

2019 Periodic Review Report

Love Road Development Site
20-50 Love Road
Town of Poughkeepsie
Dutchess County, New York

Chazen Project No. 81434.00
April 17, 2019



Prepared for:
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1.0 EXECUTIVE SUMMARY

On behalf of Herbert H. Redl, The Chazen Companies, Inc. (Chazen) has provided ongoing groundwater monitoring and annual site inspections at the 20-50 Love Road in the Town of Poughkeepsie, New York (the "Site"). The Site is identified as Brownfield Cleanup Program (BCP) Site No. C314113 and consists of overgrown vegetated areas and the remnants of former structures including driveways and building foundations. The Site is zoned for commercial use, has remained vacant and free of structures since the 1990s, and includes a public use easement for the driveway and access to an adjoining rail trail. The Certificate of Completion (COC) was issued in 2017. A Site Location Map is included as **Figure 1a**. A Site Survey Map is included as **Figure 1b**.

This Periodic Review Report summarizes Site conditions with respect to the Remedial Action Objectives for the Site and the results of environmental media sampling, collected since the COC was issued in December 2017 and covering the period of January 2018 through February 2019. The completed Site Management Periodic Review Report Notice and Institutional and Engineering Controls Certification Form are attached in **Appendix A**.

1.1 Remedial History

The contaminants of concern are petroleum range (CP-51 list) volatile organic compounds (VOCs) in groundwater. The source area is a former 1,000-gallon underground storage tank (UST) within the area of concern AOC-2. The remedy was conducted in 2017 and included:

1. Placement of a composite cover system in the lower part of AOC-2 where the upper two feet of exposed soils exceeded the SCOs. Petroleum contaminated soil remains beneath the two-foot composite cover system.
2. Excavation and off-site disposal of 325 cubic yards of petroleum impacted soil in the upper AOC-2 area, in the vicinity of a former 1,000-gallon UST, followed by backfilling. Visual, olfactory, and photoionization detector (PID) evidence of petroleum impacts remain at the depth and beneath building foundations in the upper AOC-2 area.

1.2 Effectiveness of Remedial Program

- Decreasing concentrations of VOCs in groundwater samples demonstrate the effectiveness of the soil removal remedy.
- The cover system remains intact and continues to function as designed to prevent exposure.

1.3 Compliance Consistency

Based on observations during monitoring, no breaching of the soil cover has occurred, and groundwater monitoring wells remain in serviceable condition.

Monitoring of VOCs in groundwater show decreasing concentrations in the two sampling events conducted since the COC was issued.

1.4 Recommendations

The remedial cover system continues to operate as intended with no evidence of erosion. Continued periodic inspection of the cover and maintenance as needed is recommended.

VOC concentrations in groundwater samples have been decreasing since completion of the remedial action. Consistent with the SMP, the four on-Site groundwater monitoring wells will continue to be sampled semi-annually for another year (2019). If the results continue to demonstrate a decreasing trend in the concentration of VOCs we anticipate that a recommendation for a reduction in the groundwater sampling frequency would be warranted.

At this time, we are recommending that the results of the semi-annual groundwater sampling events be reported on an annual basis. We also recommend the PRR reporting frequency be reduced to three years with the next PRR due 2022.

2.0 SITE OVERVIEW

2.1 Site Location and Pre-Remedy Conditions

The Site is located at 20-50 Love Road in the Town of Poughkeepsie, Dutchess County, New York and is identified as Section 6261, Block 01, and Lot 187898 on the Dutchess County Tax Map (see **Figure 1b**). The Site is an approximately 4.59-acre area and is bounded by commercial plazas to the north and west, US Route 44 (Dutchess Turnpike) to the south, and the Dutchess Rail Trail to the east. The Site consists of overgrown vegetated areas and the remnants of former structures including driveways and building foundations. The Site is zoned for commercial use, has remained vacant and free of structures since the 1990s, and includes a public use easement for the driveway and access to an adjoining rail trail.

The Site was formerly occupied at different times by a lumber/building supply yard, a gasoline service station, a brick factory, and most recently by a petroleum bulk storage (PBS) facility which operated through the 1970s and 1980s. The PBS facility had six fuel oil above-ground storage tanks (ASTs) with the following capacities: one 2,500,000-gallon AST, two 25,000-gallon ASTs, and three 20,000-gallon ASTs. The PBS facility closed in the late 1980s, and the PBS registration notes that the ASTs were cleaned, removed, and listed as closed on the facility in the early 1990s. The following section includes pre-remedy conditions along with identified impacts.

2.2 Chronology of Remedial Program

The following narrative provides a remedial history timeline and a brief summary of the available project records to document key investigative and remedial milestones for the Site.

