;
- Remove and/or treat sources of contamination;
- Groundwater protection.

Prior work at the Site has included soil and groundwater sampling to identify potential constituents of concern (COCs). Pending site activities will consist of soil excavation, sub-grade hydraulic lift removals, introduction of chemical oxidants to treat groundwater, drilling and monitoring well installations and soil and groundwater sampling.

3.0 QUALITY ASSURANCE OBJECTIVES

3.1 Data Quality Objectives

Data Quality Objectives (DQOs) are based on the concept that various uses of data collected require varying degrees of data quality. Data quality is defined as the degree of certainty in a data set with respect to precision, accuracy, representativeness, completeness and comparability (PARCC). DQOs are qualitative and quantitative statements specifying the required quality of data necessary to support implementation of the RAWP. The activities associated with implementation of the RAWP include site screening and post-remedy site characterization. A description of PARCC parameters is described below.

Precision is a measure of mutual agreement among individual measurements of the same property, usually under prescribed similar conditions. Precision is best expressed in terms of the standard deviation. Various measures of precision exist depending upon the "prescribed similar conditions".

Accuracy is the degree of agreement of a measurement (or an average of measurements) with an accepted reference or "true value". Accuracy is one estimate of the bias in a system.

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition.

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

Comparability expresses the confidence with which one data set can be compared to another data set.

It is the responsibility of the field team to collect representative and complete samples. It is the responsibility of the analytical laboratory to analyze these samples using accepted protocols resulting in data that meet PARCC standards.

The categories of data quality to be utilized during the implementation of the RAWP at the Site are described below.

- DQO Level 1 - Field Screening Utilizing Portable Instrumentation: Data used for site health and safety monitoring and field screening during site characterization activities. The data generally determines the presence or absence of certain constituents and is generally qualitative rather than quantitative. Field screening data provides the lowest data quality.
- DQO Level 2 - Field Laboratory Analysis: Data used for field screening during site characterization activities, evaluation of remedial alternatives, engineering design and monitoring during implementation of alternatives. The data generally determines levels of certain constituents relative to a calibration standard and is generally qualitative or quantitative.
- DQO Level 3 – Engineering Level Data: Data used for site characterization, risk assessment, evaluation of alternatives, engineering design and monitoring during implementation of alternatives. The data is quantitative and is generated using EPA analytical laboratory procedures; however, it does not include full Contract Laboratory Protocol (CLP) documentation.
- DQO Level 4 - Laboratory Analysis: Data used for risk assessment, evaluation of alternatives and engineering design. The data is quantitative and is generated using EPA analytical laboratory procedures. All analyses require full Analytical

Services Protocol (ASP)/CLP analytical protocols including Data Usability Summary Reports (DUSR). The majority of the data generated during the Remedial Investigation will be DQO Level 4.

- DQO Level 5 – Non-Standard Special Analytical Services: Data for use when analysis by non-standard procedures is required to obtain specific or lower detection limits or analyses are not of a nature typically performed under the CLP Routine Analytical Service (RAS) Program.

DQOs have been developed for the tasks outlined in Section 5 of the RAWP. The DQOs are designed primarily to support confirmation that the remediation has met cleanup goals. During the remediation process it is anticipated that DQO Levels 1 and 4 will primarily be utilized.

DQO Level 1 data (field screening) will be generated during site activities including: head space screening of soil samples; health and safety monitoring; and collection of groundwater field parameters.

DQO Level 3 data (engineering) will be generated to support engineering decisions as part of remediation, as needed.

DQO Level 4 data (laboratory analysis by CLP/ASP Methods) will be generated for all confirmation samples.

DQO Level 2 data (field analysis) and DQO Level 5 (non-standard) data are not expected to be generated as part of RAWP activities.

GREYSTONE

3.2 Field Sampling Quality Objectives

The objectives with respect to field sampling activities are to maximize the confidence in the data in terms of PARCC. Field Internal Quality Control Checks will be utilized during this investigation through the use of field duplicates as presented below.

Field Duplicates – At a minimum, one of every twenty samples collected in the field will be accompanied by a duplicate sample. The duplicate will be prepared by homogenizing the sample and preparing two identical sample aliquots for analysis (grab samples will be used for volatile organic compound (VOC) analysis). The duplicate sample will be assigned a fictitious sample number, which will be recorded in the field notebook. Analysis of duplicate samples will determine the precision of the analytical techniques.

Precision will be calculated as relative percent difference (RPD) if there are only two analytical points, and percent relative standard deviation (%RSD) if there are more than two analytical points. Through the submission of field QC samples, the distinction may be made between analytical problems, sampling technique considerations, and sample matrix variability. This distinction will be made by the data reviewer based on industry guidelines and personal judgment.

To assure representativeness, a field sampling plan has been devised that estimates the number of samples to be collected. This plan is presented in the RAWP as well as in the project Sampling and Analysis Plan (SAP) which is Appendix C to the RAWP. The data quality objective for the completeness of all data to be collected during the investigation is 100%. In other words, the objective is to collect samples from all of the locations noted in the SAP. In the event 100% is not obtained due to changes in the implementation of the remedial actions, inaccessibility of sampling points or other field conditions, the effect that the missing data will have on the projects objectives will be

evaluated. If necessary, corrective action will be initiated to resolve any data gaps that develop as a result of less than 100% data completeness. Every effort will be made to obtain valid data for all sampling points, particularly those identified by the Site Manager as critical points. In this regard, the sampling points identified as critical will be selected for QC sampling (duplicate sample collection) at the frequency specified.

In order to establish a degree of comparability, such that observations and conclusions can be directly compared with all historical data, standardized methods of field analysis, sample collection, holding times, sample preservation and standard units of measurement for data will be used. In addition, field conditions will be documented and considered when evaluating data to determine the effects of sample characteristics on analytical results. Whenever possible, the same sampling team will obtain all samples to reduce inconsistencies which may be caused by technique and time variables.

3.3 Laboratory Data Quality Objectives

The laboratory will demonstrate analytical precision and accuracy by the analysis of laboratory duplicates and by adherence to accepted manufacture and procedural methodologies.

The performance of the laboratory will be evaluated by the Project Manager and Project Quality Assurance Officer (QAO) during data reduction. The evaluation will include a review of all deliverables for completeness and accuracy when applicable.

4.0 QUALITY CONTROL PROCEDURES

This section presents a general overview of the quality assurance and quality control procedures that will be implemented during implementation of the RAWP. These quality control procedures are to be implemented as follows:

- at the factory for certain manufactured products;
- in the field; and
- in the laboratory utilized for selected sample analyses.

4.1 Sampling Activities

Sampling and analysis will be conducted to characterize the effectiveness of the remedial actions implemented at the Site, for waste characterization purposes and to characterize materials to be utilized as backfill on the Site. General field sampling procedures are described in Appendix A of the SAP. Samples will be handled by all field and laboratory personnel in a manner which allows for custody tracking and maintenance of the validity of the samples. Sample custody procedures are presented as Appendix A of this QAPP.

All sampling equipment, field measuring equipment and heavy equipment will be decontaminated according to the decontamination procedures presented in Appendix B of this QAPP.

All field activities will be documented in accordance with Appendix C of this QAPP.

5.0 CALIBRATION PROCEDURES

Laboratory calibration and frequency for specific analytical methods and pieces of equipment are specified in USEPA SW846 and the laboratory's Standard Operating Procedures.

During the course of the remedial action program, soil samples may be screened with a photoionization detector (PID) in the field. In addition, a multi-parameter water quality meter will be used to measure field parameters during development, purging and/or sampling of groundwater at the Site. A maintenance, calibration, and operation program will be implemented to ensure that routine calibration and maintenance is performed on all field instruments. This program will be monitored by the Site Manager. Trained team members will perform scheduled calibration, field calibrations, checks, and instrument maintenance prior to use each day. Additionally, calibration will be checked as necessary to ascertain that proper measurements are being taken.

Team members are familiar with the field calibration, operation, and maintenance of the equipment, and will perform the prescribed field operating procedures outlined in the operation and field manuals accompanying the respective instrument. Field personnel will keep records of all field instruments calibrations and field checks in the field logbooks. Calibration information recorded in field logbooks will include date, time, instrument model and serial number, a description of calibration or field check procedure, and any instrument deviations.

If onsite monitoring equipment should fail, the Site Manager will be contacted immediately. Replacement equipment will be provided or the malfunction will be repaired in a timely fashion.

6.0 ANALYTICAL PROCEDURES AND DATA EVALUATION

Sampling activities during the implementation and monitoring of the remedial actions described in the RAWP will include sample collection and analysis for some or all of the following analytes: VOCs, semi-volatile organic compounds (SVOCs), target analyte list (TAL) metals, pesticides, herbicides, polychlorinated biphenyls (PCBs), total and dissolved iron and sulfate. Subsurface soil samples, waste characterization samples, backfill samples and groundwater samples will be collected as part of the remedial action program. In general, laboratory analytical procedures will adhere to NYS ASP methodologies and/or to USEPA SW-846 methodologies as appropriate. Samples collected during and after the completion of the remedial actions will be analyzed by a NYS Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified analytical laboratory that participates in the CLP.

A summary of the sampling program to be conducted for post-remediation confirmation purposes and additional site characterization and the analytical methods to be utilized are shown in Table 6-1. In addition to the soil and groundwater samples listed on this table, appropriate waste characterization sampling will be performed on the various excavated soils, liquids and other wastes generated during the course of the site remediation activities in accordance with the procedures and requirements of the landfill(s) and other disposal facilities selected to receive the waste. Finally, fill materials imported to the Site and those generated onsite for reuse (e.g. crushed concrete) will be properly characterized in accordance with DER-10 Chapter 5.4(e). Duplicate and MS/MSD samples will not be collected from the waste characterization samples.

Table 6-1
Sampling Program

Task	Matrix	VOCs EPA Method 8260	SVOCs EPA Method 8270	Pesticides EPA Method 8081	Herbicides EPA Method 8151	PCBs EPA Method 8082	TAL Metals EPA Method 6010/ 7470A	Total & Dissolved Iron EPA Method 6010	Sulfate EPA Method 9038
Post-Excavation Soil Samples									
AOC 2 – Surficial Oil Staining on Unpaved Ground Surface on the Northwestern Portion of the Site	Soil	2	2	1	1	1	1		
AOC 3 – Former Used Oil UST and Surficial Staining Beneath Air Compressor Blow-Down	Soil	12[A]	12[A]			4	4		
AOC 4 – Sub-Grade Hydraulic Lifts	Soil	6[B]	6[B]			6[B]			
AOC 5 – Green-Colored Sand from Sand Blasting Activities	Soil			1	1		3		
AOC 6 – Interior Trench Drains and Trench Drain Outlets	Soil	8[C]	8[C]			2	8[C]		
Backfill Sampling									
Crushed Concrete Slab Bacfkill Samples	Concrete		2			2			
Paint from Concrete Block Walls	Paint						3[D]		
Crushed Concrete and Cinder Block Backfill Samples	Concrete/ Cinder Block						2[E]		
AOC 3 Shallow Soils for Backfill	Soil	4	2			2	2		
Imported Top Soil	Soil	7	2	2		2	2		

Task	Matrix	VOCs EPA Method 8260	SVOCs EPA Method 8270	Pesticides EPA Method 8081	Herbicides EPA Method 8151	PCBs EPA Method 8082	TAL Metals EPA Method 6010/ 7470A	Total & Dissolved Iron EPA Method 6010	Sulfate EPA Method 9038
for Site Cover									
Waste Characterization	Soil/Liquid/ Concrete	F	F	F	F	F	F		
Duplicates (1 per 20)	Soil	2	2	1	1	1	1		
MS/MSD (1 set per 20)	Soil	2 sets	2 sets	1 set	1 set	1 set	1 set		
Total Soil Samples (Including Duplicates and MS/MSD Samples)	Soil	45	40	7	5	22	23		
Groundwater Sampling									
New Wells	GW	5	5	G	G	G	5	1^{H}	1^{H}
Trip Blank	Water	1							
Duplicates	GW	1	1				1		
Total Water Samples	GW	7	6	G	G	G	65	1^{H}	1^{H}

Table Notes:

A: The number of samples may be increased or decreased based on the size of the excavation per the sampling frequency requirements of DER-10 Chapter 5.4(b).

B: The final number of samples will be dependent on the absence or presence of apparent subsurface impacts and remedial actions implemented for treatment. Sampling will be completed as appropriate based on the guidance provided in DER-10 Chapter 5.4(b) and Chapter 5.5(c).

C: Samples will be biased towards features that could have functioned as sources of sub-grade releases if there are no other areas of obvious impacted subsurface soils encountered during demolition and redevelopment activities.

D: Samples of paint will be collected and analyzed for lead. The number of samples will be dependent on variations in the paint applied to the walls of the building.

E: Samples of the crushed concrete and cinder block may need to be collected and analyzed for lead depending on the results of lead analysis performed on samples of the paint coating the block walls.

F: Waste characterization samples will be collected in accordance with the requirements of the facility at which the wastes are being disposed. For soils, waste characterization analysis is likely to include some combination of toxicity characteristic leaching procedure (TCLP) VOCs, TCLP SVOCs, TCLP Metals, TCLP PCBs, Flash Point, Paint Filter and Reactivity. ASP Categary B deliverables will not be generated for the waste characterization samples.

G: The selected analyses for the initial round of groundwater samples will be based on the post-excavation soil sampling results.

H: Total iron, dissolved iron and sulfate analyses for purposes of monitoring availability of chemical oxidants introduced to treat groundwater. These samples will only be collected from the monitoring well in AOC 3.

1: The method quantification limits will be the lowest as required by the method.
2: The actual detection limit will be dependent upon the sample matrix.
3: Holding times, sample preservatives and sample containers will be specified by the analytical method.

Upon receipt of analytical reports from the laboratory, the data packages will be evaluated to confirm that samples were analyzed within required holding time and at proper detection limits. Data validation will be conducted for all samples analyzed in accordance with ASP methodologies. The laboratory will provide ASP category B QA/QC backup for data packages with all confirmation sampling analytical reports. These packages will be reviewed for completeness and provided upon request. ASP category B deliverables will not be generated for the waste characterization samples.

The project QAO will review the data packages to confirm completeness of the ASP Category B deliverables and to prepare a DUSR in accordance with NYSDEC guidelines. The QAO will be independent from the analytical laboratory. At a minimum, the following information will be evaluated:

- chain-of-custody forms;
- date sampled/date analyzed;
- sample temperature at check-in;
- raw data;
- initial and continuing instrument calibrations;
- matrix spikes;
- laboratory duplicate analyses;
- surrogate recoveries (organics); and
- laboratory control samples (inorganics).

Data reduction will consist of presenting analytical results on summary tables. The data will then be used to evaluate the post-remediation Site conditions relative to the remedial objectives defined in the RAWP.

6.1 Electronic Data submission

Analytical data will be submitted in electronic format in accordance with the requirements specified in section 1.15 of DER-10.

7.0 PROJECT PERSONNEL

The RAWP was prepared by a project team from Greystone Envolutions, LLC (Greystone) with extensive experience in site investigation, site remediation, site development and construction management.

The RAWP will be implemented by the same project team that developed the RAWP. Trevor Tompkins will function as project manager. Jim Blasting will serve as the QAO for the project and Donald Anné will serve as the third party validator. Mr. Anné will review this QAPP and understand the QA/QC requirements and will complete the data validation in accordance with the requirements of DER-10, Appendix 2B. Resumés for Mr. Tompkins, Mr. Blasting and Mr. Anné are provided in Appendix D.

Alpha Analytical, Inc. (Alpha), a NYSDOH-certified laboratory with ASP/CLP experience will be utilized for all analytical work. Site contractors will be selected upon approval of the RAWP.

8.0 SCHEDULE

The estimated work schedule is presented in Section 6.0 of the RAWP.

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QAPP - APPENDIX A

SAMPLE CUSTODY PROCEDURES

SAMPLE CUSTODY PROCEDURES

The primary objective of the sample custody procedures is to create an accurate written record which can be used to trace the possession and handling of all samples from the moment of their collection, through analysis, until their final disposition. For the purpose of this document, the USEPA Office of Enforcement and Compliance Monitoring, National Enforcement Investigation Center (NEIC) Policies and Procedures (May 1986) definition of custody applies. USEPA states that a sample is under custody if:

1. It is in one's possession, or
2. It is in one's view, after being in one's possession, or
3. It is locked up after being in one's possession, or
4. It is in a designated secure area.

The Site Manager or the field personnel collecting the samples will maintain custody for samples collected during this investigation. The Site Manager or field personnel are responsible for documenting each sample transfer and maintaining custody of all samples until they are shipped to the laboratory.

A self-adhesive sample label will be affixed to each container before sample collection. These labels will be covered with clear waterproof tape if necessary to protect the label from water or solvents. The sample label will contain the following information:

- Laboratory Name
- Sample ID Number
- Sample Location
- Sample Matrix
- Date and Time of Sample Collection
- Designation as grab or composite
- Parameters to be tested
- Preservative Added
- Name of Sampler.

All sampling containers will be supplied by the laboratory, and are to be cleaned by the bottle supplier in accordance with standard laboratory procedures. Analytical proof of cleanliness will be available for review. Sample containers will be enclosed in clear plastic bags and packed with cushioning material inside the coolers.

The Site Manager will maintain custody of the sample bottles. Sample bottles needed for a specific sampling task will be properly pre-preserved in the laboratory prior to sample collection. After the Site Manager has verified the integrity of the bottles and that the proper bottles have been assigned for the task, the bottles will be relinquished to the sampling team. The sampler will place a sufficient volume of sample in the appropriate laboratory-grade bottles for use as sample containers. Care will be taken to not overfill the bottles during sample collection, thereby ensuring proper sample preservation.

The samples will be stored in an insulated cooler for shipment to the laboratory. The laboratory should receive the samples within 48 hours of sampling. Field chain-of-custody records completed at the time of sample collection will be placed inside the cooler for shipment to the laboratory. These record forms will be sealed in a zip-lock type plastic bag to protect them against moisture. Each cooler will contain sufficient ice or cold packs to insure that an approximate 4^0C temperature is maintained, and will be packed in a manner to prevent damage to sample containers. Sample coolers will be sealed with strapping tape and the Site Manager will sign and date a custody seal and place it on the cooler in such a way that any tampering during shipment will be detected.

All coolers will be shipped by an overnight courier according to current US DOT regulations or will be picked up and transported by a courier for the laboratory. Upon receiving the samples, the sample custodian at the laboratory will inspect the condition of the samples, compare the information on the sample labels against the field chain-of-custody record, assign a laboratory control number, and log the control number into the computer sample inventory system. The sample custodian will then store the sample in a secure sample storage cooler maintained at approximately 4°C and maintain custody until the sample is assigned to an analyst for analysis. Custody will be maintained until disposal of the analyzed samples.

The sample custodian will note any damaged sample vials, void space within the vials, or discrepancies between the sample label and information on the field chain-of-custody record when logging the sample. This information will also be communicated to field personnel so proper action can be taken. The chain-of-custody form will be signed by both the relinquishing and receiving parties and the reason for transfer indicated each time the sample custody changes.

An internal chain-of-custody form will be used by the laboratory to document sample possession from laboratory sample custodian to analysts and final disposition. All chain-of-custody information will be supplied with the data packages for inclusion in the document control file

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QAPP - APPENDIX B

DECONTAMINATION PROCEDURES

DECONTAMINATION PROCEDURES

1.0 INTRODUCTION

To the extent possible, dedicated/disposable sampling devices will be used during sampling activities completed in conjunction with the implementation of the RAWP. In those instances where re-usable field investigation and sampling equipment must be utilized, decontamination procedures will follow guidelines established in the USEPA Region II CERCLA Quality Assurance Manual, Final Copy, October 1989, and specific decontamination procedures detailed below.

Equipment cleaning areas will generally be established within or adjacent to the specific work area. The equipment cleaning procedures described below include pre-field, field and post-field cleaning of sampling equipment. The equipment consists of soil sampling equipment. The non-disposable equipment will be cleaned after completing each sampling event. All rinse water will be contained and treated on site or sent to an approved disposal facility. The site manager will monitor cleaning procedures.

All solvents and water used in the decontamination process will be contained and collected for characterization and proper disposal. Solids (e.g., disposable gloves, disposable clothing, and other disposable equipment) generated from personnel cleaning procedures will be collected for proper disposal. Decontamination procedures will be fully documented in the field notebook.

2.0 SAMPLING EQUIPMENT DECONTAMINATION

Typical sampling equipment cleaning materials may include:

- phosphate-free detergent solution soap;
- potable water (which will be obtained from a treated municipal water source);
- appropriate cleaning solvent (e.g., dilute nitric acid, pesticide grade hexane or methanol);

- wash basins;
- brushes;
- polyethylene sheeting;
- aluminum foil;
- large heavy duty garbage bags;
- spray bottles;
- zip-lock type bags;
- paper towels/Handiwipes®; and
- nitrile, disposable gloves. Note: These gloves will also be worn by the sampling team and changed between sample points.

All sampling equipment will be stored in a clean environment and, where appropriate, the equipment will be covered in aluminum foil.

Field decontamination procedures, as described below, will include the establishment of cleaning stations. These stations will be located away from the immediate work area so as not to adversely impact the cleaning procedure, but close enough to the sampling teams to keep equipment handling to a minimum.

A designated area will be established to conduct large scale cleaning. The location of the decontamination area is shown on Figure 3 of the RAWP. All equipment such as drill rigs and excavation equipment will be inspected to determine if an initial cleaning at this location prior to use on-site is needed. The frequency of subsequent on-site cleaning will depend on actual equipment use in the collection of environmental samples or during remedial activities. All fluids and residues produced from the decontamination procedures will be collected and stored on-site until analyses can be conducted and a decision regarding final disposition of the materials is made pursuant to state and federal requirements.

All sampling equipment (e.g. hand-operated coring devices, knives, hand-augers, bowls) will be cleaned before each use and prior to leaving the site. The field sampling equipment-cleaning procedure when analyzing for organic constituents is as follows:

- Phosphate-free detergent solution;
- Potable water rinse;
- Deionized water rinse;
- Repeat water rinse twice (i.e., triple rinse) and allow to air dry; and
- Wrap equipment completely with aluminum foil to prevent contact with other materials during storage and/or transport to the sampling location.

The initial step, a soap and water wash, is to remove all visible particulate matter and residual oils and grease (this may be preceded by a steam cleaning to facilitate residuals removal). When analyzing for organic constituents when tools appear heavily contaminated, this may be followed by a potable water rinse to remove the detergent and a rinse sequence of solvent (e.g., hexane, and methanol) and deionized water

All heavy equipment (drill rigs, excavator, etc.) will be pressure washed prior to onsite usage, between locations if the equipment comes in direct contact with contaminated media, and prior to leaving the site. All down-hole equipment (augers and buckets) will be pressure washed between uses at each location. Equipment will be scrubbed manually as needed to remove heavy soils prior to steam cleaning. Clean equipment will be stored in an in-active work area on-site until use. The anticipated location of the decontamination area is shown on Figure 3 of the RAWP. A decon pad will be constructed on the asphalt pavement utilizing 10 mil polyethylene sheeting and boards or hay bales for a berm. Wash water accumulated in the decon pad will be pumped out, as necessary into drums and characterized for proper offsite disposal. When remediation activities on the Site are complete, the decon pad will be disassembled and the materials properly disposed.

Trucks hauling potentially contaminated materials from the Site will be properly tarped and lined with box liners to prevent the accidental spread of site-related contaminants offsite during transport. It is not anticipated that saturated materials will be generated or loaded out from the Site, thus avoiding leakage. When traveling on-site, trucks will utilize routes paved with blacktop or clean material (crushed stone or concrete). Truck box exteriors will be swept to remove any soil that may collect on the outside of the truck box. Loading activities will take place with the dump trucks parked on the existing asphalt pavement of the Site. Loading areas will be kept free of debris such that the trucks transporting materials offsite do not pick up mud or soils on their tires.

3.0 METER DECONTAMINATION

All meters and probes used in the field will be decontaminated between uses with deionized water (triple rinse). Sampling equipment and probes will be decontaminated in an area covered by polyethylene sheeting near the sampling location.

GREYSTONE

QAPP - APPENDIX C

FIELD DOCUMENTATION

FIELD DOCUMENTATION

All field data, including field measurements (e.g. PID screening, groundwater field parameters, etc.), observations and field instrument calibrations, will be entered directly into a bound field notebook. Each project team member will be responsible for proofing all data transfers made, and the Site Manager will proof at least ten percent of all data transfers.

One or more bound field notebooks may be maintained for the Site; each book will be consecutively numbered. The book(s) will remain with the site evidence file.

All entries in the Logbook will be made in ink. Logbook entries will include but not be limited to the following:

First Page:

- site name and number
- date and time started
- personnel on-site

Subsequent Pages:

- detailed description of investigative activities including sampling, on-site meetings and any problems encountered along with the duration of these activities
- documentation of all personnel monitoring results (e.g. PID readings)
- list of all samples obtained and sample appearance (referenced to field logs if necessary)
- list of personal protection used and documentation procedure
- all other pertinent daily activities

Each new day will contain:

- date and time started

- weather
- personnel on-site
- activity information
- initials of notekeeper

*Note: When a mistake is made in the log, it will be crossed out with a single ink line and will be initialed and dated.

Special care will be taken in the description and documentation of sampling procedures. Sampling information to be documented in the field notebook and/or associated forms are as follows:

- sample number
- date and time sample collected
- source of sample (Area, monitoring well number, etc.)
- location of sample - document with a site sketch and/or written description of the sampling location so that accurate resampling can be conducted if necessary
- sampling equipment (trowel, split spoon, sediment corer, etc.)
- analysis and QA/QC required
- chemical preservative used (HCl, HNO_3, H_2SO_4, NaOH, etc.)
- field instrument calibration including date of calibration, standards used and their source, results of calibration and any corrective actions taken.
- field data (pH, temperature, conductivity, etc.)
- field observations - all significant observations will be documented.
- sample condition (color, odor, etc.)
- site condition (stressed vegetation, exposure of buried wastes, erosion problems, etc.)
- sample shipping procedure, date, time, destination and if container seals were attached to transport container(s)
- comments - any observation or event that occurred that would be relevant to the facility; for example: weather changes and effect on sampling, conversations with the

client, public official or private citizen; and instrument calibration, equipment problems, and field changes.

GREYSTONE

QAPP - APPENDIX D

RESUMÉS

GREYSTONE

APPENDIX I

SITE-WIDE INSPECTION LOG

SITE-WIDE INSPECTION LOG
BCP SITE #C622031
700 MOHAWK STREET
HERKIMER, NY

GREYSTONE

SITE INSPECTION LOG	Date:
Inspector:	Time Begin:
Signature:	Time End:
Sheet: 1 of	Weather:

Institutional Control Evaluation

Institutional Control Item	Compliant? Yes	No	Comments/Corrective Actions
Commercial Site Usage			
Prohibited Groundwater Usage			
Record Keeping/Records Updated			

Engineering Control Evaluation

Specific Item to Inspect	Typical Problems Encountered	Conditions Observed Normal	Abnormal (Attach Report)	Comments or Corrective Action(s) Implemented and Date(s)
Soil Cover Systems	Erosion	☐	☐	
	Vegetation	☐	☐	
	Settling/Ponding	☐	☐	
	Uplift	☐	☐	
	Washouts	☐	☐	
	Rodent Holes	☐	☐	
Pavement Areas	Settling/Ponding	☐	☐	
	Uplift	☐	☐	
	Cracks	☐	☐	
	Potholes	☐	☐	
	Deterioration	☐	☐	
Sub-Slab Depressurization System	Fan	☐	☐	
	Manometer	☐	☐	
	Piping	☐	☐	
	Concrete Slab	☐	☐	
Groundwater Monitoring Wells	Prot-casing	☐	☐	
	Locked ?	☐	☐	
	Inside cap	☐	☐	
	Surface seal	☐	☐	
Groundwater Monitoring	Water Levels (measured)	☐	☐	W.L. Req'd: YES ☐ NO ☐
	GW Samples (collected)	☐	☐	Sampling Req'd: : YES ☐ NO ☐ Date Completed: _____ Analysis: _____

Comments: _____

GREYSTONE

APPENDIX J

SUB-SLAB DEPRESSURIZATION SYSTEM COMPONENT SPECIFICATION SHEETS AND INSTALLATION INSTRUCTIONS

STEGO® WRAP VAPOR BARRIER

ASTM E 1745 Class A-B-C Compliant

STEGO® WRAP VAPOR BARRIER

is made with our proven trade secret blend of prime virgin resins and additives. Stego Wrap Vapor Barrier is an ASTM E 1745 Class A Vapor Barrier (Below 0.01 perms). We focus on producing a product that will maintain its extremely low permeance for the life of a building. The protection of Stego Wrap Vapor Barrier provides the flexibility to change flooring types and overall building use without worrying about below-slab moisture vapor.

FEATURES & BENEFITS

Unsurpassed Permeance Characteristics

Life of the Building Protection

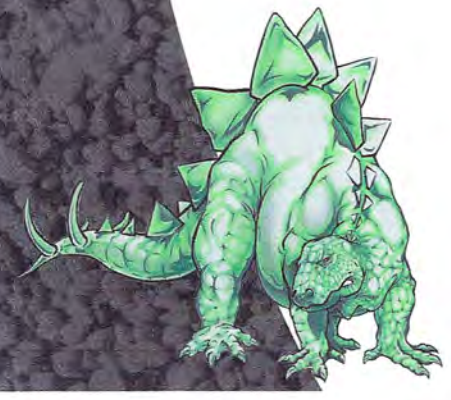
Exceptional Tear and Puncture Resistance

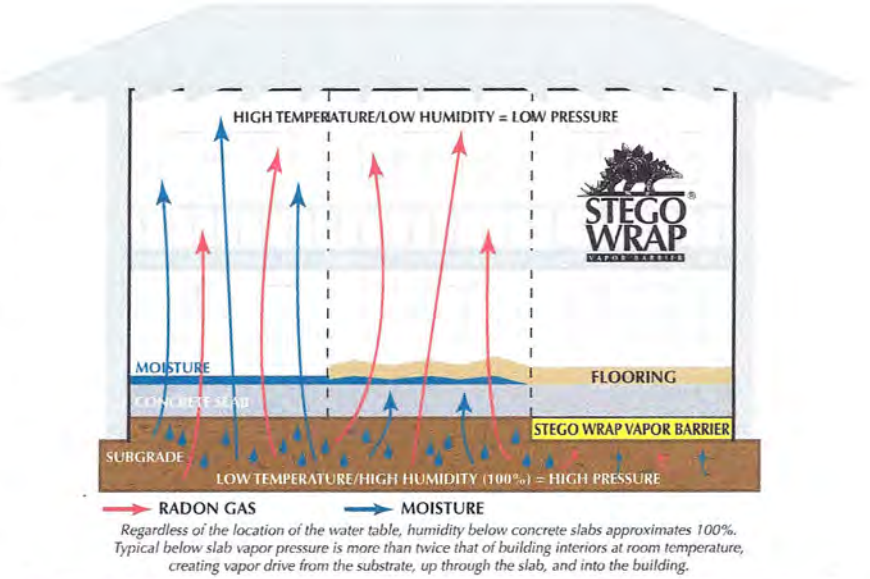
Easy, Reliable Installation

Competitively Priced

Available Nationwide

Local Support





Regardless of the location of the water table, humidity below concrete slabs approximates 100%. Typical below slab vapor pressure is more than twice that of building interiors at room temperature, creating vapor drive from the substrate, up through the slab, and into the building.

THE STEGO® ADVANTAGES

SUPERIOR DEFENSE Against Floor Failures:

Experts say "the need for a vapor barrier (as opposed to a vapor retarder) is becoming increasingly clear." Concrete Construction Magazine, August 2003, p.18.

Infiltration of moisture through concrete slabs is a major building defect liability. Stego Wrap Vapor Barrier has an extremely low permeance preventing water vapor, soil gases (i.e. Radon), alkaline salts and soil sulfates from compromising the integrity of the building envelope and leading to serious problems with the concrete slab, floor coverings and indoor air quality. Stego Wrap Vapor Barrier is the best protection against these costly failures.

MOLD PREVENTION:

Mold needs three things to survive: moisture, sustained temperature (between 50° and 122° F), and a food source (dust, drywall, etc.). In any given building environment, contractors can only control one of these variables: moisture. Mold spores are present in 100% of building interiors. If moisture is allowed into your building environment, mold can and will grow. Toxic molds like Stachybotyrus can be fatal for nearly 5% of people (Institute of Medicine 1993), and cause a variety of serious health problems in others. Several recent well-publicized cases involving toxic mold have resulted in multimillion-dollar insurance settlements. Many of the nation's leading Insurance companies have severely limited or removed coverage for mold claims fearing that these claims will bankrupt their companies. Now more than ever, it is critically important that extra attention be paid to preventing the intrusion of moisture vapor from your below-slab environment. Stego Wrap Vapor Barrier offers the level of protection that many architects are now seeking and is considered to be inexpensive insurance against these costly failures.

LONGEVITY AND STRENGTH:

Stego Wrap Vapor Barrier is NOT made with recycled materials and will not degrade. Prime, virgin resins are the key. Molecules within Stego Wrap "interlock" to provide strength, durability and unprecedented resistance to moisture vapor and radon gas. Stego Wrap's puncture resistance is excellent. Stego Wrap will not tear, crack, flake, snag or puncture, even when 18,000 lb. laser-screed machines are driving directly across the barrier (see the reverse side for Stego Wrap Vapor Barrier's specifications).

Stego Industries, LLC · San Clemente, CA
Tel: 949-257-4100 · Toll Free: 877-464-7834 · Fax: 949-257-4113
www.stegoindustries.com

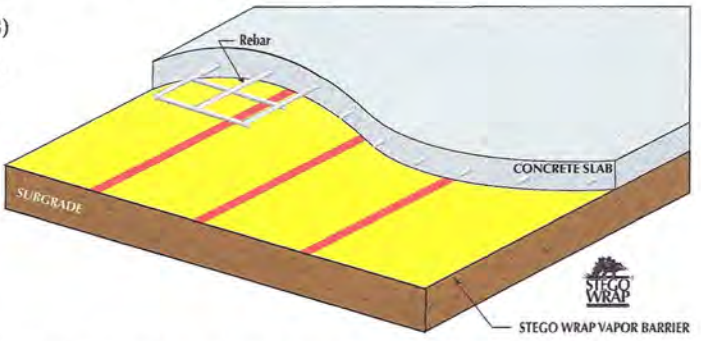
STEGO® WRAP VAPOR BARRIER SPECIFICATIONS

PROPERTIES	TEST METHOD	ASTM E 1745 Class A Requirements	TEST RESULT	EXPLANATION
Permeance	ASTM F 1249	0.1 perms	0.0084 perms * 0.0035 WVTR	Very impermeable to water vapor
Puncture Resistance	ASTM D 1709	2200 grams	Method B 2326 grams	Resistant to puncturing from construction abuse
Tensile Strength	ASTM D 882	45.0 lbf./in.	79.6 lbf./in.	Will not tear easily
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 section 8	0.1 perms	0.0091 perms	Permeance after wetting, drying, and soaking
	ASTM E 154 section 11	0.1 perms	0.0092 perms	Permeance after heat conditioning
	ASTM E 154 section 12	0.1 perms	0.0089 perms	Permeance after low temperature conditioning
	ASTM E 154 section 13	0.1 perms	0.0092 perms	Permeance after soil organism exposure
Methane Transmission Rate	ASTM D 1434		**149.6 GTR 2.12 x 10^{-6} perms	Greatly impedes the transmission of methane gas
Radon Diffusion Coefficient			1.3 x 10^{-13} m^2/second	Greatly impedes the transmission of radon gas
Thickness			15 mils	Stronger, tougher and less permeable than much thicker membranes
Roll Dimensions			14 ft. X 140 ft.	1,960 ft^2/roll - allows for a minimum of seams
Roll Weight			140 lbs.	Easy to unroll and install

Note: perm unit = grains/(ft^2 *hr* in.Hg) * WVTR = water vapor transmission rate **GTR = Gas Transmission Rate

INSTALLATION INSTRUCTIONS: (Based on ASTM E 1643)

Unroll Stego Wrap over the area where the slab is to be placed. Stego Wrap should completely cover the concrete placement area. Overlap seams 6 inches and tape using Stego Tape. All penetrations and blockouts should be sealed using a combination of Stego Wrap, Stego Tape and/or Stego Mastic. If the Stego Wrap is damaged, cut a piece from the Stego Wrap roll, place over the damaged area, and tape around all edges. Concrete may be placed directly on Stego Wrap.



STEGO® TAPE:

STEGO WRAP RED POLYETHYLENE TAPE (3.75" x 180'/roll) is specially designed to seal seams and penetrations on Stego Wrap installations. The acrylic, pressure-sensitive adhesive provides permanent bonding and quick-stick properties. The area to be bonded should be free of dust, dirt and moisture. If properly installed Stego Tape will provide years of continuous protection.

WARRANTY:

STEGO INDUSTRIES, LLC believes, to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions and installations are not within our control, STEGO INDUSTRIES, LLC does not guarantee results from use of the information provided and disclaims all liability from any loss or damage. NO WARRANTY EXPRESS OR IMPLIED IS GIVEN AS TO THE MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR OTHERWISE WITH RESPECT TO THE PRODUCTS REFERRED TO.

DISTRIBUTED BY:

Stego Industries, LLC · San Clemente, CA
Tel: 949-257-4100 · Toll Free: 877-464-7834 · Fax: 949-257-4113 · www.stegoindustries.com

Stego® Wrap Vapor Barrier

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Wrap Vapor Barrier

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Wrap Vapor Barrier is used as a true below-slab vapor barrier, and as a protection course for below grade waterproofing applications.
COMPOSITION: Stego Wrap Vapor Barrier is a multi-layer plastic extrusion manufactured with only the highest grade of prime, virgin, polyolefin resins.
ENVIRONMENTAL FACTORS:
Stego Wrap Vapor Barrier can be used in systems for the control of soil gases (radon, methane), soil poisons (oil by-products) and sulfates.

5. Installation
UNDER SLAB: Unroll Stego Wrap Vapor Barrier over an aggregate, sand or tamped earth base. Overlap all seams a minimum of six inches and tape using Stego Tape or Crete Claw® Tape. All penetrations must be sealed using a combination of Stego Wrap and Stego accessories.

VERTICAL WALL: Install Stego Wrap Vapor Barrier over the waterproofing membrane while still tacky. Mechanically fasten Stego Wrap Vapor Barrier to the wall at the top with Stego Term Bar and concrete nails. Drape Stego Wrap Vapor Barrier down across the footer and under the french drain.

6. Availability & Cost
Stego Wrap Vapor Barrier is available nationally via building supply distributors. For current cost information, contact your local Stego Wrap distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or via the website.

10. Filing Systems
- Stego Industries' website
- Buildsite
- 4Specs

4. Technical Data

TABLE 1: PHYSICAL PROPERTIES OF STEGO WRAP VAPOR BARRIER

PROPERTY	TEST	RESULTS
Under Slab Vapor Retarders	ASTM E 1745 Class A, B & C – Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs	Exceeds Class A, B & C
Water Vapor Permeance	ASTM F 1249 – Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor	0.0084 perms *0.0035 WVTR
Puncture Resistance	ASTM D 1709 – Test Methods for Impact Resistance of Plastic Film by Free-Falling Dart Method	2326 grams
Tensile Strength	ASTM D 882 – Test Method for Tensile Properties of Thin Plastic Sheeting	79.6 lbf/in.
Permeance After Conditioning (ASTM E 1745 Sections 7.1.2 - 7.1.5)	ASTM E 154 Section 8, F 1249 – Permeance after wetting, drying, and soaking ASTM E 154 Section 11, F 1249 – Permeance after heat conditioning ASTM E 154 Section 12, F 1249 – Permeance after low temperature conditioning ASTM E 154 Section 13, F 1249 – Permeance after soil organism exposure	0.0091 perms 0.0092 perms 0.0089 perms 0.0092 perms
Methane Transmission Rate	ASTM D 1434 – Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting	**149.6 GTR 2.12 x 10^{-6} perms
Radon Diffusion Coefficient		1.3 x 10^{-13} m^2/second
Thickness	ACI 302.1R-04 – Minimum Thickness (10 mils)	15 mils
Roll Dimensions		14 ft. wide x 140 ft. long or 1,960 ft^2
Roll Weight		140 lbs.

Note: perm unit = grains/(ft^2 *hr* in.Hg) * WVTR = Water Vapor Transmission Rate ** GTR = Gas Transmission Rate

 03/12

Stego® Mastic

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Mastic

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Mastic is designed to be used as a waterproofing and vapor retardant membrane for use in conjunction with Stego Wrap 10-mil and 15-mil Vapor Retarder/Barrier. Stego Mastic can be used as an alternate to boots for pipe penetrations in Stego Wrap Vapor Barrier. Stego Mastic can also be used as a primary waterproofing for below grade walls.
COMPOSITION: Stego Mastic is a medium-viscosity, water-based, polymer-modified anionic bituminous/asphalt emulsion, which exhibits bonding, elongation and waterproofing characteristics.
SIZE: Stego Mastic comes in five-gallon buckets.

4. Technical Data
APPLICABLE STANDARDS:
American Society for Testing and Materials (ASTM)
- ASTM D 412 Standard Test Method for Vulcanized Rubber and Thermoplastic Elastomers - Tension
- ASTM E 154 Standard Test Methods for Water Vapor Retarders Used in Contact with Earth under Concrete Slabs, on Walls, or as Ground Cover
- ASTM G 23 Practice for Operating Light-Exposure Apparatus (Carbon-Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Withdrawn 2000)
- ASTM E 96 Standard Test Methods for Water Vapor Transmission of Materials
- ASTM D 751 Standard Test Methods for Coated Fabrics
- ASTM D 1434 Standard Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting
- ASTM C 836 Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.
- ASTM E 1643 Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.

5. Installation
PREPARATION:
- A test application simulating the project environment should always be done prior to final usage of Stego Mastic.
- All Surfaces should be dry and free of loose materials, oils and other contaminants. The surfaces should be cleaned in the same fashion as the test surface in order to ensure proper results.
- Store above 40°F

PENETRATIONS:
For small pipe and rebar penetrations in Stego Wrap Vapor Barrier cut Stego Wrap just big enough for the penetration. Liberally apply Stego Mastic around the penetration to keep the integrity of the membrane intact. Stego Mastic can be applied by brush, roller, or sprayer.
NOTES: 1) For larger penetrations or wide cut-outs of Stego Wrap, use Stego Wrap and Stego Red Polyethylene Tape to repair and seal. 2) Solvent-based products should not be applied over this product.

CLEANING:
Clean all tools with kerosene and/or oil-based cleaners.

6. Availability & Cost
Stego Mastic is available nationally via building supply distributors. For current cost information, contact your local Stego distributor or Stego Industries' sales department.

7. Warranty
Stego Industries, LLC believes to the best of its knowledge, that specifications and recommendations herein are accurate and reliable. However, since site conditions are not within its control, Stego Industries does not guarantee results from the use of the information provided and disclaims all liability from any loss or damage. No warranty, express or implied, is given as to the merchantability, fitness for a particular purpose, or otherwise with respect to the products referred to.

8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or by visiting the website.

10. Filing Systems
- Stego Industries' website
- Buildsite

TABLE 1: PHYSICAL PROPERTIES OF STEGO MASTIC

Property and Test	Stego Mastic
Tensile/Elongation, ASTM D 412	32 psi / 3860%
Resistance to Decay, ASTM E 154	9% perm loss
Accelerated Aging, ASTM G 23	No Effect
Permeance, ASTM E 96	0.17 Perms
Hydrostatic Water Pressure, ASTM D 751	28 psi
Methane Transmission Rate, ASTM D 1434	0
Adhesion to Concrete & Masonry, ASTM C 836	7 lbf./in.
Hardness, ASTM C 836	85
Crack Bridging, ASTM C 836	No Cracking
Low Temp Flexibility, ASTM C 836	No Cracking at -20°C
Resistance to Acids:	
Acetic	30%
Sulfuric and Hydrochloric	15%
Temperature Effect:	
Stable	248°F
Flexible	13°F

Note: perm unit = grains/(ft² *hr* in.Hg)

Stego® Tape

STEGO INDUSTRIES, LLC

Vapor Retarders
07 26 00, 03 30 00

1. Product Name
Stego Tape

2. Manufacturer
Stego Industries, LLC
216 Avenida Fabricante, Suite 101
San Clemente, CA 92672
Sales, Technical Assistance
Ph: (877) 464-7834
Fx: (949) 257-4113
www.stegoindustries.com

3. Product Description
USES: Stego Tape is a low permeance tape designed for protective sealing, hanging, seaming, splicing, and patching applications where a highly conformable material is required. It has been engineered to bond specifically to Stego Wrap, making it ideal for sealing Stego Wrap seams and penetrations.

COMPOSITION: Stego Tape is composed of polyethylene film and an acrylic, pressure-sensitive adhesive.

SIZE: Stego Tape is 3.75" wide and 180' long. Stego Tape ships 12 rolls in a case.

4. Technical Data
APPLICABLE STANDARDS:

Pressure Sensitive Tape Council (PSTC)

- PSTC 101 – International Standard for Peel Adhesion of Pressure Sensitive Tape

American Society for Testing & Materials (ASTM)

- ASTM E 1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs

5. Installation
SEAMS:

Overlap Stego Wrap six inches and seal with Stego Tape. Make sure the area of adhesion is free from dust, dirt, moisture and frost to allow maximum adhesion of the pressure sensitive tape.