July 2006 Site Characterization and Remedial Investigation Summary Report (RI), prepared by Fuss & O'Neill

The initial RI at the Love Road Site occurred during June through August 2005 and included the advancement of 48 test pits, 29 soil borings, and two temporary groundwater monitoring wells. Three areas of concern (AOCs) were identified (Figure 2), which included a former PBS fuel unloading area near the northern site entrance (AOC-1), an area surrounding and including an existing remaining foundation from a former building adjacent to the southern site boundary (AOC-2), and the northeastern property corner (AOC-3) which was a former railside loading area. These areas were identified based on field evidence of petroleum impacted soil and analytical evidence of volatile organic compounds (VOCs), semi-

volatile organic compounds (SVOCs), as well as select metals in soil that exceeded NYSDEC Part 375 Unrestricted Use Soil Cleanup Objectives (UUSCOs). Groundwater impacted by petroleum-range VOCs was identified at one location, within AOC-2.

During the RI, a 1,000-gallon underground storage tank (UST) was discovered near the southern site boundary within AOC-2 (Figure 2). It was surmised that this UST was associated with an historic gasoline service station that operated at the Site. The UST was removed in November 2005 as an Interim Remedial Measure (IRM). A hole was noted in the bottom of the UST and petroleum impacts were observed at the base of the tank grave. Analytical soil samples taken from the tank grave limit confirmed the presence of petroleum-range VOCs and SVOCs exceeding UUSCOs. Impacted soil was left in place, to be addressed by the site remedy.

October 2010 Supplemental Remedial Investigation (SRI), prepared by Fuss & O'Neill

A Supplemental Remedial Investigation (SRI) was conducted between 2008 and 2009 to resolve environmental data gaps identified by the initial RI. The SRI also documented remaining conditions following a 2007 soil and UST removal IRM.

The July 2007 IRM was conducted to excavate an area of stained soil in AOC-1 where free product had been observed during the 2006 RI. Following NYSDEC approval, this soil was excavated and stockpiled on site. The excavation limit is depicted on Figure 2. Two 500-gallon USTs connected by a pipe, surmised to have been used as an oil-water separator, were discovered during the soil excavation and were removed and disposed. No petroleum-range VOCs or SVOCs were detected in seven soil samples taken at the excavation limits, confirming a satisfactory soil removal effort. A total of 127.38 tons were removed and transported to Deep Green of New York in New Windsor, New York for thermal treatment and recycling on January 11, 2012.

The 2010 SRI included completion of a soil vapor investigation, installation and sampling of four monitoring wells, and completion of a fish and wildlife resources impact assessment (FWRIA). The SRI report provided the following conclusions:

- Soil vapor results were compared to the NYSDOH Soil Vapor Intrusion (SVI) guidance values for sub-slab soil vapor and did not identify concentrations that would require mitigation. One of the five soil vapor samples reported elevated petroleum range compounds which are not included in the NYSDOH SVI guidance matrixes and one sample was analyzed with detection limits exceeding SVI action criteria thresholds, warranting further SVI evaluation in this location if enclosed structures are proposed in the future.
- One overburden well, MW-1, was installed near the former 1,000-gallon UST in AOC-2, one bedrock well was installed west of AOC-2 (MW-2), and two bedrock wells were installed in and near AOC-1 (MW-3 and MW-4). The groundwater sample from the overburden well identified petroleum range VOCs and SVOCs greater than NYSDEC Standards, Criteria, and Guidance values (SCGs). Groundwater sampling results from the three bedrock wells met the SCGs.
- The results of the FWRIA determined that impacts present at the Site do not constitute actual or potential adverse impacts to fish and wildlife resources.

July 2012 Alternatives Analysis and Remedial Work Plan, prepared by Fuss & O'Neill

Three remedial alternatives were evaluated for the site, including no further action, remediation to UUSCOs, and remediation for RRUSCOs. Remediation for restricted-residential use was selected based on its cost effectiveness in achieving compliance with the Remedial Action Objectives (RAOs) and SCGs in both the short and long term.

The proposed remedial strategies to protect site occupants and visitors from potential exposure to the contaminants of concern and to reduce the potential for off-site migration of contaminants included the following:

- Removal of approximately 650 cubic yards of source area soils in the vicinity of the former 1,000-gallon UST located within AOC-2.
- Placement of a composite cap system over shallow soil remaining on site that exceeds restricted-residential SCGs.
- Installation of a sub-surface depressurization system (SSDS) as part of any future buildings constructed within areas impacts by VOCs.
- Execution of an environmental easement which places standard BCA use restrictions on the property.