PIPE PENETRATION SEALING

1) Install Stego Wrap around pipe by slitting/cutting material
2) If void space around pipe is minimal, seal around base of pipe with Stego Tape (Stego Mastic can be used for additional coverage)

DETAIL PATCH FOR PIPE PENETRATION SEALING

1) Cut a piece of Stego Wrap that creates a six inch overlap around all edges of the void space
2) Cut an "X" in the center of the detail patch
3) Slide detail patch over pipe, secure tightly
4) Tape down all sides of detail patch with Stego Tape
5) Seal around base of pipe with Stego Tape (Stego Mastic can be used for additional coverage)

Stego Tape should be installed above 40°F. In temperatures below 40°F, take extra care to remove moisture or frost from the area of adhesion.

NOTE: See Stego's installation instructions for complete instructions and detailed drawings. Each user should make their own tests to determine the products suitability for their own intended use and shall assume all risks and liability in connection therewith.

6. Availability & Cost
Stego Tape is available nationally via building supply distributors. For current cost information, contact your local Stego distributor or Stego Industries' sales department.

7. Warranty
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8. Maintenance
None required.

9. Technical Services
Technical advice, custom CAD drawings, and additional information can be obtained by contacting Stego Industries' technical assistance department or by visiting the website.

10. Filing Systems
- Stego Industries' website
- Buildsite

TABLE 1: PHYSICAL PROPERTIES OF STEGO TAPE

PROPERTY	RESULTS
Total Thickness	6 mils
Permeance	0.03 perms
Tensile Strength	17 lbs./in. width
Elongation (at break) MD	1060%
Adhesion (20 min dwell ss, PSTC 101)	95-oz./in. width
Ultraviolet Resistance	Excellent

Fantech

Installation Instructions for Radon Fans Model HP/FR

READ & SAVE THESE INSTRUCTIONS!

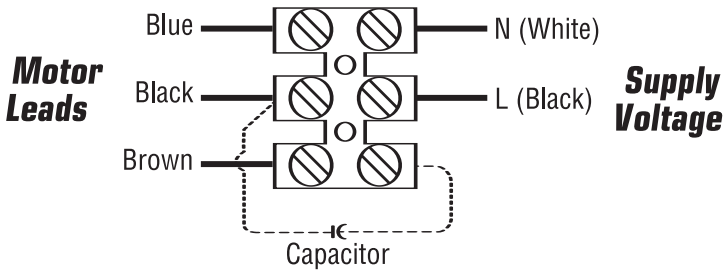
Warnings

DO NOT CONNECT POWER SUPPLY UNTIL FAN IS COMPLETELY INSTALLED, MAKE SURE ELECTRICAL SERVICE TO THE FAN IS LOCKED IN "OFF: POSITION.

1. Suitable for use with solid-state speed control.
2. This unit has rotating parts and safety precautions should be exercised during installation, operation and maintenance.
3. CAUTION: "For General Ventilation Use Only. Do Not Use To Exhaust Hazardous Or Explosives Materials and Vapors."
4. **WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS-OBSERVE THE FOLLOWING:**
   a. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the factory.
   b. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
   c. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
   d. The combustion airflow needed for safe operation of fuel burning equipment may be affected by this unit's operation. Follow the heating equipment manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) and the local code authorities.
   e. When cutting or drilling into wall or ceiling, do not damage electrical wires or other hidden utilities.
   f. Ducted fans must always be vented to the outdoors.
   g. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application.
   h. NEVER place a switch where it can be reached from a tub or shower.
5. WARNING! Check voltage at the fan to see if it corresponds to the motor nameplate.

GUARDS MUST BE INSTALLED WHEN FAN IS WITHIN REACH OF PERSONNEL OR WITHIN SEVEN (7) FEET OF WORKING LEVEL OR WHEN DEEMED ADVISABLE FOR SAFETY.

Wiring Diagram



Five (5) Year Warranty

This warranty supersedes all prior warranties

Installation that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet duction, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

DURING ENTIRE WARRANTY PERIOD:

FANTECH will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
  1. Improper maintenance
  2. Misuse, abuse, abnormal use, or accident, and
  3. Incorrect electrical voltage or current.
- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

United States
1712 Northgate Blvd.,
Sarasota, FL. 34234
Phone: 800.747.1762; 941.309.6000
Fax: 800.487.9915; 941.309.6099
www.fantech.net; info@fantech.net

Canada
50 Kanalflakt Way,
Bouctouche, NB E4S 3M5
Phone: 800.565.3548; 506.743.9500
Fax: 877.747.8116; 506.743.9600
www.fantech.ca; info@fantech.ca

Article #: 301077
Item #: 401443
Rev Date: 010307

Fantech

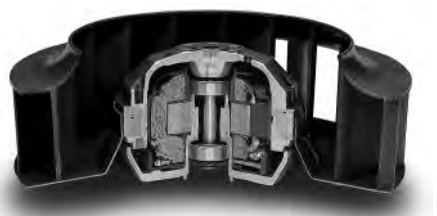
HP SERIES

FANS FOR RADON APPLICATIONS

WITH IMPROVED UV RESISTANCE!

TRUST THE INDUSTRY STANDARD. HERE'S WHY:

Don't put your reputation at stake by installing a fan you know won't perform like a Fantech! For nearly twenty years, Fantech has manufactured quality ventilation equipment for Radon applications. Fantech is the fan Radon contractors have turned to in over 1,000,000 successful Radon installations worldwide.



Fantech external rotor motor

FANTECH HP SERIES FANS MEET THE CHALLENGES OF RADON APPLICATIONS:

HOUSING
- UV resistant, UL Listed durable plastic
- UL Listed for use in commercial applications
- Factory sealed to prevent leakage
- Watertight electrical terminal box
- Approved for mounting in wet locations - i.e. Outdoors

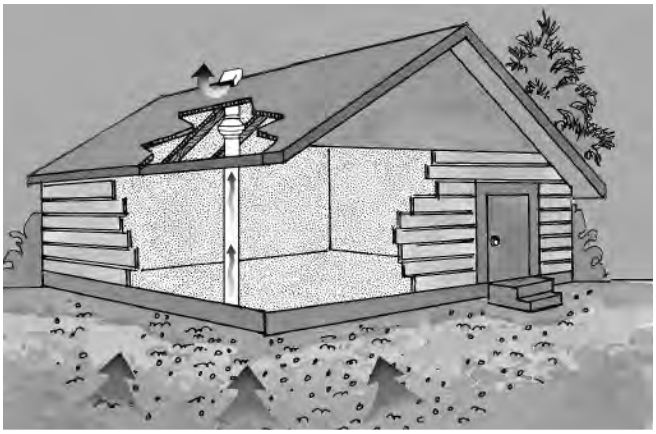
MOTOR
- Totally enclosed for protection
- High efficiency EBM motorized impeller
- Automatic reset thermal overload protection
- Average life expectancy of 7-10 years under continuous load conditions

RELIABILITY
- Five Year Full Factory Warranty
- Over 1,000,000 successful radon installations worldwide

Fantech

HP Series Fans are Specially Designed with Higher Pressure Capabilities for Radon Mitigation Applications

MOST RADON MITIGATORS WHO PREVIOUSLY USED THE FANTECH FR SERIES FANS HAVE SWITCHED TO THE NEW HP SERIES.



PERFORMANCE DATA

Fan Model	Volts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.								Max. Ps
				0"	0.5"	0.75"	1.0"	1.25"	1.5"	1.75"	2.0"	
HP2133	115	14 - 20	0.17	134	68	19	-	-	-	-	-	0.84
HP2190	115	60 - 85	0.78	163	126	104	81	58	35	15	-	1.93
HP175	115	44 - 65	0.57	151	112	91	70	40	12	-	-	1.66
HP190	115	60 - 85	0.78	157	123	106	89	67	45	18	1	2.01
HP220	115	85 - 152	1.30	344	260	226	193	166	137	102	58	2.46

HVI MEMBER™

PERFORMANCE CURVES

Fantech provides you with independently tested performance specifications.

The performance curves shown in this brochure are representative of the actual test results recorded at Texas Engineering Experiment Station/Energy Systems Lab, a recognized testing authority for HVI. Testing was done in accordance with AMCA Standard 210-85 and HVI 916 Test Procedures. Performance graphs show air flow vs. static pressure.

Use of HP Series fans in low resistance applications such as bathroom venting will result in elevated sound levels. We suggest FR Series or other Fantech fans for such applications.

HP FEATURES INCLUDE

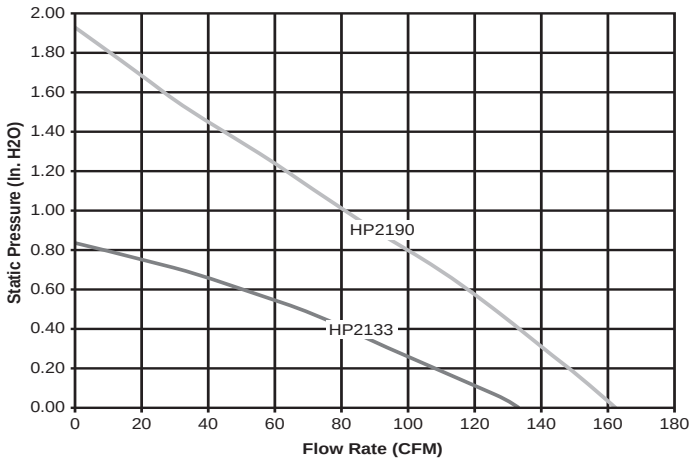
- Improved UV resistant housings approved for commercial applications.
- UL Approved for Wet Locations (Outdoors)
- Sealed housings and wiring boxes to prevent Radon leakage or water penetration
- Energy efficient permanent split capacitor motors
- External wiring box
- Full Five Year Factory Warranty

c UL us

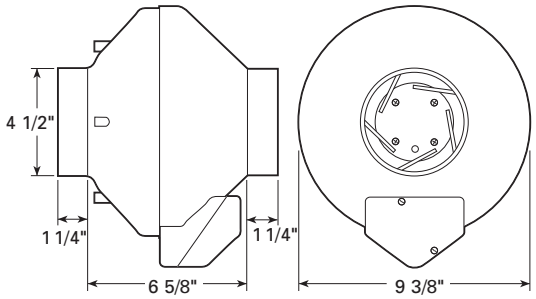
NOTE:

Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

HP2133 & HP2190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.

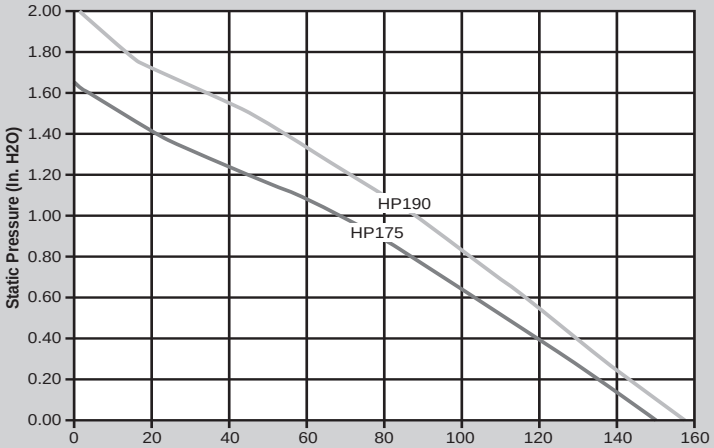


HP2133 – For applications where lower pressure and flow are needed. Record low power consumption of 14-20 watts! Often used where there is good sub slab communication and lower Radon levels.

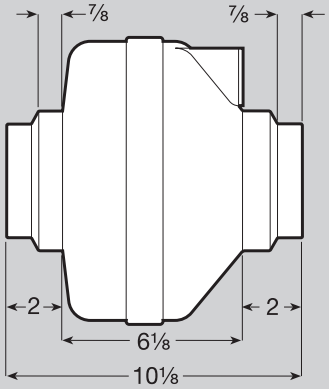
HP2190 – Performance like the HP190 but in a smaller housing. Performance suitable for the majority of installations.

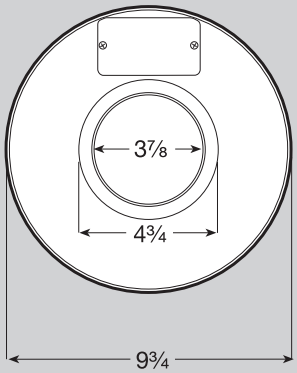
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-44, Pipeconx PCX 56-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP175 & HP190 RADON MITIGATION FANS



Tested with 4" ID duct and standard couplings.



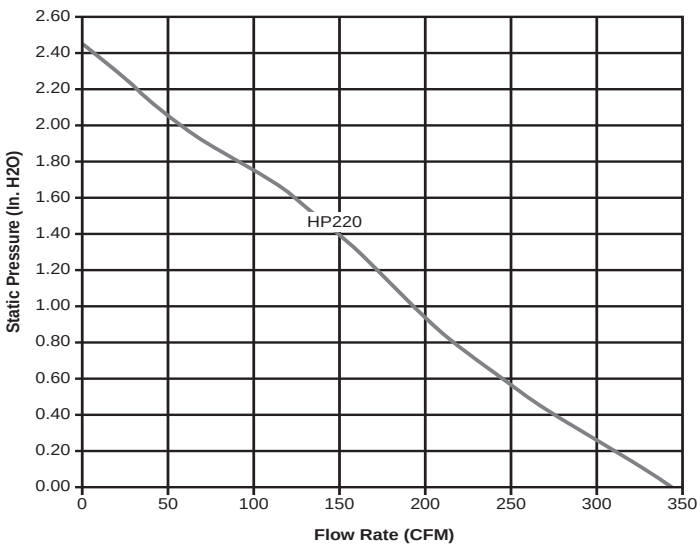


HP175 – The economical choice where slightly less air flow is needed. Often used where there is good sub slab communication and lower Radon levels.

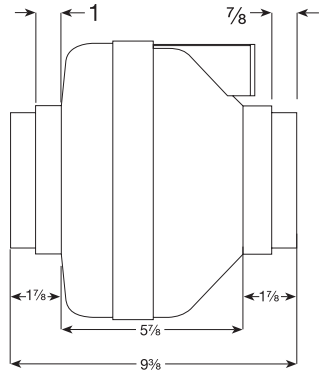
HP190 – The standard for Radon Mitigation. Ideally tailored performance curve for a vast majority of your mitigations.

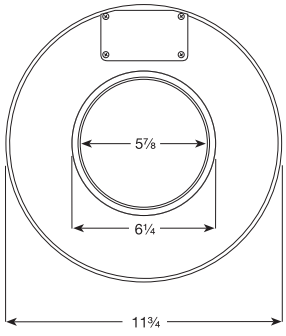
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #151-44, Pipeconx PCX 51-44 or equivalent.
For 3" PVC pipe use Indiana Seals #156-43, Pipeconx PCX 56-43 or equivalent.

HP220 RADON MITIGATION FAN



Tested with 6" ID duct and standard couplings.





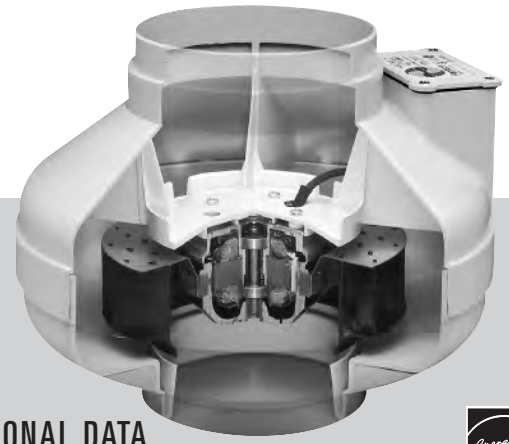
HP 220 – Excellent choice for systems with elevated radon levels, poor communication, multiple suction points and large subslab footprint. Replaces FR 175.

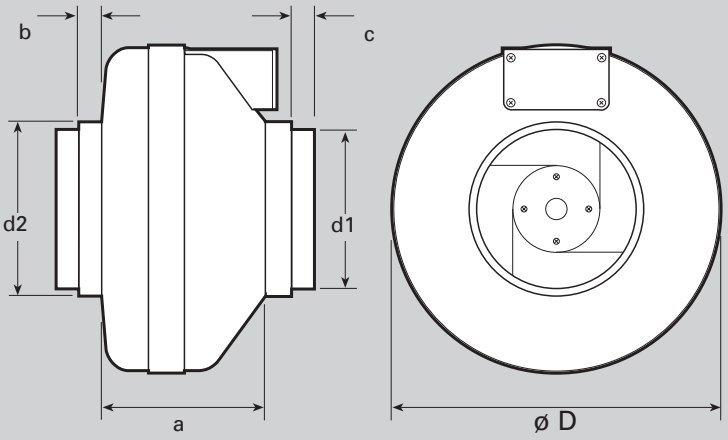
Fans are attached to PVC pipe using flexible couplings.
For 4" PVC pipe use Indiana Seals #156-64, Pipeconx PCX 56-64 or equivalent.
For 3" PVC pipe use Indiana Seals #156-63, Pipeconx PCX 56-63 or equivalent.

Fantech

FR SERIES

THE ORIGINAL MITIGATOR





DIMENSIONAL DATA

model	øD	d1	d2	a	b	c
FR100	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR110	9 1/2	3 7/8	4 7/8	6 1/8	7/8	7/8
FR125	9 1/2	–	4 7/8	6 1/8	7/8	–
FR140	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR150	11 3/4	5 7/8	6 1/4	5 7/8	1	7/8
FR160	11 3/4	5 7/8	6 1/4	6 3/8	1	7/8
FR200	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR225	13 1/4	7 7/8	9 7/8	6 1/4	1 1/2	1 1/2
FR250	13 1/4	–	9 7/8	6 1/4	–	1 1/2

All dimensions in inches

PERFORMANCE DATA

Fan Model	Energy Star	RPM	Volts	Rated Watts	Wattage Range	Max. Amps	CFM vs. Static Pressure in Inches W.G.							Max. Ps	Duct Dia.
							0"	.2"	.4"	.6"	.8"	1.0"	1.5"		
FR100	✓	2950	120	21.2	13 - 22	0.18	137	110	83	60	21	-	-	0.90"	4"
FR125	✓	2950	115	18	15 - 18	0.18	148	120	88	47	-	-	-	0.79"	5"
FR150	✓	2750	120	71	54 - 72	0.67	263	230	198	167	136	106	17	1.58"	6"
FR160	-	2750	115	129	103 - 130	1.14	289	260	233	206	179	154	89	2.32"	6"
FR200	✓	2750	115	122	106 - 128	1.11	408	360	308	259	213	173	72	2.14"	8"
FR225	✓	3100	115	137	111 - 152	1.35	429	400	366	332	297	260	168	2.48"	8"
FR250*	-	2850	115	241	146 - 248	2.40	649	600	553	506	454	403	294	2.58"	10"

FR Series performance is shown with ducted outlet. Per HVI's Certified Ratings Program, charted air flow performance has been derated by a factor based on actual test results and the certified rate at .2 inches WG.
** Also available with 8" duct connection. Model FR 250-8. Special Order.*

NOTE:

Installations that will result in condensate forming in the outlet ducting should have a condensate bypass installed to route the condensate outside of the fan housing. Conditions that are likely to produce condensate include but are not limited to: outdoor installations in cold climates, long lengths of outlet ducting, high moisture content in soil and thin wall or aluminum outlet ducting. Failure to install a proper condensate bypass may void any warranty claims.

FIVE YEAR WARRANTY

DURING ENTIRE WARRANTY PERIOD:

FANTECH will replace any fan which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling FANTECH either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty fan and is invoiced.
The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:

1. Improper maintenance
2. Misuse, abuse, abnormal use, or accident, and
3. Incorrect electrical voltage or current.

- Removal or any alteration made on the FANTECH label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

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Item #: 411741
Rev Date: 021010

APPENDIX K
CORRESPONDENCE RELATED TO RELIEF FROM GROUNDWATER MONITORING REQUIREMENTS

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **Fax:** (518) 402-9679
Website: www.dec.ny.gov

Joe Martens
Commissioner

Via E-mail and Regular Mail

December 22, 2014

Kurt F. Wendler
Managing Partner
Sphere STP LLC
PO Box 207
Manlius, NY 13104

Re: Discontinuation of Ground Water Monitoring
Skinner Automotive BCP site, Site #C622031
Herkimer, Herkimer County

Dear Mr. Wendler:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed a request dated December 17, 2014 received from OneGroup NY, Inc. to discontinue groundwater monitoring required by Site Management Plan (SMP). The Department hereby agrees to the request to discontinue groundwater monitoring required by SMP and Sphere STP LLC may decommission existing ground water monitoring wells located on site in accordance with the Department's policy CP-43: Groundwater Monitoring Well Decommissioning. (http://www.dec.ny.gov/docs/remediation_hudson_pdf/cp43mwdecomm.pdf).

Within 30 days of the date of this letter, please revise SMP by vacating Section 3.3 (Media Monitoring) of the SMP, appending December 17, 2014 submission including this approval letter to the SMP and submit revised SMP for the Department approval. Please note that Sphere STP LLC must continue to comply with the remainder of the requirements set forth in the approved SMP including but not limited to maintaining site cover and operating sub-slab depressurization system.

If you have any questions, please contact the Department's Project Manager, Parag Amin, at (518) 402-9662 or parag.amin@dec.ny.gov.

Sincerely,

Parag Amin, P.E.
Remedial Bureau C
Division of Environmental Remediation

ecc: D. Crosby, DER, CO
G. Heitzman, DER, CO
N. Freeman, NYSDOH
M. Schuck, NYSDOH
J. Blasting, OneGroup NY, Inc.

ONEGROUP®
A World of Risk Management and Insurance Expertise
Bailey & Haskell Insurance
Benefit Consulting Group
Schenectady Insuring Agency
Workplace Health Solutions

17 December 2014

Mr. Parag Amin
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, NY 12233-7014

VIA EMAIL pbamin@gw.dec.state.ny.us

RE: Summary of Sampling Activities and Results, and Request for OM&M Change
Former Skinner Automotive Site (BCP Site No. C622031-06-12)
700 Mohawk Street, Herkimer, NY 13350

Dear Parag;

In accordance with New York State Department of Environmental Conservation (NYSDEC) Site Management requirements, OneGroup NY, Inc. (OneGroup) completed groundwater sampling and analyses at the former Skinner Automotive property (BCP Site No. C622031-06-12) located at 700 Mohawk Street in Herkimer, NY (the "Site") on behalf of the Site owner and BCP Volunteer, Sphere STP LLC (Sphere). On 17 November 2014, OneGroup submitted a letter report to NYSDEC which described the work performed and associated results, and provide conclusions and recommendations.

On 5 December 2014, Jim Blasting of OneGroup and Kurt Wendler of Sphere participated in a conference call with NYSDEC to discuss, among other things, Sphere's request for the elimination of the groundwater monitoring requirement and the closure of the five on-site groundwater monitoring wells. During that discussion, NYSDEC indicated that the request would be considered if the following were completed:

- The results of the 27 August 2014 groundwater sampling event be added to the table of historic groundwater sampling results;
- Post-remediation groundwater sampling results from 'former source area' monitoring well MW-1, including the 27 August 2014 results, be graphed to show reductions over time;
- A map showing the location of all groundwater monitoring wells be added to the report; and
- A Data Usability Summary Report (DUSR) be prepared by a qualified environmental chemist.

Sphere has completed all of the requirement discussed on 5 December 2014 as transmitted herewith. This submittal is an update of the 17 November 2014 letter report and provides the additional information requested by NYSDEC.

Please note that, as previously discussed:

- Sphere is in the process of marketing this site; therefore, site ownership may change (Sphere will inform NYSDEC of any pending change in Site ownership);
- Due to business considerations, ***Sphere requests a determination regarding the request to remove groundwater monitoring from the operation and maintenance requirements and properly decommission the existing monitoring wells*** (please refer to the Conclusions and Recommendations section of this submittal).

The subject site in located in the Town of Herkimer, Herkimer County in a commercial location approximately 850 feet north of the Herkimer thruway exit, Exit 30 (see attached Figure 1). Please recall that this site was completely remediated and re-developed by the Volunteer in accordance with the Brownfield Cleanup Agreement and a Certificate of Completion (COC) was issued on 11 December 2012. Site remediation included the removal of all potential sources of groundwater contamination and remediation by chemical oxidation of the one localized "hot spot" of affected groundwater. Chemical oxidation components were introduced in July 2012. Three rounds of groundwater monitoring were conducted prior to issuance of the COC (2/9/12, 8/15/12 and 10/18/12), and three groundwater sampling events were conducted post-COC (2/21/13, 5/30/13 and 8/6/13). The data set documents that groundwater was successfully treated, as none of the samples analyzed in August 2013 contained analytes in excess of groundwater standards. At that time, Sphere's consultant concluded that additional groundwater monitoring was not necessary and that groundwater monitoring wells should be properly closed. NYSDEC requested one more round of groundwater sampling. The requested sampling was conducted on 27 August 2014 as described herein.

SITE INSPECTION: August 2014

On 27 August 2014, OneGroup's Qualified Environmental Professional (QEP) performed a site inspection in accordance with the NYSDEC-approved Operations, Monitoring and Maintenance (OMM) Plan. A copy of the completed site-wide inspection log is attached.

As documented on the completed form, there were no abnormal conditions observed in the site cover system during these inspections.

Also as documented on the completed form, the condition of the fan and piping for the SSDS and the concrete building slab were found to be in normal condition during the inspection, and vacuum pressure on the manometer was 2.5 inches Hg.

The cover system and SSDS engineering controls are in place. There are no deficiencies in the engineering controls at the Site. Corrective measures are not required.

GROUNDWATER MONITORING: August 2014

As requested by NYSDEC, groundwater samples were collected from monitoring wells MW-1 and MW-4 on 27 August 2014. Water level measurements were obtained from all on-site wells prior to well purging and sampling (see attached Table 1). The data show that groundwater flow direction is to the south-southeast as previously documented. Well locations and groundwater flow direction, based on August 2014 measurements, are shown on Figure 2.

At least three well volumes of water were purged from each well prior to sampling; however, water produced by the wells was still somewhat turbid. Purging was conducted using dedicated bailers and nylon string; the same dedicated bailers were used for well sampling. Samples were submitted to Alpha Analytical, Inc. (Alpha), a New York State Department of Health (NYSDOH)-approved laboratory, under proper chain-of-custody. Per NYSDEC's request, each groundwater sample was analyzed for Target Compound List VOCs (USEPA Method 8260) and TCL SVOCs (USEPA Method 8270).

Don Anne' of Alpha Geoscience validated the laboratory package which included 'Category B' quality control deliverables. Mr. Anne' is an environmental chemist with over 30 years of professional experience and is accepted by NYSDEC as a data validator. The DUSR prepared by Mr. Anne' (attached) concluded that "The data were acceptable for Alpha Analytical Labs, lab number L1419648 with minor issues outlined in the QA/QC reviews".

The results of groundwater sample analyses are summarizes below (laboratory data reports and QA/QC reports are provided under separate cover).

Sample	Analyte	GWQS (ppb)	Concentration (ppb)
MW-1	Tetrachloroethene	5	0.61
MW-1	Ethylbenzene	5	1J
MW-1	Acetone	50	3.5J
MW-1	Isopropylbenzene	5	0.85J
			5.96 Total VOCs

[**NOTE-** Caprolactam, a component of nylon string, was detected in sample MW-1 and MW-4 at a concentration of 11 ppb. This is either a laboratory remnant or an effect of the string used in sampling. There is no GWQS for Caprolactam. No other SVOCs were detected in either sample.]

EVALUATION OF HISTORIC AND CURRENT GROUNDWATER DATA

Historic and current analytical results of samples collected from all wells are presented on the attached Table 2 (2014 results have been added 'hand-written'). A comparison of analytical results from August 2013 and August 2014 sampling events are provided on Table 3.

TCL VOCs and TCL SVOCs were not detected at concentrations exceeding applicable Ground Water Quality Standards (GWQS) in any of the groundwater samples collected during the August 2013 groundwater sampling event. The August 2014 groundwater samples also did not contain TCL VOCs or TCL SVOCs at concentrations exceeding the GWQS. At MW-1, the total VOC concentration fell from 15.74 ppb (August 2013) to 5.96 ppb (August 2014).

As required by NYSDEC, four rounds of sampling were conducted on a quarterly basis in 2012 to documents the success of groundwater remediation. The 2012 quarterly groundwater monitoring documented the following:

- Contaminants of Concern (CoCs) were never detected in downgradient monitoring wells MW-2 and MW-3 which are located along the eastern extent of the site;
- CoCs were never detected in monitoring well MW-4, which is located immediately downgradient (within 60 feet) of the former source area;
- CoCs were never detected in upgradient monitoring well MW-5;
- Within one year of remediation, total VOC concentration in samples from monitoring well MW-1 (located within the former source area) were reduced from 4327.95 ppb to 87.7 ppb, a reduction of 98%, with five CoCs present at concentrations slightly exceeding NYSDEC groundwater quality standards (GWQS).

NYSDEC requested an additional sampling event in August 2013 from monitoring wells MW-1 and MW-4. This sampling was conducted and showed that CoCs still were not present in the sample from MW-4 and that total VOC concentrations in the sample from MW-1 has decreased from 87.7 (5/30/13 sampling event) to 15.74 ppb (8/6/13 sampling event) and that **all concentrations were below GWQS**.

Based on those data, Sphere requested that the requirement for groundwater monitoring be removed. NYSDEC responded that one more sampling event from MW-1 and MW-4 was required after one year. As such, Sphere arranged for groundwater sampling in August 2014. That sampling event documented that total VOC concentration in the sample from MW-1 were 5.96 ppb and that **all concentrations were below GWQS.** Once again, CoCs were not detected in the sample from MW-4. Total reduction in VOC concentration is the source area is nearly 100% and there has been no migration of CoCs. Post-remediation reductions of total VOC concentrations in groundwater samples collected from monitoring well MW-1 are presented graphically on the attached Figure 3.

The data demonstrate that past source removal and groundwater treatment activities have completely remediated previously-affected groundwater which had been present only in one localized area of the Site.

CONCLUSIONS AND RECOMMENDATIONS

Source removal and groundwater remediation activities have achieved the remedial objectives for groundwater at the Site and, as such, further groundwater monitoring is not needed. **OneGroup recommends discontinuing groundwater monitoring and immediately abandoning the onsite monitoring wells in accordance with NYSDEC's "CP-43: Groundwater Monitoring Well Decommissioning Policy dated November 3, 2009."** Well decommissioning will be by 'grouting-in-place' as described in Section 2.1 of the above-referenced policy.

Due to business considerations, ***Sphere requests a determination from NYSDEC regarding these recommendations as soon as possible***. Please let me know if additional information is needed and/or if you would like to discuss these recommendations. Thank you for your attention to this request.

Sincerely;
OneGroup of NY, Inc.

James F. Blasting

James F. Blasting, P.G.
Qualified Environmental Professional

CC: Mr. David Crosby, NYSDEC
Mr. Kurt Wendler, Sphere STP LLC

Attachments

SITE-WIDE INSPECTION LOG
BCP SITE #C622031
700 MOHAWK STREET
HERKIMER, NY

SITE INSPECTION LOG	Date: 8-27-14
Inspector: Jame F Blasting	Time Begin: 9:45 AM
Signature: JFBl	Time End: 11:00 AM
Sheet: 1 of 1	Weather: 75° overcast

Institutional Control Evaluation

Institutional Control Item	Compliant? Yes	Compliant? No	Comments/Corrective Actions
Commercial Site Usage	X		
Prohibited Groundwater Usage	X		
Record Keeping/Records Updated	X		

Engineering Control Evaluation

Specific Item to Inspect	Typical Problems Encountered	Conditions Observed Normal	Conditions Observed Abnormal (Attach Report)	Comments or Corrective Action(s) Implemented and Date(s)
Soil Cover Systems	Erosion	☒ none	☐	Some ruts had developed over winter. Owner added topsoil to low areas and seeded No problems.
	Vegetation	☒	☐	
	Settling/Ponding	☒ none	☐	
	Uplift	☒ none	☐	
	Washouts	☒ none	☐	
	Rodent Holes	☒ none	☐	
Pavement Areas	Settling/Ponding	☒ NONE	☐	
	Uplift	☒	☐	
	Cracks	☒	☐	
	Potholes	☒	☐	
	Deterioration	☒	☐	
Sub-Slab Depressurization System	Fan	☒	☐	All very good condition. Fan operational
	Manometer	☒	☐	
	Piping	☒	☐	
	Concrete Slab	☒	☐	
Groundwater Monitoring Wells	Prot-casing	☒	☐	All good condition
	Locked ?	☒	☐	
	Inside cap	☒ Good	☐	
	Surface seal	☒	☐	
Groundwater Monitoring	Water Levels (measured)	☒	☐	W.L. Req'd: YES ☒ NO ☐
	GW Samples (collected)	☒	☐	Sampling Req'd: : YES ☒ NO ☐ Date Completed: 8-27-14 Analysis: TCL VOC TCL SVOC

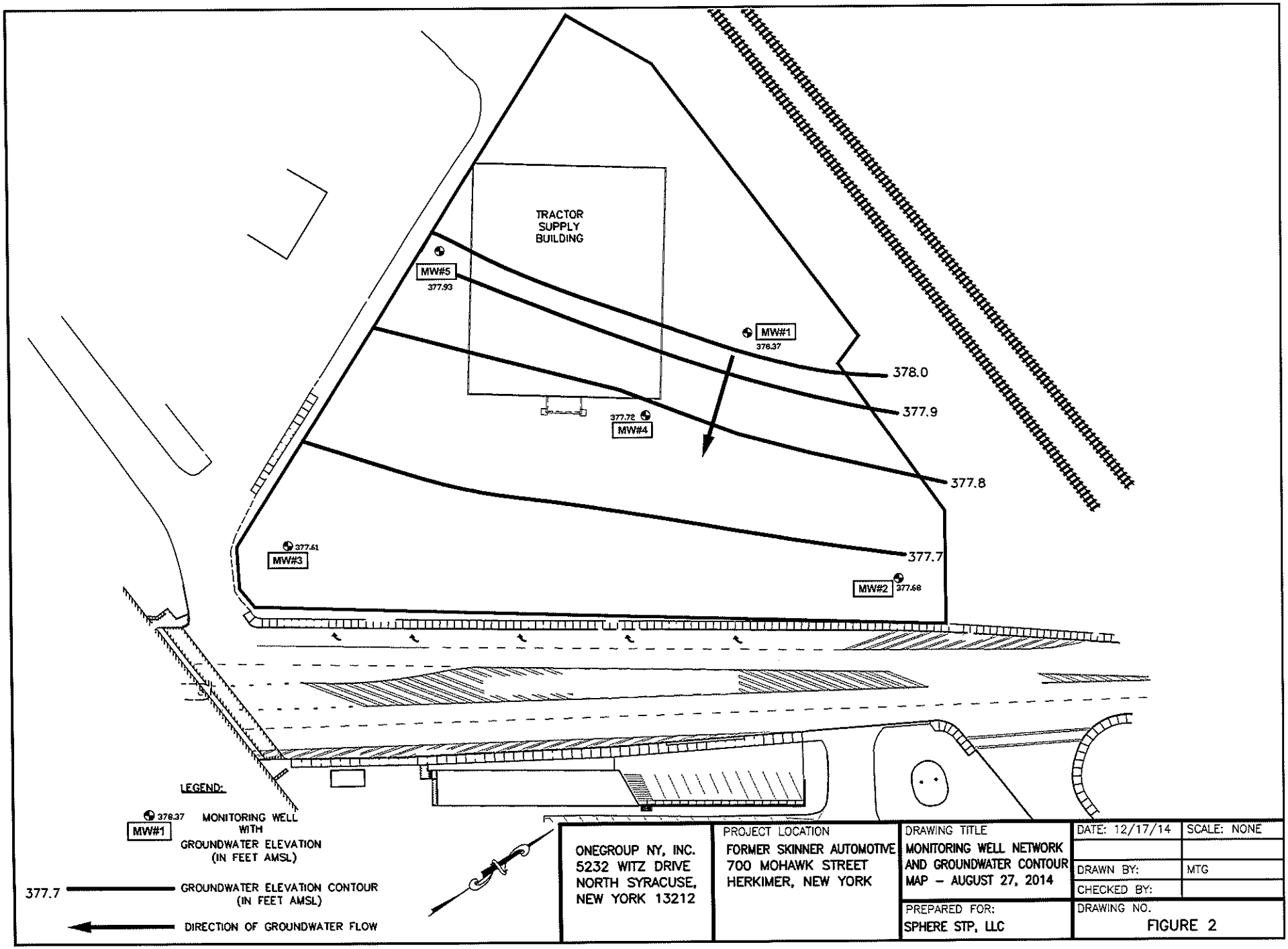
Comments: Site is in very good condition.

FIGURES

0 1000'

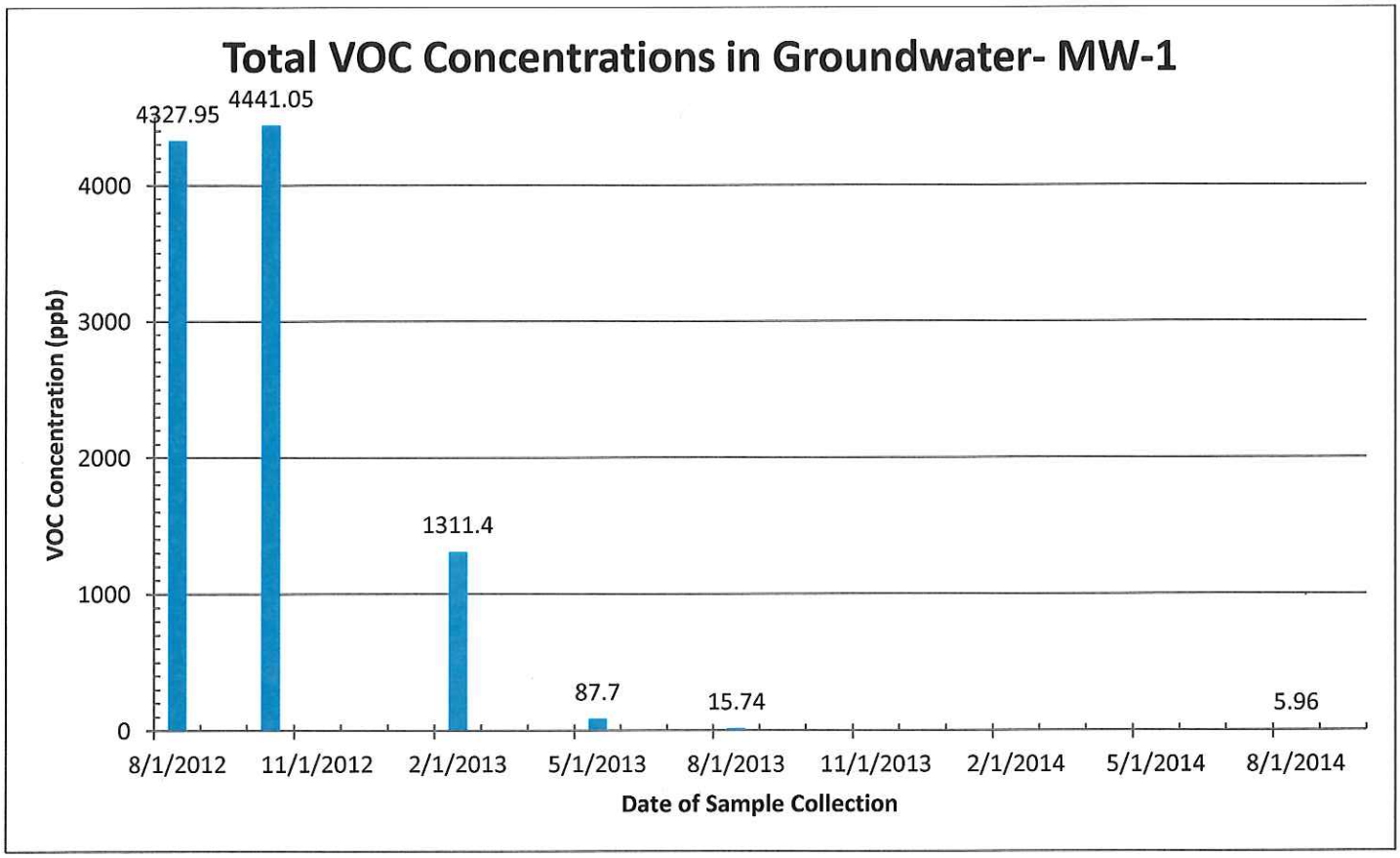
SCALE (IN FEET)

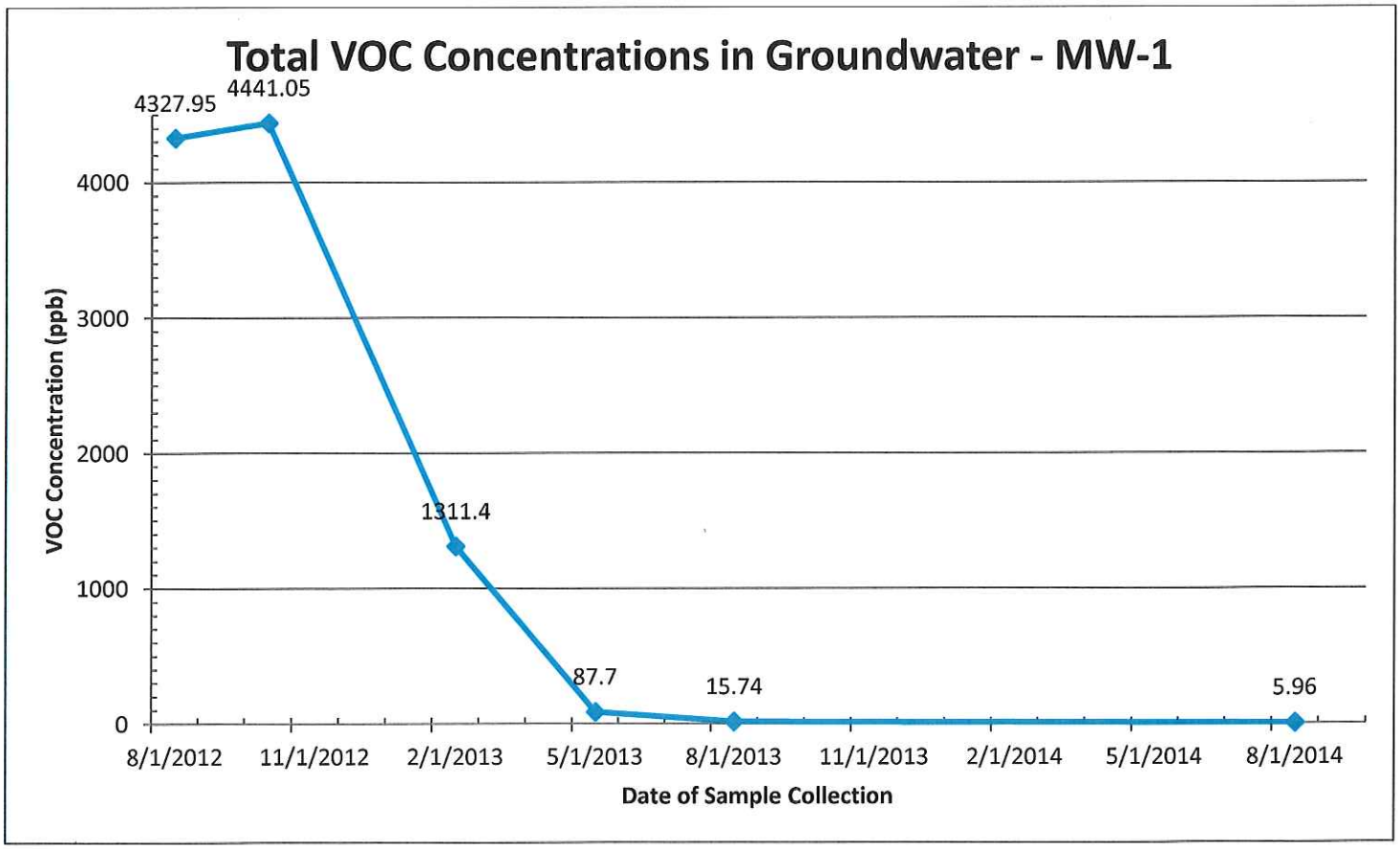
ONEGROUP NY, INC. 5232 WITZ DRIVE NORTH SYRACUSE, NEW YORK 13212	PROJECT LOCATION FORMER SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK	DRAWING TITLE SITE LOCATION MAP	DATE: 12/17/14	SCALE: AS NOTED
			DRAWN BY:	MTG
			CHECKED BY:	
		PREPARED FOR: SPHERE STP, LLC	DRAWING NO. FIGURE 1	



ONEGROUP NY, INC. 5232 WITZ DRIVE NORTH SYRACUSE, NEW YORK 13212	PROJECT LOCATION FORMER SKINNER AUTOMOTIVE 700 MOHAWK STREET HERKIMER, NEW YORK	DRAWING TITLE MONITORING WELL NETWORK AND GROUNDWATER CONTOUR MAP – AUGUST 27, 2014	DATE: 12/17/14 DRAWN BY: MTG CHECKED BY:	SCALE: NONE
		PREPARED FOR: SPHERE STP, LLC	DRAWING NO. FIGURE 2	