2015 Supplemental Sampling Investigation and 2017 Addendum to Alternatives Analysis and Remedial Work Plan, prepared by Chazen

Chazen completed a supplemental soil and groundwater sampling investigation in September 2015 to collect additional data to confirm the extent of cover remedies needed at the Site. The investigation included installation of test pits to field screen soils for petroleum impacts and ten near-surface soil samples. One groundwater sample was also collected from exiting overburden well MW-1. The 2015 sampling locations were added to the 2012 SRI location map attached as **Figure 2**.

The ten near-surface soil results met the UUSCOs, significantly reducing the AOC-2 area requiring a protective cover system as part of the remedy. The 2017 Addendum to the Remedial Work Plan presented a reduced cover area subsequently approved by NYSDEC and NYSDOH on June 20, 2017.

The groundwater sample met the SCGs except for two compounds (isopropylbenzene and n-propylbenzene). The subsequent Remedial Work Plan Addendum included installation of MW-5, MW-6 and MW-7, around the AOC-2 excavation area in lieu of any future routine monitoring of wells MW-1 through MW-4.

2017 AOC-2 Soil Excavation and Soil Cover Remedy

In September 2017, 489.7 tons of petroleum-impacted soil were removed from the vicinity of the former 1,000-gallon UST area on the upper part of AOC-2 and taken to Deep Green for disposal. The excavation limit is shown on **Figure 2b**. MW-1 was removed during excavation activities. Post-excavation soil sampling results confirmed UUSCOs were achieved. A demarcation layer was placed in the excavation bottom and then the excavation was backfilled with soil meeting the requirements of 6 NYCRR Part 375-6.7(d). The area of the cover to be maintained is shown on **Figure 1b**.

Monitoring wells MW-5, MW-6 and MW-7 were installed around this excavation area as part of this remedial work effort.

In the lower part of AOC-2, shown on **Figure 1b**, the ground was cleared and grubbed, orange construction fencing was placed as a demarcation barrier, and a two-foot thick layer of clean soil cover was placed over the existing grade (approximately 21 inches of fill with three inches of topsoil).

3.0 REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

Soil Cover System

Exposure to remaining contamination at the Site is prevented by a cover system placed over a limited area of the Site. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, or concrete building slabs. The location of the cover system and applicable demarcation layers is included on **Figure 1b**. The soil cover system was inspected during the February 2019 annual inspection, and confirmed to be intact with no evidence of significant erosion. The annual inspection form is included in **Appendix A**.

Groundwater

In accordance with the October 2017 SMP, the December 2017 Certificate of Completion (COC), current monitoring requirements include the semi-annual collection and analysis of groundwater from four on-site monitoring wells.

- The following monitoring wells are sampled semi-annually: overburden wells MW-5, MW-6, and MW-7, and bedrock aquifer well 2009-MW-2.

Groundwater monitoring results are reported to NYSDEC. The most recent groundwater samples were collected on May 17, 2018 and February 22, 2019. The samples were collected in general conformance with the methodologies identified in the approved Field Sampling Plan. Samples were collected in laboratory-provided sample jars and immediately chilled. The groundwater samples were analyzed for CP-51 list VOCs via USEPA Method 8260.

The table in **Appendix B** summarizes laboratory analytical results with comparison to guidance values published in Part 703. Groundwater concentrations show decreasing concentrations of VOCs. The laboratory reports for the May 2018 and February 2019 groundwater sampling events are presented in **Appendix C**.

4.0 INSTITUTIONAL CONTROL/ENGINEERING CONTROL COMPLIANCE REPORT

4.1 IC/EC Requirements and Compliance

Several IC/ECs are in place at the Site. A description of each control, its objective, and performance evaluation follows. Each objective has been and continues to be met, and no deficiencies have been identified. Therefore, no corrective measures are warranted and no recommendations for change are proposed at this time.

1. Soil Cover System - Exposure to remaining contamination at the Site is prevented by a cover system placed over a limited area of the Site. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, or concrete building slabs. Inspection and reporting of the cover system shall be performed as defined in the SMP. An Excavation Work Plan presented in the SMP outlines procedures required in the event that the cover system must be breached, penetrated, or if any underlying contaminated material must be disturbed. Based on the February 2019 inspection, the cover appears to be intact.
2. Groundwater monitoring must be performed as defined in the SMP. Results are provided in Appendixes B and C.
3. The property may only be used for restricted-residential, commercial, or industrial use as described within 6 NYCRR Part 375-1.8(g)(2)(ii), (iii) and (iv). Compliance with this IC is documented in the PRR EC/IC Certification Form in Appendix A.
4. All activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP. Compliance with this IC is documented in this PRR.
5. The use of the groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Dutchess County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department. Compliance with this IC is documented in the PRR EC/IC Certification Form in Appendix A.
6. The potential for vapor intrusion must be evaluated for any buildings developed at the Site, and any potential impacts that are identified must be monitored or mitigated.
7. Vegetable gardens and farming on the property are prohibited. These activities are not conducted on the property. Compliance with this IC is documented in the PRR EC/IC Certification Form in Appendix A.
8. Site owner certification is provided the PRR EC/IC Certification Form in Appendix A.
9. Additional ICs include: Compliance with the Environmental Easement and the SMP by the Grantor and the Grantor's successors and assigns; all Engineering Controls must be operated and maintained as specified in the SMP; all Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP; 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; future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP; and monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP. Compliance with these ICs is documented in this PRR, annual inspections, and groundwater monitoring reports that have been conducted since the Certificate of Completion was issued in December 2017.
10. 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 the Environmental Easement.