Figure 3: Post-remediation CoC trends in former source area monitoring well MW-1





TABLES

Table 1
Relative Groundwater Elevations
700 Mohawk Street, Herkimer, NY

		8/15/2012		10/18/2012			2/21/2013	
Monitoring Well Location	Elevation (Feet Above Mean Sea Level)	DTW (Feet)	GW Elevation (Feet)	Elevation (Feet Above mean sea level)	DTW (Feet)	GW Elevation (Feet)	DTW (Feet)	GW Elevation (Feet)
MW01	394.87	17.22	377.65	391.89	14.20	377.69	13.88	378.01
MW02	394.25	17.72	376.53	390.38	13.34	377.04	13.09	377.29
MW03	394.35	17.76	376.59	391.19	14.03	377.16	13.78	377.41
MW04	395.15	18.51	376.64	392.83	15.69	377.14	15.42	377.41
MW05	393.88	17.19	376.69	392.16	15.13	377.03	14.85	377.31

	5/30/2013		8/6/2013		8/27/2014	
Monitoring Well Location	DTW (Feet)	GW Elevation (Feet)	DTW (Feet)	GW Elevation (Feet)	DTW (Feet)	GW Elevation (Feet)
MW01	13.21	378.68	13.29	378.60	13.52	378.37
MW02	12.31	378.07	12.5	377.88	12.45	377.68
MW03	12.97	378.22	13.15	378.04	13.58	377.61
MW04	14.64	378.19	14.81	378.02	15.11	377.72
MW05	14.1	378.06	14.22	377.94	14.48	377.93

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York
(prepared for Sphere STP LLC by Greystone: 1-31-14 PRR)

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	AOC 3 MW01-081512 8/15/2012	MW01-101812 10/18/2012	MW01-022113 2/21/2013	MW01-053013 5/30/2013	MW11-053013 5/30/2013 Duplicate	MW01-080613 8/6/2013
Semivolatile Organic Compounds (SVOCs)							
Biphenyl	--	ND	ND	ND	ND	ND	ND
Phenol	1	ND	**880**	ND	ND	ND	ND
3-Methylphenol/4-Methylphenol	--	ND	1900	ND	ND	ND	ND
Benzoic Acid	--	1200	8500	ND	ND	ND	ND
Benzyl Alcohol	--	ND	51	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND	ND
Naphthalene	10	75	76	**40**	ND	ND	1
Fluorene	50	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	--	33	32	20	ND	ND	0.62
Volatile Organic Compounds (VOCs)							
Chloroform	7	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	0.8	0.92	ND	0.33J	0.35 J	0.35 J
1,2-Dichloroethane	0.6	ND	0.33 J	ND	ND	ND	ND
Benzene	1	**9.9**	**9.3**	7	0.25 J	0.21 J	ND
Toluene	5	2.1 J	1.6 J	ND	ND	ND	ND
Ethylbenzene	5	**290**	**330**	**120**	**7.1**	**5.9**	ND
Chloromethane	--	18	9.3	8.8 J	ND	ND	ND
Bromomethane	5	2.2 J	3.5	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND
Chloroethane	5	0.95 J	ND	ND	ND	ND	ND
p/m-Xylene	5	**1000**	**1200**	**300**	**14**	**12**	0.86 J
o-Xylene	5	**110**	**110**	**20 J**	0.82 J	ND	ND
1,2,3-Trichloropropane	0.04	**16**	ND	ND	ND	ND	ND
Acetone	50	**530**	**170**	**78**	8.5	3.7 J	2.7 J
Carbon disulfide	60	11	11	ND	ND	ND	ND
2-Butanone	50	ND	74	ND	1.8 J	ND	ND
4-Methyl-2-pentanone	--	63	8.1	ND	ND	ND	ND
n-Butylbenzene	5	**24**	**52**	**16 J**	1.4 J	ND	ND
sec-Butylbenzene	5	**15**	**17**	**9.6 J**	ND	ND	ND
Isopropylbenzene	5	**110**	**120**	**67**	4.3	3.5	0.73 J
p-Isopropyltoluene	5	ND	**10**	ND	ND	ND	ND
Naphthalene	10	**93**	**91**	**42**	2.4 J	2.9	1.7 J
n-Propylbenzene	5	**180**	**210**	**110**	**6.6**	**5.6**	1.0 J
1,3,5-Trimethylbenzene	5	**240**	**220**	**50**	**5.5**	4.8	ND
1,2,4-Trimethylbenzene	5	**620**	**760**	**130**	**9.9**	**9.3**	2.1 J
1,4-Diethylbenzene	--	150	43	60	5.8	ND	ND
4-Ethyltoluene	--	760	850	270	19	17	2
1,2,4,5-Tetramethylbenzene	--	82	140	23	1.8 J	ND	4.3
Total VOCs	--	4327.95	4441.05	1311.4	87.7	65.26	15.74

MW-01 8-27-14
ND
0.61
15
3.5 J
0.85 J
5.96

Notes:
All samples analyzed for TCL SVOCs and TCL VOCs.
Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
-- -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	AOC 7 MW02-081512 8/15/2012	MW02-101812 10/18/2012	MW02-022113 2/21/2013	MW02-053013 5/30/2013	MW02-080613 8/6/2013
Semivolatile Organic Compounds (SVOCs)						
Biphenyl	--	ND	ND	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND
3-Methylphenol/4-Methylphenol	--	ND	ND	ND	ND	ND
Benzoic Acid	--	ND	ND	ND	ND	ND
Benzyl Alcohol	--	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND
2-Methylnaphthalene	--	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
Chloroform	7	1.3 J	0.74 J	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND
Chloromethane	--	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
p/m-Xylene	5	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND
Acetone	50	ND	1.3 J	ND	ND	3.4 J
Carbon disulfide	60	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	--	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,4-Diethylbenzene	--	ND	ND	ND	ND	ND
4-Ethyltoluene	--	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	--	ND	ND	ND	ND	ND
Total VOCs	--	1.3 J	2.04	ND	ND	3.4 J

Notes:
All samples analyzed for TCL SVOCs and TCL VOCs.
Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
-- -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	AOC 10 & 11					
		MW03-081512	MW33-081512	MW03-101812	MW03-022113	MW03-053013	MW03-080613
		8/15/2012	8/15/2012	10/18/2012	2/21/2013	5/30/2013	8/6/2013
			Duplicate				
Semivolatile Organic Compounds (SVOCs)							
Biphenyl	–	ND	ND	ND	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND	ND
3-Methylphenol/4-Methylphenol	–	ND	ND	ND	ND	ND	ND
Benzoic Acid	–	ND	ND	ND	ND	ND	ND
Benzyl Alcohol	–	ND	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	–	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)							
Chloroform	7	ND	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND	ND
Chloromethane	–	ND	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND	ND
p/m-Xylene	5	ND	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND	ND
Acetone	50	ND	ND	1 J	ND	ND	1.2 J
Carbon disulfide	60	ND	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	–	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND
1,4-Diethylbenzene	–	ND	ND	ND	ND	ND	ND
4-Ethyltoluene	–	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	–	ND	ND	ND	ND	ND	ND
Total VOCs	–	ND	ND	1 J	ND	ND	1.2 J

Notes:
All samples analyzed for TCL SVOCs and TCL VOCs.
Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
– -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	AOC 8 & 9 MW04-081512 8/15/2012	MW04-101812 10/18/2012	MW04-022113 2/21/2013	MW04-053013 5/30/2013	MW04-080613 8/6/2013
Semivolatile Organic Compounds (SVOCs)						
Biphenyl	--	ND	ND	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND
3-Methylphenol/4-Methylphenol	--	ND	ND	ND	ND	ND
Benzoic Acid	--	ND	ND	ND	ND	ND
Benzyl Alcohol	--	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND
2-Methylnaphthalene	--	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
Chloroform	7	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND
Chloromethane	--	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
p/m-Xylene	5	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND
Acetone	50	ND	ND	ND	ND	1.8 J
Carbon disulfide	60	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	--	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,4-Diethylbenzene	--	ND	ND	ND	ND	ND
4-Ethyltoluene	--	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	--	ND	ND	ND	ND	ND
Total VOCs	--	ND	ND	ND	ND	1.8 J

MW-04 5-27-14

ND

ND

Notes:
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Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
-- -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	AOC 6				
		MW05-081512	MW05-101812	MW05-022113	MW05-053013	MW05-080613
		8/15/2012	10/18/2012	2/21/2013	5/30/2013	8/6/2013
Semivolatile Organic Compounds (SVOCs)						
Biphenyl	--	ND	ND	ND	ND	ND
Phenol	1	ND	ND	ND	ND	ND
3-Methylphenol/4-Methylphenol	--	ND	ND	ND	ND	ND
Benzoic Acid	--	ND	ND	ND	ND	ND
Benzyl Alcohol	--	ND	ND	ND	ND	ND
Fluoranthene	50	0.06 J	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND
2-Methylnaphthalene	--	ND	ND	ND	ND	ND
Volatile Organic Compounds (VOCs)						
Chloroform	7	1.5 J	1.8 J	1.2 J	1.8 J	1.7 J
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND
Chloromethane	--	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
p/m-Xylene	5	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND
Acetone	50	1.3 J	ND	ND	ND	1.4 J
Carbon disulfide	60	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	--	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,4-Diethylbenzene	--	ND	ND	ND	ND	ND
4-Ethyltoluene	--	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	--	ND	ND	ND	ND	ND
Total VOCs	--	2.8 J	1.8 J	1.2 J	1.8 J	3.1 J

Notes:
All samples analyzed for TCL SVOCs and TCL VOCs.
Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
-- -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 2
Groundwater Analytical Results - August 15, 2012 - August 6, 2013
BCP Site #C622031 - 700 Mohawk Street, Herkimer, New York

Analyte/Compound	NYSDEC 6 NYCRR Part 703.5 GWQS (µg/L)	QA/QC TRIP BLANK 8/15/2012	TRIP BLANK 10/18/2012	TRIP BLANK 2/21/2013	TRIP BLANK 5/30/2013	TRIP BLANK 8/6/2013
Semivolatile Organic Compounds (SVOCs)						
Biphenyl	--	-	-	-	-	-
Phenol	1	-	-	-	-	-
3-Methylphenol/4-Methylphenol	--	-	-	-	-	-
Benzoic Acid	--	-	-	-	-	-
Benzyl Alcohol	--	-	-	-	-	-
Fluoranthene	50	-	-	-	-	-
Naphthalene	10	-	-	-	-	-
Fluorene	50	-	-	-	-	-
2-Methylnaphthalene	--	-	-	-	-	-
Volatile Organic Compounds (VOCs)						
Chloroform	7	ND	ND	ND	ND	ND
Tetrachloroethene	5	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.6	ND	ND	ND	ND	ND
Benzene	1	ND	ND	ND	ND	ND
Toluene	5	ND	ND	ND	ND	ND
Ethylbenzene	5	ND	ND	ND	ND	ND
Chloromethane	--	ND	ND	ND	ND	ND
Bromomethane	5	ND	ND	ND	ND	ND
Vinyl chloride	2	ND	ND	ND	ND	ND
Chloroethane	5	ND	ND	ND	ND	ND
p/m-Xylene	5	ND	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	ND
Acetone	50	2.1 J	ND	1 J	ND	1.9 J
Carbon disulfide	60	ND	ND	ND	ND	ND
2-Butanone	50	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	--	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	ND	ND
Isopropylbenzene	5	ND	ND	ND	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND
1,4-Diethylbenzene	--	ND	ND	ND	ND	ND
4-Ethyltoluene	--	ND	ND	ND	ND	ND
1,2,4,5-Tetramethylbenzene	--	ND	ND	ND	ND	ND
Total VOCs	--	2.1 J	ND	1 J	ND	1.9 J

TRIP BLANK 8-27-14

NS

ND

Notes:
All samples analyzed for TCL SVOCs and TCL VOCs.
Only those compounds detected in at least one sample are presented on the table.
All results presented in µg/L - parts per billion (ppb).
ND - Compound not detected.
J - Estimated concentration.
-- -NYSDEC GWQS not available.
- -Sample not analyzed for corresponding compound.

Table 3: Groundwater Monitoring Results: August 2013 and August 2014
Former Skinner Automotive Site (BCP Site No. C622031-06-12)700 Mohawk Street, Herkimer, NY 13350

Analyte	NYSDEC GWQS	MW01 8/6/2013	MW01 8/27/2014	MW02 8/6/2013	MW02 8/27/2014	MW03 8/6/2013	MW03 8/27/2014	MW04 8/6/2013	MW04 8/27/2014	MW05 8/6/2013	MW05 8/27/2014	TRIP BLANK 8/27/2014
Semivolatile Organic Compounds (SVOCs)												
Naphthalene	10	1.0	ND	ND	NS	ND	NS	ND	ND	ND	NS	-
2-Methylnaphthalene	no. std.	0.62	ND	ND	NS	ND	NS	ND	ND	ND	NS	-
Volatile Organic Compounds (VOCs)												
Chloroform	7	ND	ND	ND	NS	ND	NS	ND	ND	1.7 J	NS	ND
Benzene	1	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
Ethylbenzene	5	ND	1J	ND	NS	ND	NS	ND	ND	ND	NS	ND
Chloromethane	no. std.	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
p/m-Xylene	5	0.86 J	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
o-Xylene	5	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
Acetone	50	2.7J	3.5J	3.4 J	NS	1.2 J	NS	1.8 J	ND	1.4 J	NS	ND
n-Butylbenzene	5	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
sec-Butylbenzene	5	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
Isopropylbenzene	5	0.73 J	0.85J	ND	NS	ND	NS	ND	ND	ND	NS	ND
Naphthalene	10	1.7 J	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
n-Propylbenzene	5	1.0 J	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
1,2,4-Trimethylbenzene	5	2.1 J	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
Tetrachloroethene	5	0.35 J	0.61	ND	NS	ND	NS	ND	ND	ND	NS	ND
1,4-Diethylbenzene	5	ND	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
4-Ethyltoluene	5	2.0	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
1,2,4,5-Tetramethylbenzene	5	4.3	ND	ND	NS	ND	NS	ND	ND	ND	NS	ND
Total VOCs	5	15.74	5.96	3.4 J	NS	1.2 J	NS	1.8 J	0	3.1 J	NS	0

All concentrations are in ppb (ug/l)
2014 results are shaded for convenience only

[**NOTE**- Caprolactam, a component of nylon string, was detected in sample MW-1 and MW-4 at a concentration of 11 ppb. This is either a laboratory remnant or an effect of the string used in sampling. There is no GWQS for Caprolactam. No other SVOCs were detected in either sample.]

DATA USABILITY SUMMARY REPORT

ALPHA
GEOSCIENCE

Geology
Hydrology
Remediation
Water Supply

December 11, 2014

Mr. James F. Blasting, P.G.
Account Executive
ONEGROUP
5232 Witz Drive
N. Syracuse, New York 13212

Re: Data Validation Report
Sphere TSC Project
August 2014 Ground Water Sampling Event

Dear Mr. Blasting:

The data usability summary report (DUSR) and data validation QA/QC reviews for the August 2014 ground water sampling event are enclosed with this letter. The data were acceptable for Alpha Analytical Labs, lab number L1419648 with minor issues outlined in the QA/QC reviews. There were no data that were flagged as unusable (R) in the data pack.

A list of data validation acronyms and qualifiers is attached to assist you in interpreting the data validation reviews. If you have any questions concerning the work performed, please contact me at (518) 348-6995. Thank you for the opportunity to assist ONEGROUP.

Sincerely,
Alpha Geoscience

Donald Anné
Senior Chemist

DCA:dca

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Data Validation Qualifiers Used in the QA/QC Reviews for USEPA Region II

U = Not detected. The associated number indicates the approximate sample concentration necessary to be detected significantly greater than the level of the highest associated blank.

R = Unreliable result; data is rejected or unusable. Analyte may or may not be present in the sample. Supporting data or information is necessary to confirm the result.

N = Tentative identification. Analyte is considered present. Special methods may be needed to confirm its presence or absence during future sampling efforts.

J = Analyte is present. Reported value may be associated with a higher level of uncertainty than is normally expected with the analytical method.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

Note: These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

Data Validation Acronyms

AA	Atomic absorption, flame technique
BHC	Hexachlorocyclohexane
BFB	Bromofluorobenzene
CCB	Continuing calibration blank
CCC	Calibration check compound
CCV	Continuing calibration verification
CN	Cyanide
CRDL	Contract required detection limit
CRQL	Contract required quantitation limit
CVAA	Atomic adsorption, cold vapor technique
DCAA	2,4-Dichlophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine
ECD	Electron capture detector
FAA	Atomic absorption, furnace technique
FID	Flame ionization detector
FNP	1-Fluoronaphthalene
GC	Gas chromatography
GC/MS	Gas chromatography/mass spectrometry
GPC	Gel permeation chromatography
ICB	Initial calibration blank
ICP	Inductively coupled plasma-atomic emission spectrometer
ICV	Initial calibration verification
IDL	Instrument detection limit
IS	Internal standard
LCS	Laboratory control sample
LCS/LCSD	Laboratory control sample/laboratory control sample duplicate
MSA	Method of standard additions
MS/MSD	Matrix spike/matrix spike duplicate
PID	Photo ionization detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
QA	Quality assurance
QC	Quality control
RF	Response factor
RPD	Relative percent difference
RRF	Relative response factor
RRF(number)	Relative response factor at concentration of the number following
RT	Retention time
RRT	Relative retention time
SDG	Sample delivery group
SPCC	System performance check compound
TCX	Tetrachloro-m-xylene
%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation

ALPHA
GEOSCIENCE
Geology
Hydrology
Remediation
Water Supply

Data Usability Summary Report
for Alpha Analytical Labs
Lab Number: L1419648

2 Ground Water Samples and 1 Trip Blank
Collected August 27, 2014

Prepared by: Donald Anné
December 11, 2014

The data package contained the documentation as required by NYSDEC ASP. The proper chain of custody procedures were followed by the samplers. All information appeared legible and complete. The data pack contained the results volatile analyses for 2 ground water samples and 1 trip blank, and the results of semi-volatile analyses for 2 ground water samples.

The overall performances of the analyses are acceptable. Alpha Analytical Labs did fulfill the requirements of the analytical methods.

The data are mostly acceptable with some minor issues that are identified in the accompanying data validation reviews. The following data were flagged:

- The "not detected" semi-volatile results for hexachlorocyclopentadiene were flagged as "estimated" (J) in both ground water samples because 2 of 2 percent recoveries for hexachlorocyclopentadiene were below QC limits in the associated aqueous LCS/LCSD.

All data are considered usable, with estimated (J) data associated with a higher level of quantitative uncertainty. Detailed information on data quality is included in the data validation reviews.

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ALPHA
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Geology
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Water Supply

QA/QC Review of Method 8260B Volatiles
Data for Alpha Analytical Labs
Lab Number: L1419648

2 Ground Water Samples and 1 Trip Blank
Collected August 27, 2014

Prepared by: Donald Anné
December 11, 2014

Holding Times: Samples were analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The BFB tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8260B criteria.

The average RRFs for target compounds were above the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8260B criteria.

The RRFs for target compounds were above the allowable minimum (0.001 for 1,4-dioxane, 0.010 for all other compounds), as required.

The %Ds for acetone and 2-butanone were above the allowable maximum (25%) on 08-29-14 (0829A02.D). The %D for trichlorofluoromethane was above the allowable maximum (25%) on 09-02-14 (0902A03.D). Positive results for these compounds should be considered estimated (J) in associated samples.

Blanks: The analyses of method and trip blanks reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: One of four surrogate recoveries for samples MW-4 SPHEREHERK82714 and TRIP BLANK was above control limits. Positive results for samples MW-4 SPHEREHERK82714 and TRIP BLANK should be considered estimated (J).

679 Plank Road ▪ Clifton Park, New York 12065 ▪ (518) 348-6995 ▪ FAX (518) 348-6966
www.alphageoscience.com

Laboratory Control Sample: The relative percent differences (RPDs) for target compounds were below the allowable maximum; but 2 of 2 percent recoveries (%Rs) for 2-butanone and 1 of 2 %Rs for acetone were above QC limits for aqueous samples WG718362-1LCS and WG718362-2LCSD. The RPDs for target compounds were below the allowable maximum; but 1 of 2 %Rs for trichlorofluoromethane was above QC limits for aqueous samples WG718599-1LCS and WG718599-2LCSD. Positive results for these compounds should be considered estimated (J) in associated aqueous samples.

Compound ID: Checked compounds were within GC/MS quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

Form 2
Surrogate Recovery
Volatile Organics

Client: Bailey & Haskell Insurance
Project Name: SPHERE TSC HERKIMER

Lab Number: L1419648
Project Number: BHL-SPHERE 1
Matrix:

CLIENT ID (LAB SAMPLE NO.)	SMC1 TOL	SMC2 BFB	SMC3 DCA	SMC4 DBFM	TOT OUT
WG718599-2LCSD	105	87	105	108	0
WG718599-1LCS	105	86	104	108	0
WG718599-3BLANK	107	85	105	103	0
MW-1 SPHEREHERK82714 (L1419648-01)	108	91	107	98	0
WG718362-2LCSD	102	110	120	105	0
WG718362-1LCS	101	110	123	105	0
WG718362-3BLANK	100	117	123	103	0
MW-4 SPHEREHERK82714 (L1419648-02)	101	124	152*	115	1
TRIP BLANK (L1419648-03)	102	125	145*	115	1

	QC LIMITS
TOL = TOLUENE-D8	(70-130)
BFB = 4-BROMOFLUOROBENZENE	(70-130)
DCA = 1,2-DICHLOROETHANE-D4	(70-130)
DBFM = DIBROMOFLUOROMETHANE)	(70-130)

* Values outside of QC limits

FORM II NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Methylene chloride	10	NA	9.6	96	70-130
1,1-Dichloroethane	10	NA	10.	104	70-130
Chloroform	10	NA	12.	115	70-130
2-Chloroethylvinyl ether	10	NA	10.	100	70-130
Carbontetrachloride	10	NA	11.	112	63-132
1,2-Dichloropropane	10	NA	9.9	99	70-130
Chlorodibromomethane	10	NA	9.5	95	63-130
1,1,2-Trichloroethane	10	NA	10.	106	70-130
Tetrachloroethene	10	NA	8.8	88	70-130
Chlorobenzene	10	NA	9.8	98	75-130
Trichlorofluoromethane	10	NA	11.	107	62-150
1,2-Dichloroethane	10	NA	12.	124	70-130
1,1,1-Trichloroethane	10	NA	12.	118	67-130
Bromodichloromethane	10	NA	11.	112	67-130
trans-1,3-Dichloropropen	10	NA	10.	104	70-130
cis-1,3-Dichloropropene	10	NA	10.	103	70-130
1,1-Dichloropropene	10	NA	10.	105	70-130
Bromoform	10	NA	9.2	92	54-136
1,1,2,2,-Tetrachloroetha	10	NA	10.	104	67-130
Benzene	10	NA	10.	102	70-130
Toluene	10	NA	10.	103	70-130
Ethyl benzene	10	NA	11.	107	70-130
Chloromethane	10	NA	8.1	81	64-130
Bromomethane	10	NA	9.3	93	39-139
Vinyl chloride	10	NA	8.1	81	55-140
Chloroethane	10	NA	8.6	87	55-138
1,1,-Dichloroethene	10	NA	9.8	98	61-145
trans-1,2-Dichloroethene	10	NA	10.	101	70-130
Trichloroethene	10	NA	10.	105	70-130
1,2-Dichlorobenzene	10	NA	9.4	94	70-130
1,3-Dichlorobenzene	10	NA	9.7	97	70-130
1,4-Dichlorobenzene	10	NA	9.4	94	70-130
Methyl tert butyl ether	10	NA	10.	102	63-130
p/m xylene	20	NA	20.	100	70-130
o Xylene	20	NA	20.	102	70-130
cis-1,2-Dichloroethene	10	NA	10.	100	70-130
Dibromomethane	10	NA	11.	114	70-130
1,2,3-Trichloropropane	10	NA	11.	107	64-130
Acrylonitrile	10	NA	11.	109	70-130
Diisopropyl Ether	10	NA	11.	114	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A
LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY
WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs
SDG No.: L1419648 Matrix: Water
Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
tert-Butyl Alcohol	50	NA	48.	96	70-130
Styrene	20	NA	21.	103	70-130
Dichlorodifluoromethane	10	NA	10.	103	36-147
Acetone	10	NA	13.	134	58-148
Carbon disulfide	10	NA	9.3	93	51-130
2-Butanone	10	NA	15.	151*	63-138
Vinyl acetate	10	NA	12.	117	70-130
4-Methyl-2-pentanone	10	NA	9.8	99	59-130
2-Hexanone	10	NA	12.	116	57-130
Bromochloromethane	10	NA	8.5	85	70-130
2,2-Dichloropropane	10	NA	11.	109	63-133
1,2-Dibromoethane	10	NA	11.	107	70-130
1,3-Dichloropropane	10	NA	10.	106	70-130
1,1,1,2-Tetrachloroethan	10	NA	10.	100	64-130
Bromobenzene	10	NA	9.4	94	70-130
n-Butylbenzene	10	NA	10.	104	53-136
sec-Butylbenzene	10	NA	10.	105	70-130
tert-Butylbenzene	10	NA	10.	100	70-130
2-Chlorotoluene	10	NA	11.	111	70-130
4-Chorotoluene	10	NA	11.	111	70-130
1,2-Dibromo-3-chloroprop	10	NA	10.	103	41-144
Hexachlorobutadiene	10	NA	9.2	92	63-130
Isopropylbenzene	10	NA	10.	104	70-130
p-Isopropyltoluene	10	NA	9.8	98	70-130
Naphthalene	10	NA	6.0	60*	70-130
n-Propylbenzene	10	NA	11.	110	69-130
1,2,3-Trichlorobenzene	10	NA	7.3	73	70-130
1,2,4-Trichlorobenzene	10	NA	7.4	74	70-130
1,3,5-Trimethybenzene	10	NA	11.	106	64-130
1,2,4-Trimethylbenzene	10	NA	10.	105	70-130
Methyl Acetate	10	NA	11.	115	70-130
Ethyl Acetate	10	NA	12.	119	70-130
Cyclohexane	10	NA	9.8	98	70-130
Ethyl-Tert-Butyl-Ether	10	NA	10.	103	70-130
Tertiary-Amyl Methyl Eth	10	NA	9.7	97	66-130
1,4-Dioxane	500	NA	570	114	56-162
Freon-113	10	NA	11.	107	70-130
p-Diethylbenzene	10	NA	9.5	95	70-130
4-Ethyltoluene	10	NA	10.	105	70-130
1,2,4,5-Tetramethylbenze	10	NA	7.4	74	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Ethyl ether	10	NA	9.4	94	59-134
trans-1,4-Dichloro-2-but	10	NA	11.	114	70-130
Iodomethane	10	NA	8.8	88	70-130
Methyl cyclohexane	10	NA	9.6	96	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A
LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY
WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs
SDG No.: L1419648 Matrix: Water
Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D
Lab Control Dup : WG718362-2LCSD Injected: 08/29/14 12:37 Lab File ID: 0829A03.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Methylene chloride	10	9.5	95	1	20	70-130
1,1-Dichloroethane	10	11.	110	6	20	70-130
Chloroform	10	12.	119	3	20	70-130
2-Chloroethylvinyl ether	10	10.	105	5	20	70-130
Carbontetrachloride	10	11.	115	3	20	63-132
1,2-Dichloropropane	10	10.	105	6	20	70-130
Chlorodibromomethane	10	10.	100	5	20	63-130
1,1,2-Trichloroethane	10	11.	111	5	20	70-130
Tetrachloroethene	10	9.0	91	3	20	70-130
Chlorobenzene	10	10.	102	4	20	75-130
Trichlorofluoromethane	10	11.	108	1	20	62-150
1,2-Dichloroethane	10	13.	128	3	20	70-130
1,1,1-Trichloroethane	10	12.	122	3	20	67-130
Bromodichloromethane	10	12.	116	4	20	67-130
trans-1,3-Dichloropropen	10	11.	109	5	20	70-130
cis-1,3-Dichloropropene	10	10.	101	2	20	70-130
1,1-Dichloropropene	10	11.	109	4	20	70-130
Bromoform	10	9.4	94	2	20	54-136
1,1,2,2,-Tetrachloroetha	10	11.	107	3	20	67-130
Benzene	10	11.	107	5	20	70-130
Toluene	10	11.	107	4	20	70-130
Ethyl benzene	10	11.	109	2	20	70-130
Chloromethane	10	8.3	83	2	20	64-130
Bromomethane	10	9.4	94	1	20	39-139
Vinyl chloride	10	8.4	84	4	20	55-140
Chloroethane	10	9.0	90	3	20	55-138
1,1,-Dichloroethene	10	10.	104	6	20	61-145
trans-1,2-Dichloroethene	10	10.	103	2	20	70-130
Trichloroethene	10	11.	109	4	20	70-130
1,2-Dichlorobenzene	10	9.6	96	2	20	70-130
1,3-Dichlorobenzene	10	9.6	96	1	20	70-130
1,4-Dichlorobenzene	10	9.7	97	3	20	70-130
Methyl tert butyl ether	10	10.	104	2	20	63-130
p/m xylene	20	21.	104	4	20	70-130
o Xylene	20	21.	104	2	20	70-130
cis-1,2-Dichloroethene	10	10.	105	5	20	70-130
Dibromomethane	10	12.	115	1	20	70-130
1,2,3-Trichloropropane	10	11.	110	3	20	64-130
Acrylonitrile	10	12.	119	9	20	70-130
Diisopropyl Ether	10	12.	117	3	20	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D

Lab Control Dup : WG718362-2LCSD Injected: 08/29/14 12:37 Lab File ID: 0829A03.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
tert-Butyl Alcohol	50	52.	104	8	20	70-130
Styrene	20	22.	108	5	20	70-130
Dichlorodifluoromethane	10	10.	105	2	20	36-147
Acetone	10	15.	153 *	13	20	58-148
Carbon disulfide	10	9.7	97	4	20	51-130
2-Butanone	10	16.	158 *	5	20	63-138
Vinyl acetate	10	12.	126	7	20	70-130
4-Methyl-2-pentanone	10	10.	103	4	20	59-130
2-Hexanone	10	13.	127	9	20	57-130
Bromochloromethane	10	9.3	93	9	20	70-130
2,2-Dichloropropane	10	11.	113	4	20	63-133
1,2-Dibromoethane	10	11.	110	3	20	70-130
1,3-Dichloropropane	10	11.	110	4	20	70-130
1,1,1,2-Tetrachloroethan	10	10.	101	1	20	64-130
Bromobenzene	10	9.9	99	5	20	70-130
n-Butylbenzene	10	11.	110	6	20	53-136
sec-Butylbenzene	10	11.	106	1	20	70-130
tert-Butylbenzene	10	10.	101	1	20	70-130
2-Chlorotoluene	10	11.	113	2	20	70-130
4-Chorotoluene	10	11.	114	3	20	70-130
1,2-Dibromo-3-chloroprop	10	10.	103	0	20	41-144
Hexachlorobutadiene	10	9.4	94	2	20	63-130
Isopropylbenzene	10	10.	106	2	20	70-130
p-Isopropyltoluene	10	10.	100	2	20	70-130
Naphthalene	10	7.0	70	15	20	70-130
n-Propylbenzene	10	11.	111	1	20	69-130
1,2,3-Trichlorobenzene	10	7.7	77	5	20	70-130
1,2,4-Trichlorobenzene	10	8.0	80	8	20	70-130
1,3,5-Trimethybenzene	10	11.	107	1	20	64-130
1,2,4-Trimethylbenzene	10	11.	107	2	20	70-130
Methyl Acetate	10	12.	116	1	20	70-130
Ethyl Acetate	10	12.	124	4	20	70-130
Cyclohexane	10	10.	105	7	20	70-130
Ethyl-Tert-Butyl-Ether	10	11.	110	7	20	70-130
Tertiary-Amyl Methyl Eth	10	10.	100	3	20	66-130
1,4-Dioxane	500	590	119	4	20	56-162
Freon-113	10	11.	107	0	20	70-130
p-Diethylbenzene	10	9.7	97	2	20	70-130
4-Ethyltoluene	10	11.	107	2	20	70-130
1,2,4,5-Tetramethylbenze	10	8.2	82	10	20	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718362-1LCS Injected: 08/29/14 12:02 Lab File ID: 0829A02.D

Lab Control Dup : WG718362-2LCSD Injected: 08/29/14 12:37 Lab File ID: 0829A03.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Ethyl ether	10	10.	100	6	20	59-134
trans-1,4-Dichloro-2-but	10	11.	112	2	20	70-130
Iodomethane	10	9.6	96	9	20	70-130
Methyl cyclohexane	10	9.9	99	3	20	70-130

* Values outside of QC limits.

COMMENTS: _____

_____

FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Methylene chloride	10	NA	10.	103	70-130
1,1-Dichloroethane	10	NA	9.8	98	70-130
Chloroform	10	NA	11.	109	70-130
2-Chloroethylvinyl ether	10	NA	9.5	95	70-130
Carbontetrachloride	10	NA	9.8	98	63-132
1,2-Dichloropropane	10	NA	9.4	94	70-130
Chlorodibromomethane	10	NA	10.	102	63-130
1,1,2-Trichloroethane	10	NA	12.	115	70-130
Tetrachloroethene	10	NA	9.8	98	70-130
Chlorobenzene	10	NA	10.	104	75-130
Trichlorofluoromethane	10	NA	15.	149	62-150
1,2-Dichloroethane	10	NA	10.	102	70-130
1,1,1-Trichloroethane	10	NA	10.	104	67-130
Bromodichloromethane	10	NA	10.	100	67-130
trans-1,3-Dichloropropen	10	NA	11.	106	70-130
cis-1,3-Dichloropropene	10	NA	9.1	91	70-130
1,1-Dichloropropene	10	NA	10.	104	70-130
Bromoform	10	NA	11.	106	54-136
1,1,2,2,-Tetrachloroetha	10	NA	11.	106	67-130
Benzene	10	NA	10.	101	70-130
Toluene	10	NA	10.	104	70-130
Ethyl benzene	10	NA	11.	109	70-130
Chloromethane	10	NA	8.5	85	64-130
Bromomethane	10	NA	10.	104	39-139
Vinyl chloride	10	NA	9.9	99	55-140
Chloroethane	10	NA	12.	119	55-138
1,1,-Dichloroethene	10	NA	10.	104	61-145
trans-1,2-Dichloroethene	10	NA	10.	104	70-130
Trichloroethene	10	NA	10.	102	70-130
1,2-Dichlorobenzene	10	NA	10.	104	70-130
1,3-Dichlorobenzene	10	NA	11.	107	70-130
1,4-Dichlorobenzene	10	NA	11.	108	70-130
Methyl tert butyl ether	10	NA	11.	108	63-130
p/m xylene	20	NA	21.	105	70-130
o Xylene	20	NA	21.	107	70-130
cis-1,2-Dichloroethene	10	NA	10.	103	70-130
Dibromomethane	10	NA	10.	102	70-130
1,2,3-Trichloropropane	10	NA	12.	121	64-130
Acrylonitrile	10	NA	9.8	98	70-130
Diisopropyl Ether	10	NA	9.0	90	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
tert-Butyl Alcohol	50	NA	55.	110	70-130
Styrene	20	NA	21.	105	70-130
Dichlorodifluoromethane	10	NA	8.8	88	36-147
Acetone	10	NA	9.4	94	58-148
Carbon disulfide	10	NA	9.6	96	51-130
2-Butanone	10	NA	12.	117	63-138
Vinyl acetate	10	NA	9.4	94	70-130
4-Methyl-2-pentanone	10	NA	9.1	91	59-130
2-Hexanone	10	NA	9.4	94	57-130
Bromochloromethane	10	NA	10.	106	70-130
2,2-Dichloropropane	10	NA	9.8	98	63-133
1,2-Dibromoethane	10	NA	11.	109	70-130
1,3-Dichloropropane	10	NA	11.	110	70-130
1,1,1,2-Tetrachloroethan	10	NA	11.	113	64-130
Bromobenzene	10	NA	8.3	83	70-130
n-Butylbenzene	10	NA	11.	114	53-136
sec-Butylbenzene	10	NA	10.	104	70-130
tert-Butylbenzene	10	NA	9.3	93	70-130
2-Chlorotoluene	10	NA	10.	101	70-130
4-Chorotoluene	10	NA	9.7	97	70-130
1,2-Dibromo-3-chloroprop	10	NA	10.	105	41-144
Hexachlorobutadiene	10	NA	8.5	85	63-130
Isopropylbenzene	10	NA	8.4	84	70-130
p-Isopropyltoluene	10	NA	10.	104	70-130
Naphthalene	10	NA	11.	112	70-130
n-Propylbenzene	10	NA	9.4	94	69-130
1,2,3-Trichlorobenzene	10	NA	10.	105	70-130
1,2,4-Trichlorobenzene	10	NA	10.	102	70-130
1,3,5-Trimethybenzene	10	NA	11.	108	64-130
1,2,4-Trimethylbenzene	10	NA	10.	101	70-130
Methyl Acetate	10	NA	11.	109	70-130
Ethyl Acetate	10	NA	10.	102	70-130
Cyclohexane	10	NA	9.2	92	70-130
Ethyl-Tert-Butyl-Ether	10	NA	9.4	94	70-130
Tertiary-Amyl Methyl Eth	10	NA	10.	100	66-130
1,4-Dioxane	500	NA	600	120	56-162
Freon-113	10	NA	11.	113	70-130
p-Diethylbenzene	10	NA	10.	104	70-130
4-Ethyltoluene	10	NA	10.	100	70-130
1,2,4,5-Tetramethylbenze	10	NA	10.	102	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Ethyl ether	10	NA	11.	110	59-134
trans-1,4-Dichloro-2-but	10	NA	9.6	96	70-130
Methyl cyclohexane	10	NA	9.8	98	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

Lab Control Dup : WG718599-2LCSD Injected: 09/02/14 10:14 Lab File ID: 0902A04.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Methylene chloride	10	11.	109	6	20	70-130
1,1-Dichloroethane	10	10.	103	5	20	70-130
Chloroform	10	11.	115	5	20	70-130
2-Chloroethylvinyl ether	10	9.7	97	2	20	70-130
Carbontetrachloride	10	10.	105	7	20	63-132
1,2-Dichloropropane	10	9.9	99	5	20	70-130
Chlorodibromomethane	10	11.	106	4	20	63-130
1,1,2-Trichloroethane	10	12.	117	2	20	70-130
Tetrachloroethene	10	10.	104	6	20	70-130
Chlorobenzene	10	11.	108	4	20	75-130
Trichlorofluoromethane	10	16.	158 *	6	20	62-150
1,2-Dichloroethane	10	11.	107	5	20	70-130
1,1,1-Trichloroethane	10	11.	110	6	20	67-130
Bromodichloromethane	10	10.	104	4	20	67-130
trans-1,3-Dichloropropen	10	11.	108	2	20	70-130
cis-1,3-Dichloropropene	10	9.5	95	4	20	70-130
1,1-Dichloropropene	10	11.	112	7	20	70-130
Bromoform	10	11.	111	5	20	54-136
1,1,2,2,-Tetrachloroetha	10	11.	109	3	20	67-130
Benzene	10	11.	106	5	20	70-130
Toluene	10	11.	108	4	20	70-130
Ethyl benzene	10	11.	114	4	20	70-130
Chloromethane	10	9.2	92	8	20	64-130
Bromomethane	10	11.	111	7	20	39-139
Vinyl chloride	10	11.	110	11	20	55-140
Chloroethane	10	13.	126	6	20	55-138
1,1,-Dichloroethene	10	11.	112	7	20	61-145
trans-1,2-Dichloroethene	10	11.	112	7	20	70-130
Trichloroethene	10	11.	109	7	20	70-130
1,2-Dichlorobenzene	10	11.	109	5	20	70-130
1,3-Dichlorobenzene	10	11.	112	5	20	70-130
1,4-Dichlorobenzene	10	11.	113	5	20	70-130
Methyl tert butyl ether	10	11.	111	3	20	63-130
p/m xylene	20	22.	110	5	20	70-130
o Xylene	20	22.	112	5	20	70-130
cis-1,2-Dichloroethene	10	11.	110	7	20	70-130
Dibromomethane	10	10.	105	3	20	70-130
1,2,3-Trichloropropane	10	12.	124	2	20	64-130
Acrylonitrile	10	10.	100	2	20	70-130
Diisopropyl Ether	10	9.3	93	3	20	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

Lab Control Dup : WG718599-2LCSD Injected: 09/02/14 10:14 Lab File ID: 0902A04.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
tert-Butyl Alcohol	50	58.	116	5	20	70-130
Styrene	20	22.	109	4	20	70-130
Dichlorodifluoromethane	10	9.4	94	7	20	36-147
Acetone	10	9.6	96	2	20	58-148
Carbon disulfide	10	10.	103	7	20	51-130
2-Butanone	10	12.	125	7	20	63-138
Vinyl acetate	10	9.7	97	3	20	70-130
4-Methyl-2-pentanone	10	9.2	92	1	20	59-130
2-Hexanone	10	9.4	94	0	20	57-130
Bromochloromethane	10	11.	110	4	20	70-130
2,2-Dichloropropane	10	10.	103	5	20	63-133
1,2-Dibromoethane	10	11.	111	2	20	70-130
1,3-Dichloropropane	10	11.	113	3	20	70-130
1,1,1,2-Tetrachloroethan	10	12.	116	3	20	64-130
Bromobenzene	10	8.6	86	4	20	70-130
n-Butylbenzene	10	12.	121	6	20	53-136
sec-Butylbenzene	10	11.	111	7	20	70-130
tert-Butylbenzene	10	10.	100	7	20	70-130
2-Chlorotoluene	10	12.	116	14	20	70-130
4-Chorotoluene	10	10.	103	6	20	70-130
1,2-Dibromo-3-chloroprop	10	11.	112	6	20	41-144
Hexachlorobutadiene	10	9.3	93	9	20	63-130
Isopropylbenzene	10	8.8	88	5	20	70-130
p-Isopropyltoluene	10	11.	109	5	20	70-130
Naphthalene	10	12.	118	5	20	70-130
n-Propylbenzene	10	10.	100	6	20	69-130
1,2,3-Trichlorobenzene	10	11.	111	6	20	70-130
1,2,4-Trichlorobenzene	10	11.	110	8	20	70-130
1,3,5-Trimethybenzene	10	11.	114	5	20	64-130
1,2,4-Trimethylbenzene	10	11.	106	5	20	70-130
Methyl Acetate	10	11.	108	1	20	70-130
Ethyl Acetate	10	10.	106	4	20	70-130
Cyclohexane	10	9.9	99	7	20	70-130
Ethyl-Tert-Butyl-Ether	10	9.7	97	3	20	70-130
Tertiary-Amyl Methyl Eth	10	10.	104	4	20	66-130
1,4-Dioxane	500	620	125	4	20	56-162
Freon-113	10	12.	121	7	20	70-130
p-Diethylbenzene	10	11.	110	6	20	70-130
4-Ethyltoluene	10	11.	107	7	20	70-130
1,2,4,5-Tetramethylbenze	10	11.	108	6	20	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

3A

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER VOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG718599-1LCS Injected: 09/02/14 09:46 Lab File ID: 0902A03.D

Lab Control Dup : WG718599-2LCSD Injected: 09/02/14 10:14 Lab File ID: 0902A04.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Ethyl ether	10	11.	114	4	20	59-134
trans-1,4-Dichloro-2-but	10	9.7	97	1	20	70-130
Methyl cyclohexane	10	10.	104	6	20	70-130

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8260

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Elaine.i Injection Date: 29-AUG-2014 12:02
Lab File ID: 0829A02.D Init. Cal. Date(s): 18-AUG-2014 18-AUG-2014
Analysis Type: WATER Init. Cal. Times: 15:47 21:37
Lab Sample ID: Quant Type: ISTD
Method: \\Orgserv2\ff\chem\GCMSVOA\Elaine.i\140829.b\liq8260C.m

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 dichlorodifluoromethane	0.44075	0.45485	0.050	3.19776	20.00000	Averaged	
2 chloromethane	0.38150	0.30863	0.050	-19.10166	20.00000	Averaged	
3 vinyl chloride	0.32826	0.26625	0.050	-18.89191	20.00000	Averaged	
4 bromomethane	0.19988	0.18680	0.050	-6.54305	20.00000	Averaged	
5 chloroethane	0.20154	0.17449	0.050	-13.42039	20.00000	Averaged	
6 trichlorofluoromethane	0.52383	0.56078	0.050	7.05320	20.00000	Averaged	
7 ethyl ether	0.10281	0.09621	0.050	-6.42253	20.00000	Averaged	
8 freon-113	0.24877	0.26527	0.050	6.63465	20.00000	Averaged	
9 acetone	0.04668	0.06263	0.050	34.15904	20.00000	Averaged	<-
11 1,1,-dichloroethene	0.21409	0.20917	0.050	-2.29671	20.00000	Averaged	
12 Tert-Butyl Alcohol	0.01239	0.01188	0.050	-4.06410	20.00000	Averaged	<-
13 iodomethane	0.30776	0.27217	0.001	-11.56408	20.00000	Averaged	
14 Methyl Acetate	0.10301	0.11838	0.050	14.92101	20.00000	Averaged	
16 methylene chloride	0.27801	0.26765	0.050	-3.72629	20.00000	Averaged	
17 carbon disulfide	0.70792	0.65575	0.050	-7.36922	20.00000	Averaged	
18 acrylonitrile	0.06067	0.06593	0.050	8.65310	20.00000	Averaged	
19 methyl tert butyl ether	0.61725	0.63286	0.050	2.52888	20.00000	Averaged	
20 trans-1,2-dichloroethene	0.23645	0.23906	0.050	1.10056	20.00000	Averaged	
23 Diisopropyl Ether	0.80069	0.91179	0.050	13.87518	20.00000	Averaged	
24 vinyl acetate	0.37036	0.43256	0.050	16.79223	20.00000	Averaged	
25 1,1-dichloroethane	0.49508	0.51775	0.050	4.57899	20.00000	Averaged	
26 Ethyl-Tert-Butyl-Ether	0.81386	0.83655	0.050	2.78830	20.00000	Averaged	
27 2-butanone	0.06065	0.09146	0.050	50.80122	20.00000	Averaged	<-
28 2,2-dichloropropane	0.46162	0.50488	0.050	9.37166	20.00000	Averaged	
29 Ethyl Acetate	0.13919	0.16584	0.050	19.14918	20.00000	Averaged	
30 cis-1,2-dichloroethene	0.25925	0.25918	0.050	-0.02582	20.00000	Averaged	
33 chloroform	0.50615	0.58394	0.050	15.36726	20.00000	Averaged	
34 bromochloromethane	0.10912	0.09325	0.050	-14.54701	20.00000	Averaged	
35 tetrahydrofuran	0.04017	0.04707	0.050	17.19086	20.00000	Averaged	<-
$ 36 dibromofluoromethane	0.26108	0.27338	0.050	4.71153	20.00000	Averaged	
37 1,1,1-trichloroethane	0.50882	0.60149	0.050	18.21301	20.00000	Averaged	
38 Cyclohexane	0.48465	0.47470	0.050	-2.05401	20.00000	Averaged	
39 1,1-dichloropropene	0.39803	0.41872	0.050	5.19834	20.00000	Averaged	
40 Tertiary-Amyl Methyl Ether	0.63954	0.62184	0.050	-2.76860	20.00000	Averaged	
41 carbontetrachloride	0.41697	0.46663	0.050	11.90746	20.00000	Averaged	
$ 42 1,2-dichloroethane-d4	0.35312	0.43260	0.050	22.50788	20.00000	Averaged	<-
44 1,2-dichloroethane	0.41264	0.50977	0.050	23.53979	20.00000	Averaged	<-
45 benzene	0.97834	0.99884	0.050	2.09500	20.00000	Averaged	
48 trichloroethene	0.28217	0.29518	0.050	4.61125	20.00000	Averaged	
49 methyl cyclohexane	0.50900	0.49068	0.050	-3.59966	20.00000	Averaged	
50 1,2-dichloropropane	0.25173	0.25004	0.050	-0.67177	20.00000	Averaged	
51 bromodichloromethane	0.39235	0.44160	0.050	12.55078	20.00000	Averaged	

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Elaine.i Injection Date: 29-AUG-2014 12:02
Lab File ID: 0829A02.D Init. Cal. Date(s): 18-AUG-2014 18-AUG-2014
Analysis Type: WATER Init. Cal. Times: 15:47 21:37
Lab Sample ID: Quant Type: ISTD
Method: \\Orgserv2\ff\chem\GCMSVOA\Elaine.i\140829.b\liq8260C.m

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
52 1,4-Dioxane	0.00123	0.00140	0.050	13.87030	20.00000	Averaged	<-
54 dibromomethane	0.12959	0.14807	0.050	14.26003	20.00000	Averaged	
57 2-Chloroethylvinyl ether	0.12911	0.12869	0.050	-0.32360	20.00000	Averaged	
58 4-methyl-2-pentanone	0.06117	0.06028	0.050	-1.44623	20.00000	Averaged	
59 cis-1,3-dichloropropene	0.41438	0.42541	0.050	2.66056	20.00000	Averaged	
$ 60 toluene-d8	1.36810	1.38357	0.050	1.13119	20.00000	Averaged	
61 toluene	0.87490	0.89826	0.050	2.67066	20.00000	Averaged	
62 ethyl-methacrylate	0.31629	0.31442	0.050	-0.59052	20.00000	Averaged	
63 trans-1,3-dichloropropene	0.48916	0.50704	0.050	3.65637	20.00000	Averaged	
64 2-hexanone	0.12393	0.14343	0.050	15.72999	20.00000	Averaged	
65 1,1,2-trichloroethane	0.18921	0.20034	0.050	5.87878	20.00000	Averaged	
66 1,3-dichloropropane	0.42940	0.45382	0.050	5.68924	20.00000	Averaged	
67 tetrachloroethene	0.39684	0.35129	0.050	-11.47882	20.00000	Averaged	
68 chlorodibromomethane	0.30816	0.29415	0.050	-4.54568	20.00000	Averaged	
69 1,2-dibromoethane	0.22883	0.24421	0.050	6.71998	20.00000	Averaged	
71 chlorobenzene	0.99252	0.96936	0.050	-2.33345	20.00000	Averaged	
72 1,1,1,2-tetrachloroethane	0.35042	0.34885	0.050	-0.44902	20.00000	Averaged	
73 ethyl benzene	1.92382	2.05108	0.050	6.61484	20.00000	Averaged	
74 p/m xylene	0.71229	0.71119	0.050	-0.15553	20.00000	Averaged	
75 o xylene	0.67672	0.68916	0.050	1.83825	20.00000	Averaged	
76 styrene	1.09734	1.13427	0.050	3.36503	20.00000	Averaged	
77 isopropylbenzene	3.29137	3.42368	0.050	4.01971	20.00000	Averaged	
78 bromoform	0.32343	0.29846	0.050	-7.71983	20.00000	Averaged	
79 1,4-dichloro-2-butane	0.88101	1.00151	0.050	13.67730	20.00000	Averaged	
80 1,1,2,2,-tetrachloroethane	0.45367	0.47152	0.050	3.93480	20.00000	Averaged	
$ 81 4-bromofluorobenzene	1.11526	1.22239	0.050	9.60585	20.00000	Averaged	
82 1,2,3-trichloropropane	0.40192	0.42946	0.050	6.85145	20.00000	Averaged	
83 trans-1,4-dichloro-2-butene	0.17798	0.20386	0.050	14.54397	20.00000	Averaged	
84 n-propylbenzene	3.82222	4.19570	0.050	9.77111	20.00000	Averaged	
85 bromobenzene	0.69572	0.65152	0.050	-6.35346	20.00000	Averaged	
86 4-ethyltoluene	3.50115	3.68237	0.050	5.17617	20.00000	Averaged	
87 1,3,5-trimethybenzene	2.93267	3.12272	0.050	6.48041	20.00000	Averaged	
88 2-chlorotoluene	2.52095	2.80474	0.050	11.25720	20.00000	Averaged	
89 4-chorotoluene	2.56353	2.85383	0.050	11.32414	20.00000	Averaged	
90 tert-butylbenzene	2.40597	2.40289	0.050	-0.12809	20.00000	Averaged	
91 1,2,4-trimethylbenzene	2.82776	2.98284	0.050	5.48432	20.00000	Averaged	
92 sec-butylbenzene	3.50655	3.68764	0.050	5.16416	20.00000	Averaged	
93 p-isopropyltoluene	2.99551	2.94580	0.050	-1.65951	20.00000	Averaged	
94 1,3-dichlorobenzene	1.41582	1.37314	0.050	-3.01407	20.00000	Averaged	
96 1,4-dichlorobenzene	1.42609	1.33726	0.050	-6.22867	20.00000	Averaged	
97 n-butylbenzene	3.32217	3.45310	0.050	3.94113	20.00000	Averaged	
98 p-Diethylbenzene	1.77615	1.69325	0.050	-4.66739	20.00000	Averaged	

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Elaine.i
Lab File ID: 0829A02.D
Analysis Type: WATER
Lab Sample ID:
Method: \\Orgserv2\ff\chem\GCMSVOA\Elaine.i\140829.b\liq8260C.m

Injection Date: 29-AUG-2014 12:02
Init. Cal. Date(s): 18-AUG-2014 18-AUG-2014
Init. Cal. Times: 15:47 21:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
99 1,2-dichlorobenzene	1.26785	1.18819	0.050	-6.28359	20.00000	Averaged	
100 1,2,4,5-tetramethylbenzene	2.51827	1.85848	0.050	-26.20004	20.00000	Averaged	<-
101 1,2-dibromo-3-chloropropane	0.09958	0.10240	0.050	2.82918	20.00000	Averaged	
102 1,3,5-trichlorobenzene	1.03255	0.85002	0.050	-17.67714	20.00000	Averaged	
103 1,2,4-trichlorobenzene	0.83768	0.61780	0.050	-26.24860	20.00000	Averaged	<-
104 hexachlorobutadiene	0.47162	0.43558	0.050	-7.64206	20.00000	Averaged	
105 naphthalene	1.29855	0.77587	0.050	-40.25118	20.00000	Averaged	<-
106 1,2,3-trichlorobenzene	0.67531	0.49153	0.050	-27.21515	20.00000	Averaged	<-

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Voa105.i
Lab File ID: 0902A03.D
Analysis Type: WATER
Lab Sample ID:
Method: \\Orgserv2\ff\chem\GCMSVOA\Voa105.i\140902.b\liq8260B.m

Injection Date: 02-SEP-2014 09:46
Init. Cal. Date(s): 21-AUG-2014 22-AUG-2014
Init. Cal. Times: 23:06 03:43
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 dichlorodifluoromethane	0.28441	0.25005	0.050	-12.08121	20.00000	Averaged	
2 chloromethane	0.62532	0.53158	0.050	-14.99022	20.00000	Averaged	
3 vinyl chloride	0.48602	0.48274	0.050	-0.67484	20.00000	Averaged	
4 bromomethane	0.14779	0.15324	0.050	3.69044	20.00000	Averaged	
5 chloroethane	0.20171	0.24042	0.050	19.19115	20.00000	Averaged	
6 trichlorofluoromethane	0.23505	0.35056	0.050	49.14316	20.00000	Averaged	<-
7 ethyl ether	0.11899	0.13050	0.050	9.67594	20.00000	Averaged	
8 1,1,-dichloroethene	0.23338	0.24318	0.050	4.19654	20.00000	Averaged	
9 carbon disulfide	0.77331	0.74072	0.050	-4.21506	20.00000	Averaged	
10 freon-113	0.23363	0.26465	0.050	13.27986	20.00000	Averaged	
11 methylene chloride	0.31542	0.32505	0.050	3.05368	20.00000	Averaged	
13 acetone	0.07747	0.07281	0.050	-6.01059	20.00000	Averaged	
14 trans-1,2-dichloroethene	0.26054	0.27217	0.050	4.46654	20.00000	Averaged	
15 Methyl Acetate	0.15992	0.17453	0.050	9.13570	20.00000	Averaged	
16 methyl tert butyl ether	0.49109	0.53158	0.050	8.24498	20.00000	Averaged	
17 Tert-Butyl Alcohol	0.01526	0.01676	0.050	9.85158	20.00000	Averaged	<-
18 Diisopropyl Ether	1.22706	1.09964	0.050	-10.38420	20.00000	Averaged	
19 1,1-dichloroethane	0.51737	0.50778	0.050	-1.85390	20.00000	Averaged	
20 halothane	0.18705	0.19110	0.050	2.16779	20.00000	Averaged	
21 acrylonitrile	0.08254	0.08101	0.050	-1.84456	20.00000	Averaged	
22 Ethyl-Tert-Butyl-Ether	0.90892	0.85394	0.050	-6.04900	20.00000	Averaged	
23 vinyl acetate	0.65077	0.61294	0.050	-5.81269	20.00000	Averaged	
24 cis-1,2-dichloroethene	0.29283	0.30239	0.050	3.26561	20.00000	Averaged	
25 2,2-dichloropropane	0.29686	0.29062	0.050	-2.10028	20.00000	Averaged	
27 bromochloromethane	0.13453	0.14197	0.050	5.53290	20.00000	Averaged	
26 Cyclohexane	0.62918	0.57777	0.050	-8.17127	20.00000	Averaged	
28 chloroform	0.37758	0.41322	0.050	9.43699	20.00000	Averaged	
29 Ethyl Acetate	0.22038	0.22523	0.050	2.20052	20.00000	Averaged	
30 carbontetrachloride	0.27076	0.26457	0.050	-2.28710	20.00000	Averaged	
31 tetrahydrofuran	0.07635	0.08435	0.050	10.47665	20.00000	Averaged	
$ 32 dibromofluoromethane	0.22709	0.24433	0.050	7.59508	20.00000	Averaged	
33 1,1,1-trichloroethane	0.30880	0.32057	0.050	3.80909	20.00000	Averaged	
34 2-butanone	0.10536	0.12306	0.050	16.80680	20.00000	Averaged	
35 1,1-dichloropropene	0.33038	0.34246	0.050	3.65535	20.00000	Averaged	
36 benzene	1.04888	1.05964	0.050	1.02512	20.00000	Averaged	
37 Tertiary-Amyl Methyl Ether	0.59833	0.60114	0.050	0.46939	20.00000	Averaged	
$ 38 1,2-dichloroethane-d4	0.20971	0.21811	0.050	4.00545	20.00000	Averaged	
39 1,2-dichloroethane	0.30350	0.30854	0.050	1.66347	20.00000	Averaged	
42 methyl cyclohexane	0.56784	0.55547	0.050	-2.17850	20.00000	Averaged	
43 trichloroethene	0.26897	0.27474	0.050	2.14591	20.00000	Averaged	
45 dibromomethane	0.14357	0.14621	0.050	1.84143	20.00000	Averaged	
46 1,2-dichloropropane	0.33377	0.31525	0.050	-5.55101	20.00000	Averaged	

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Voa105.i
Lab File ID: 0902A03.D
Analysis Type: WATER
Lab Sample ID:
Method: \\Orgserv2\ff\chem\GCMSVOA\Voa105.i\140902.b\liq8260B.m

Injection Date: 02-SEP-2014 09:46
Init. Cal. Date(s): 21-AUG-2014 22-AUG-2014
Init. Cal. Times: 23:06 03:43
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
47 bromodichloromethane	0.30781	0.30826	0.050	0.14722	20.00000	Averaged	
49 1,4-Dioxane	0.00164	0.00197	0.050	19.83910	20.00000	Averaged	<-
51 2-Chloroethylvinyl ether	0.15481	0.14681	0.050	-5.16643	20.00000	Averaged	
52 cis-1,3-dichloropropene	0.43699	0.39783	0.050	-8.96173	20.00000	Averaged	
$ 53 toluene-d8	1.06109	1.11829	0.050	5.39066	20.00000	Averaged	
54 toluene	0.74285	0.77155	0.050	3.86403	20.00000	Averaged	
56 4-methyl-2-pentanone	0.08366	0.07599	0.050	-9.17512	20.00000	Averaged	
55 tetrachloroethene	0.32991	0.32263	0.050	-2.20481	20.00000	Averaged	
57 trans-1,3-dichloropropene	0.34507	0.36690	0.050	6.32584	20.00000	Averaged	
59 ethyl-methacrylate	0.29369	0.30663	0.050	4.40375	20.00000	Averaged	
60 1,1,2-trichloroethane	0.18908	0.21746	0.050	15.01072	20.00000	Averaged	
61 chlorodibromomethane	0.26529	0.27214	0.050	2.58302	20.00000	Averaged	
62 1,3-dichloropropane	0.38303	0.42288	0.050	10.40291	20.00000	Averaged	
64 1,2-dibromoethane	0.23672	0.25878	0.050	9.31791	20.00000	Averaged	
65 2-hexanone	0.18053	0.16900	0.050	-6.38841	20.00000	Averaged	
67 chlorobenzene	0.95066	0.99149	0.050	4.29500	20.00000	Averaged	
68 ethyl benzene	1.46062	1.59143	0.050	8.95574	20.00000	Averaged	
69 1,1,1,2-tetrachloroethane	0.26793	0.30379	0.050	13.38333	20.00000	Averaged	
70 p/m xylene	0.65576	0.68732	0.050	4.81260	20.00000	Averaged	
71 o xylene	0.64670	0.69213	0.050	7.02551	20.00000	Averaged	
72 styrene	1.09427	1.15038	0.050	5.12766	20.00000	Averaged	
73 bromoform	0.24550	0.26080	0.050	6.23448	20.00000	Averaged	
74 isopropylbenzene	3.42691	2.87690	0.050	-16.04966	20.00000	Averaged	
$ 75 4-bromofluorobenzene	1.02728	0.88712	0.050	-13.64410	20.00000	Averaged	
76 bromobenzene	0.89382	0.74233	0.050	-16.94860	20.00000	Averaged	
77 n-propylbenzene	3.95727	3.70355	0.050	-6.41139	20.00000	Averaged	
78 1,4-dichloro-2-butane	1.04208	0.92756	0.050	-10.99011	20.00000	Averaged	
79 1,1,2,2,-tetrachloroethane	0.52771	0.55969	0.050	6.06077	20.00000	Averaged	
80 4-ethyltoluene	3.33082	3.33220	0.050	0.04149	20.00000	Averaged	
82 2-chlorotoluene	2.17374	2.18860	0.050	0.68365	20.00000	Averaged	
84 1,2,3-trichloropropane	0.35135	0.42633	0.050	21.34139	20.00000	Averaged	<-
83 1,3,5-trimethybenzene	2.38654	2.58027	0.050	8.11785	20.00000	Averaged	
85 trans-1,4-dichloro-2-butene	0.15084	0.14481	0.050	-3.99626	20.00000	Averaged	
87 4-chorotoluene	2.24544	2.18572	0.050	-2.65964	20.00000	Averaged	
88 tert-butylbenzene	2.54676	2.35900	0.050	-7.37235	20.00000	Averaged	
89 1,2,4-trimethylbenzene	2.64840	2.67717	0.050	1.08617	20.00000	Averaged	
90 sec-butylbenzene	3.62733	3.77920	0.050	4.18681	20.00000	Averaged	
91 p-isopropyltoluene	3.11886	3.23222	0.050	3.63478	20.00000	Averaged	
92 1,3-dichlorobenzene	1.50200	1.61084	0.050	7.24596	20.00000	Averaged	
94 1,4-dichlorobenzene	1.48543	1.60483	0.050	8.03855	20.00000	Averaged	
95 p-Diethylbenzene	1.92018	2.00717	0.050	4.53023	20.00000	Averaged	
96 n-butylbenzene	2.67061	3.04642	0.050	14.07204	20.00000	Averaged	

Alpha Analytical Labs

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: Voa105.i
Lab File ID: 0902A03.D
Analysis Type: WATER
Lab Sample ID:
Method: \\Orgserv2\ff\chem\GCMSVOA\Voa105.i\140902.b\liq8260B.m

Injection Date: 02-SEP-2014 09:46
Init. Cal. Date(s): 21-AUG-2014 22-AUG-2014
Init. Cal. Times: 23:06 03:43
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF100	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
97 1,2-dichlorobenzene	1.38198	1.43871	0.050	4.10486	20.00000	Averaged	
98 1,2,4,5-tetramethylbenzene	2.75310	2.80236	0.050	1.78937	20.00000	Averaged	
99 1,2-dibromo-3-chloropropane	0.18350	0.19234	0.050	4.82173	20.00000	Averaged	
100 1,3,5-trichlorobenzene	0.93039	0.95738	0.050	2.90105	20.00000	Averaged	
101 hexachlorobutadiene	0.30183	0.25613	0.050	-15.13935	20.00000	Averaged	
102 1,2,4-trichlorobenzene	0.59014	0.60085	0.050	1.81455	20.00000	Averaged	
103 naphthalene	0.90886	1.02319	0.050	12.57937	20.00000	Averaged	
104 1,2,3-trichlorobenzene	0.35439	0.37165	0.050	4.87131	20.00000	Averaged	
186 iodomethane	0.38664	0.21246	0.050	-45.05024	20.00000	Averaged	<-

MD

Average %D / Drift Results.

Calculated Average %D/Drift = 7.56378
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

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QA/QC Review of Method 8270C Semi-Volatiles
Data for Alpha Analytical Labs
Lab Number: L1419648

2 Ground Water Samples
Collected August 27, 2014

Prepared by: Donald Anné
December 11, 2014

Holding Times: Samples were extracted and analyzed within USEPA SW-846 holding times.

GC/MS Tuning and Mass Calibration: The DFTPP tuning criteria were within control limits.

Initial Calibration: The SPCCs and CCCs were within method 8270C criteria.

The average RRFs for target base/neutral compounds were above the allowable minimum (0.010) and the %RSDs were below the allowable maximum (30%), as required.

Continuing Calibration: The SPCCs and CCCs were within method 8270C criteria.

The RRFs for target compounds were above the allowable minimum (0.010) and the %Ds were below the allowable maximum (25%), as required.

Blanks: The analysis of the method blank reported target compounds as not detected.

Internal Standard Area Summary: The internal standard areas and retention times were within control limits.

Surrogate Recovery: The surrogate recoveries were within control limits for the soil samples.

Laboratory Control Sample: The relative percent differences for target compounds were below the allowable maximum, but 2 of 2 percent recoveries for hexachlorocyclopentadiene were below QC limits for aqueous samples WG717854-2LCS and WG717854-3LCSD. Positive and "not detected" results for hexachlorocyclopentadiene should be considered estimated (J) in associated soil samples.

Compound ID: Checked compounds were within quantitation limits. The mass spectra for detected compounds contained the primary and secondary ions, as outlined in the method.

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www.alphageoscience.com

3C

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER SEMIVOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG717854-2LCS Injected: 09/03/14 20:48 Lab File ID: 717854-2.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Acenaphthene	40	NA	24.	61	37-111
1,2,4-Trichlorobenzene	40	NA	18.	46	39- 98
Benzidine	40	NA	14.	36	-
n-Nitrosodimethylamine	40	NA	11.	29	-
Hexachlorobenzene	40	NA	30.	74	40-140
Bis(2-chloroethyl)ether	40	NA	25.	63	40-140
2-Chloronaphthalene	40	NA	24.	59	40-140
1,2-Dichlorobenzene	40	NA	18.	45	40-140
1,3-Dichlorobenzene	40	NA	17.	44	40-140
1,4-Dichlorobenzene	40	NA	18.	44	36- 97
3,3'-Dichlorobenzidine	40	NA	23.	58	40-140
2,4-Dinitrotoluene	40	NA	31.	77	24- 96
2,6-Dinitrotoluene	40	NA	30.	75	40-140
Azobenzene	40	NA	25.	64	40-140
Fluoranthene	40	NA	28.	70	40-140
4-Chlorophenyl phenyl et	40	NA	27.	67	40-140
4-Bromophenyl phenyl eth	40	NA	29.	72	40-140
Bis(2-chloroisopropyl)et	40	NA	23.	57	40-140
Bis(2-chloroethoxy)metha	40	NA	27.	67	40-140
Hexachlorobutadiene	40	NA	18.	44	40-140
Hexachlorocyclopentadien	40	NA	10.	25*	40-140
Hexachloroethane	40	NA	16.	41	40-140
Isophorone	40	NA	28.	69	40-140
Naphthalene	40	NA	21.	53	40-140
Nitrobenzene	40	NA	26.	64	40-140
NDPA/DPA	40	NA	27.	67	40-140
n-Nitrosodi-n-propylamin	40	NA	26.	65	29-132
Bis(2-Ethylhexyl)phthala	40	NA	29.	72	40-140
Butyl benzyl phthalate	40	NA	30.	74	40-140
Di-n-butylphthalate	40	NA	28.	71	40-140
Di-n-octylphthalate	40	NA	29.	72	40-140
Diethyl phthalate	40	NA	29.	72	40-140
Dimethyl phthalate	40	NA	29.	72	40-140
Benzo(a)anthracene	40	NA	27.	68	40-140
Benzo(a)pyrene	40	NA	26.	64	40-140
Benzo(b)fluoranthene	40	NA	26.	65	40-140
Benzo(k)fluoranthene	40	NA	27.	68	40-140
Chrysene	40	NA	28.	70	40-140
Acenaphthylene	40	NA	26.	64	45-123
Anthracene	40	NA	27.	68	40-140

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8270

3C
LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY
WATER SEMIVOLATILE ORGANICS

Lab Name: Alpha Analytical Labs
SDG No.: L1419648 Matrix: Water
Lab Control Sample: WG717854-2LCS Injected: 09/03/14 20:48 Lab File ID: 717854-2.D

COMPOUND	SPIKE ADDED (ug/l)	SAMPLE CONCENTRATION (ug/l)	LCS CONCENTRATION (ug/l)	LCS % REC	QC. LIMITS REC.
Benzo(ghi)perylene	40	NA	25.	62	40-140
Fluorene	40	NA	26.	65	40-140
Phenanthrene	40	NA	26.	66	40-140
Dibenzo(a,h)anthracene	40	NA	25.	63	40-140
Indeno(1,2,3-cd)Pyrene	40	NA	26.	64	40-140
Pyrene	40	NA	28.	70	26-127
Biphenyl	40	NA	25.	62	-
Aniline	40	NA	13.	NA 32*	40-140
4-Chloroaniline	40	NA	24.	59	40-140
2-Nitroaniline	40	NA	30.	74	52-143
3-Nitroaniline	40	NA	23.	57	25-145
4-Nitroaniline	40	NA	27.	67	51-143
Dibenzofuran	40	NA	24.	60	40-140
2-Methylnaphthalene	40	NA	20.	51	40-140
1,2,4,5-Tetrachlorobenze	40	NA	22.	54	2-134
Acetophenone	40	NA	30.	74	39-129
2,4,6-Trichlorophenol	40	NA	27.	68	30-130
P-Chloro-M-Cresol	40	NA	24.	59	23- 97
2-Chlorophenol	40	NA	21.	52	27-123
2,4-Dichlorophenol	40	NA	25.	62	30-130
2,4-Dimethylphenol	40	NA	25.	62	30-130
2-Nitrophenol	40	NA	25.	62	30-130
4-Nitrophenol	40	NA	12.	31	10- 80
2,4-Dinitrophenol	40	NA	22.	55	20-130
4,6-Dinitro-o-cresol	40	NA	28.	69	20-164
Pentachlorophenol	40	NA	28.	70	9-103
Phenol	40	NA	8.1	20	12-110
2-Methylphenol	40	NA	18.	44	30-130
3-Methylphenol/4-Methylp	40	NA	17.	42	30-130
2,4,5-Trichlorophenol	40	NA	27.	68	30-130
Benzoic Acid	40	NA	5.9	15	-
Benzyl Alcohol	40	NA	19.	47	-
Carbazole	40	NA	27.	67	55-144
Pyridine	40	NA	8.2	20	10- 66
Benzaldehyde	40	NA	25.	63	40-140
Caprolactam	40	NA	6.5	16	10-130
Atrazine	40	NA	30.	74	40-140
2,3,4,6-Tetrachloropheno	40	NA	28.	71	54-145

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8270

3C

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER SEMIVOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG717854-2LCS Injected: 09/03/14 20:48 Lab File ID: 717854-2.D

Lab Control Dup : WG717854-3LCSD Injected: 09/03/14 21:13 Lab File ID: 717854-3.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	40	21.	52	16	30	37-111
1,2,4-Trichlorobenzene	40	15.	37 *	22	30	39- 98
Benzidine	40	5.6	14	88 *	30	-
n-Nitrosodimethylamine	40	9.6	24	19	30	-
Hexachlorobenzene	40	28.	69	7	30	40-140
Bis(2-chloroethyl)ether	40	21.	52	19	30	40-140
2-Chloronaphthalene	40	20.	49	19	30	40-140
1,2-Dichlorobenzene	40	15.	38 *	17	30	40-140
1,3-Dichlorobenzene	40	14.	36 *	20	30	40-140
1,4-Dichlorobenzene	40	14.	36	20	30	36- 97
3,3'-Dichlorobenzidine	40	20.	51	13	30	40-140
2,4-Dinitrotoluene	40	29.	72	7	30	24- 96
2,6-Dinitrotoluene	40	28.	69	8	30	40-140
Azobenzene	40	22.	56	13	30	40-140
Fluoranthene	40	27.	67	4	30	40-140
4-Chlorophenyl phenyl et	40	24.	60	11	30	40-140
4-Bromophenyl phenyl eth	40	26.	66	9	30	40-140
Bis(2-chloroisopropyl)et	40	19.	48	17	30	40-140
Bis(2-chloroethoxy)metha	40	22.	55	20	30	40-140
Hexachlorobutadiene	40	14.	34 *	26	30	40-140
Hexachlorocyclopentadien	40	8.2	20 *	22	30	40-140
Hexachloroethane	40	13.	33 *	22	30	40-140
Isophorone	40	22.	56	21	30	40-140
Naphthalene	40	18.	44	19	30	40-140
Nitrobenzene	40	21.	52	21	30	40-140
NDPA/DPA	40	24.	60	11	30	40-140
n-Nitrosodi-n-propylamin	40	21.	52	22	30	29-132
Bis(2-Ethylhexyl)phthala	40	29.	72	0	30	40-140
Butyl benzyl phthalate	40	29.	72	3	30	40-140
Di-n-butylphthalate	40	27.	67	6	30	40-140
Di-n-octylphthalate	40	28.	70	3	30	40-140
Diethyl phthalate	40	27.	67	7	30	40-140
Dimethyl phthalate	40	26.	65	10	30	40-140
Benzo(a)anthracene	40	26.	66	3	30	40-140
Benzo(a)pyrene	40	26.	64	0	30	40-140
Benzo(b)fluoranthene	40	26.	66	2	30	40-140
Benzo(k)fluoranthene	40	26.	66	3	30	40-140
Chrysene	40	28.	69	1	30	40-140
Acenaphthylene	40	21.	54	17	30	45-123
Anthracene	40	26.	66	3	30	40-140

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8270

3C

LAB CONTROL/LAB CONTROL DUPLICATE SAMPLE RECOVERY

WATER SEMIVOLATILE ORGANICS

Lab Name: Alpha Analytical Labs

SDG No.: L1419648 Matrix: Water

Lab Control Sample: WG717854-2LCS Injected: 09/03/14 20:48 Lab File ID: 717854-2.D

Lab Control Dup : WG717854-3LCSD Injected: 09/03/14 21:13 Lab File ID: 717854-3.D

COMPOUND	SPIKE ADDED (ug/l)	LCSD CONCENTRATION (ug/l)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC.
Benzo(ghi)perylene	40	25.	63	2	30	40-140
Fluorene	40	23.	57	13	30	40-140
Phenanthrene	40	25.	64	3	30	40-140
Dibenzo(a,h)anthracene	40	26.	64	2	30	40-140
Indeno(1,2,3-cd)Pyrene	40	26.	64	0	30	40-140
Pyrene	40	26.	66	6	30	26-127
Biphenyl	40	21.	52	18	30	-
Aniline	40	10.	25 *	25	30	40-140
4-Chloroaniline	40	19.	48	21	30	40-140
2-Nitroaniline	40	27.	68	8	30	52-143
3-Nitroaniline	40	20.	50	13	30	25-145
4-Nitroaniline	40	26.	65	3	30	51-143
Dibenzofuran	40	21.	53	12	30	40-140
2-Methylnaphthalene	40	16.	41	22	30	40-140
1,2,4,5-Tetrachlorobenze	40	18.	44	20	30	2-134
Acetophenone	40	25.	62	18	30	39-129
2,4,6-Trichlorophenol	40	24.	59	14	30	30-130
P-Chloro-M-Cresol	40	21.	52	13	30	23- 97
2-Chlorophenol	40	17.	42	21	30	27-123
2,4-Dichlorophenol	40	21.	52	18	30	30-130
2,4-Dimethylphenol	40	20.	49	23	30	30-130
2-Nitrophenol	40	21.	53	16	30	30-130
4-Nitrophenol	40	11.	28	10	30	10- 80
2,4-Dinitrophenol	40	23.	57	4	30	20-130
4,6-Dinitro-o-cresol	40	27.	67	3	30	20-164
Pentachlorophenol	40	28.	69	1	30	9-103
Phenol	40	7.0	18	11	30	12-110
2-Methylphenol	40	15.	37	17	30	30-130
3-Methylphenol/4-Methylp	40	15.	37	13	30	30-130
2,4,5-Trichlorophenol	40	24.	61	11	30	30-130
Benzoic Acid	40	6.2	15	0	30	-
Benzyl Alcohol	40	16.	39	19	30	-
Carbazole	40	26.	64	5	30	55-144
Pyridine	40	7.2	18	11	30	10- 66
Benzaldehyde	40	19.	48	27	30	40-140
Caprolactam	40	6.2	16	0	30	10-130
Atrazine	40	30.	74	0	30	40-140
2,3,4,6-Tetrachloropheno	40	25.	62	14	30	54-145

* Values outside of QC limits.

COMMENTS: _____

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FORM III NYTCL-8270

DUSR Flagged Data

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-01	Date Collected	: 08/27/14 11:44
Client ID	: MW-1 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/02/14 16:46
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0902A18	Instrument ID	: VOA105.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	0.61	0.50	0.18	
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	1.0	2.5	0.70	J
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.33	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-01	Date Collected	: 08/27/14 11:44
Client ID	: MW-1 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/02/14 16:46
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0902A18	Instrument ID	: VOA105.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

		ug/L			
CAS NO.	Parameter	Results	RL	MDL	Qualifier
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	3.5	5.0	1.5	J
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	0.85	2.5	0.70	J
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	41.	U
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-02	Date Collected	: 08/27/14 11:31
Client ID	: MW-4 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 08/29/14 21:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0829A17	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.33	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-02	Date Collected	: 08/27/14 11:31
Client ID	: MW-4 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 08/29/14 21:16
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0829A17	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	41.	U
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-03	Date Collected	: 08/27/14 00:00
Client ID	: TRIP BLANK	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 08/29/14 20:42
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0829A16	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
75-09-2	Methylene chloride	ND	2.5	0.70	U
75-34-3	1,1-Dichloroethane	ND	2.5	0.70	U
67-66-3	Chloroform	ND	2.5	0.70	U
56-23-5	Carbon tetrachloride	ND	0.50	0.13	U
78-87-5	1,2-Dichloropropane	ND	1.0	0.13	U
124-48-1	Dibromochloromethane	ND	0.50	0.15	U
79-00-5	1,1,2-Trichloroethane	ND	1.5	0.50	U
127-18-4	Tetrachloroethene	ND	0.50	0.18	U
108-90-7	Chlorobenzene	ND	2.5	0.70	U
75-69-4	Trichlorofluoromethane	ND	2.5	0.70	U
107-06-2	1,2-Dichloroethane	ND	0.50	0.13	U
71-55-6	1,1,1-Trichloroethane	ND	2.5	0.70	U
75-27-4	Bromodichloromethane	ND	0.50	0.19	U
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	0.16	U
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	0.14	U
75-25-2	Bromoform	ND	2.0	0.65	U
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	0.14	U
71-43-2	Benzene	ND	0.50	0.16	U
108-88-3	Toluene	ND	2.5	0.70	U
100-41-4	Ethylbenzene	ND	2.5	0.70	U
74-87-3	Chloromethane	ND	2.5	0.70	U
74-83-9	Bromomethane	ND	2.5	0.70	U
75-01-4	Vinyl chloride	ND	1.0	0.33	U
75-00-3	Chloroethane	ND	2.5	0.70	U
75-35-4	1,1-Dichloroethene	ND	0.50	0.14	U
156-60-5	trans-1,2-Dichloroethene	ND	2.5	0.70	U
79-01-6	Trichloroethene	ND	0.50	0.18	U

Form 1
Volatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-03	Date Collected	: 08/27/14 00:00
Client ID	: TRIP BLANK	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 08/29/14 20:42
Sample Matrix	: WATER	Dilution Factor	: 1
Analytical Method	: 1,8260C	Analyst	: MS
Lab File ID	: 0829A16	Instrument ID	: ELAINE.I
Sample Amount	: 10 ml	GC Column	: RTX-502.2
Level	: LOW	%Solids	: N/A
Extract Volume (MeOH)	: N/A	Injection Volume	: N/A

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
95-50-1	1,2-Dichlorobenzene	ND	2.5	0.70	U
541-73-1	1,3-Dichlorobenzene	ND	2.5	0.70	U
106-46-7	1,4-Dichlorobenzene	ND	2.5	0.70	U
1634-04-4	Methyl tert butyl ether	ND	2.5	0.70	U
179601-23-1	p/m-Xylene	ND	2.5	0.70	U
95-47-6	o-Xylene	ND	2.5	0.70	U
156-59-2	cis-1,2-Dichloroethene	ND	2.5	0.70	U
100-42-5	Styrene	ND	2.5	0.70	U
75-71-8	Dichlorodifluoromethane	ND	5.0	1.0	U
67-64-1	Acetone	ND	5.0	1.5	U
75-15-0	Carbon disulfide	ND	5.0	1.0	U
78-93-3	2-Butanone	ND	5.0	1.9	U
108-10-1	4-Methyl-2-pentanone	ND	5.0	1.0	U
591-78-6	2-Hexanone	ND	5.0	1.0	U
74-97-5	Bromochloromethane	ND	2.5	0.70	U
106-93-4	1,2-Dibromoethane	ND	2.0	0.65	U
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.5	0.70	U
98-82-8	Isopropylbenzene	ND	2.5	0.70	U
87-61-6	1,2,3-Trichlorobenzene	ND	2.5	0.70	U
120-82-1	1,2,4-Trichlorobenzene	ND	2.5	0.70	U
79-20-9	Methyl Acetate	ND	2.0	0.23	U
110-82-7	Cyclohexane	ND	10	0.27	U
123-91-1	1,4-Dioxane	ND	250	41.	U
76-13-1	Freon-113	ND	2.5	0.70	U
108-87-2	Methyl cyclohexane	ND	10	0.40	U

Form 1
SemiVolatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-01	Date Collected	: 08/27/14 11:44
Client ID	: MW-1 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/03/14 23:46
Sample Matrix	: WATER	Date Extracted	: 08/29/14
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 19648-01	Analyst	: JB
Sample Amount	: 1000 ml	Instrument ID	: SV103.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.41	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.48	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.0	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.89	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.36	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.43	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.60	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.60	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.58	U J
78-59-1	Isophorone	ND	5.0	0.79	U
98-95-3	Nitrobenzene	ND	2.0	0.40	U
86-30-6	NDPA/DPA	ND	2.0	0.34	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	0.93	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.77	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.2	U
84-66-2	Diethyl phthalate	ND	5.0	0.39	U
131-11-3	Dimethyl phthalate	ND	5.0	0.33	U
92-52-4	Biphenyl	ND	2.0	0.24	U
106-47-8	4-Chloroaniline	ND	5.0	0.84	U
88-74-4	2-Nitroaniline	ND	5.0	0.96	U
99-09-2	3-Nitroaniline	ND	5.0	0.67	U
100-01-6	4-Nitroaniline	ND	5.0	0.83	U

Form 1
SemiVolatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-01	Date Collected	: 08/27/14 11:44
Client ID	: MW-1 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/03/14 23:46
Sample Matrix	: WATER	Date Extracted	: 08/29/14
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 19648-01	Analyst	: JB
Sample Amount	: 1000 ml	Instrument ID	: SV103.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
132-64-9	Dibenzofuran	ND	2.0	0.22	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.36	U
98-86-2	Acetophenone	ND	5.0	0.43	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.78	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.54	U
95-57-8	2-Chlorophenol	ND	2.0	0.58	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.56	U
105-67-9	2,4-Dimethylphenol	ND	5.0	0.58	U
88-75-5	2-Nitrophenol	ND	10	1.0	U
100-02-7	4-Nitrophenol	ND	10	1.1	U
51-28-5	2,4-Dinitrophenol	ND	20	1.4	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	U
108-95-2	Phenol	ND	5.0	0.27	U
95-48-7	2-Methylphenol	ND	5.0	0.70	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.72	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.75	U
86-74-8	Carbazole	ND	2.0	0.37	U
100-52-7	Benzaldehyde	ND	5.0	0.99	U
105-60-2	Caprolactam	11	10	0.39	
1912-24-9	Atrazine	ND	10	0.79	U
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.59	U

Form 1
SemiVolatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-02	Date Collected	: 08/27/14 11:31
Client ID	: MW-4 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/04/14 02:10
Sample Matrix	: WATER	Date Extracted	: 08/29/14
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 19648-02	Analyst	: JB
Sample Amount	: 1000 ml	Instrument ID	: BUFFY.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
111-44-4	Bis(2-chloroethyl)ether	ND	2.0	0.41	U
91-94-1	3,3'-Dichlorobenzidine	ND	5.0	0.48	U
121-14-2	2,4-Dinitrotoluene	ND	5.0	1.0	U
606-20-2	2,6-Dinitrotoluene	ND	5.0	0.89	U
7005-72-3	4-Chlorophenyl phenyl ether	ND	2.0	0.36	U
101-55-3	4-Bromophenyl phenyl ether	ND	2.0	0.43	U
108-60-1	Bis(2-chloroisopropyl)ether	ND	2.0	0.60	U
111-91-1	Bis(2-chloroethoxy)methane	ND	5.0	0.60	U
77-47-4	Hexachlorocyclopentadiene	ND	20	0.58	U J
78-59-1	Isophorone	ND	5.0	0.79	U
98-95-3	Nitrobenzene	ND	2.0	0.40	U
86-30-6	NDPA/DPA	ND	2.0	0.34	U
621-64-7	n-Nitrosodi-n-propylamine	ND	5.0	0.64	U
117-81-7	Bis(2-ethylhexyl)phthalate	ND	3.0	0.93	U
85-68-7	Butyl benzyl phthalate	ND	5.0	1.1	U
84-74-2	Di-n-butylphthalate	ND	5.0	0.77	U
117-84-0	Di-n-octylphthalate	ND	5.0	1.2	U
84-66-2	Diethyl phthalate	ND	5.0	0.39	U
131-11-3	Dimethyl phthalate	ND	5.0	0.33	U
92-52-4	Biphenyl	ND	2.0	0.24	U
106-47-8	4-Chloroaniline	ND	5.0	0.84	U
88-74-4	2-Nitroaniline	ND	5.0	0.96	U
99-09-2	3-Nitroaniline	ND	5.0	0.67	U
100-01-6	4-Nitroaniline	ND	5.0	0.83	U

Form 1
SemiVolatile Organics

Client	: Bailey & Haskell Insurance	Lab Number	: L1419648
Project Name	: SPHERE TSC HERKIMER	Project Number	: BHL-SPHERE 1
Lab ID	: L1419648-02	Date Collected	: 08/27/14 11:31
Client ID	: MW-4 SPHEREHERK82714	Date Received	: 08/27/14
Sample Location	: HERKIMER, NY	Date Analyzed	: 09/04/14 02:10
Sample Matrix	: WATER	Date Extracted	: 08/29/14
Analytical Method	: 1,8270D	Dilution Factor	: 1
Lab File ID	: 19648-02	Analyst	: JB
Sample Amount	: 1000 ml	Instrument ID	: BUFFY.I
Extraction Method	: EPA 3510C	GC Column	: RTX-5
Extract Volume	: 1000 uL	%Solids	: N/A
GPC Cleanup	: N	Injection Volume	: 1 uL

CAS NO.	Parameter	ug/L Results	RL	MDL	Qualifier
132-64-9	Dibenzofuran	ND	2.0	0.22	U
95-94-3	1,2,4,5-Tetrachlorobenzene	ND	10	0.36	U
98-86-2	Acetophenone	ND	5.0	0.43	U
88-06-2	2,4,6-Trichlorophenol	ND	5.0	0.78	U
59-50-7	p-Chloro-m-cresol	ND	2.0	0.54	U
95-57-8	2-Chlorophenol	ND	2.0	0.58	U
120-83-2	2,4-Dichlorophenol	ND	5.0	0.56	U
105-67-9	2,4-Dimethylphenol	ND	5.0	0.58	U
88-75-5	2-Nitrophenol	ND	10	1.0	U
100-02-7	4-Nitrophenol	ND	10	1.1	U
51-28-5	2,4-Dinitrophenol	ND	20	1.4	U
534-52-1	4,6-Dinitro-o-cresol	ND	10	1.4	U
108-95-2	Phenol	ND	5.0	0.27	U
95-48-7	2-Methylphenol	ND	5.0	0.70	U
108-39-4/106-44-5	3-Methylphenol/4-Methylphenol	ND	5.0	0.72	U
95-95-4	2,4,5-Trichlorophenol	ND	5.0	0.75	U
86-74-8	Carbazole	ND	2.0	0.37	U
100-52-7	Benzaldehyde	ND	5.0	0.99	U
105-60-2	Caprolactam	11	10	0.39	
1912-24-9	Atrazine	ND	10	0.79	U
58-90-2	2,3,4,6-Tetrachlorophenol	ND	5.0	0.59	U

APPENDIX L
CERTIFICATIONS

GREYSTONE

CERTIFICATIONS

I, David A. Myers, certify that I am currently a NYS registered professional engineer and that this Site Management Plan was prepared in accordance with all applicable states and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

061989	11/28/12	D A Myers
NYS Professional Engineer #	Date	Signature

CERTIFICATION OF ENGINEERING AND INSTITUTIONAL CONTROLS

I, James F. Blasting, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Site Management Plan (SMP) was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved work plan and any DER-approved modifications.

Qualified Environmental Professional

25 March 2015

Date