4.2 IC/EC Certification

The IC/EC Certification forms are included in Appendix A.

5.0 MONITORING PLAN COMPLIANCE REPORT

5.1 Components of the Monitoring Plan

The table below provides the monitoring requirements for each media type and remedial technologies.

Components of the Monitoring Plan

Media	Frequency*	Matrix	Analysis
Groundwater	Semi-annual for two years (2018 and 2019); after which, evaluate results for possible reduced sampling frequency.	Groundwater	CP-51 List Volatile Organic Compounds by EPA Method 8260
Cover System	Annual inspection	Physical system check	None

5.2 Summary of Monitoring Completed During Reporting Period

Monitoring completed during this reporting period (January 2018 to March 2019) has included the following:

- Two groundwater sampling events were conducted on May 17, 2018 and February 22, 2019, reported on March 1, 2019, and included in this PRR. Appendix B provides a compilation of groundwater sampling results at the Site compared to NYSDEC Part 703 standards, and the laboratory reports are included in Appendix C.
- The cover system and site-wide inspection was conducted in February 2019 and included in Appendix A.

5.3 Comparisons with Remedial Objectives

Groundwater - Groundwater concentrations show a continued decrease in VOC concentrations since the 2017 soil removal remedy was conducted. The monitoring is performed to document restoration of the groundwater aquifer to the extent practicable.

Cover System – The cover system remains intact and continues to function as designed. As such, it meets its RAO to prevent contact with, or inhalation of volatiles in contaminated soil and groundwater, and prevent ingestion/direct contact with contaminated soil and groundwater.

Groundwater is not used at the Site, and site work was consistent with soil excavation plan, both of which prevent ingestion/direct contact with contaminated soil and groundwater.

5.4 Monitoring Deficiencies

No monitoring deficiencies were identified during the sampling and reporting period.

5.5 Conclusions and Recommendations for Changes

The remedial cover system continues to operate as intended with no evidence of erosion. Continued periodic inspection of the cover and maintenance as needed is recommended.

VOC concentrations in groundwater samples have been decreasing since completion of the remedial action. Consistent with the SMP, the four on-site groundwater monitoring wells will continue to be sampled semi-annually for another year (2019). If the results continue to demonstrate a decreasing trend in the concentration of VOCs we anticipate that a recommendation for a reduction in the groundwater sampling frequency would be warranted.

At this time, we are recommending that the results of the semi-annual groundwater sampling events be reported on an annual basis. We also recommend the PRR reporting frequency be reduced to three years with the next PRR due 2022.

6.0 OPERATION AND MAINTENANCE (O&M) PLAN COMPLIANCE REPORT

6.1 Components of the O&M Plan

The soil cover system is a non-mechanical EC discussed in the EC/IC Control Plan.

Soil Cover System - The cover system has been in place at the Site since installation in 2017. This cover system is comprised of a minimum of 24 inches of clean soil, asphalt pavement, concrete-covered sidewalks, or concrete building slabs.

6.2 Summary of O&M Completed During Reporting Period

Annual inspections have not identified needed maintenance.

6.3 Evaluation of Remedial Systems

Based on the site inspection, the soil cover system appears to be performing as expected.

6.4 O&M Deficiencies

No O&M deficiencies were noted during the reporting period.

6.5 Conclusions and Recommendations for Improvement

The cover system is intact, functioning as designed. There are no recommendations for improvements to the O&M Plan at this time.

7.0 OVERALL PERIODIC REVIEW REPORT CONCLUSIONS AND RECOMMENDATIONS

7.1 Compliance with the Site Management Plan

IC/ECs in place at the site include a cover system.

- The Annual Site Wide Inspection conducted in 2019 indicated that groundwater monitoring wells are in place and in adequate condition that the groundwater quality is not being compromised, and there were no visible breaches in the impermeable cover.
- The Site continues to be unoccupied, which is consistent with the allowed restricted residential, commercial or industrial use of the Site.

- Groundwater monitoring has been conducted.

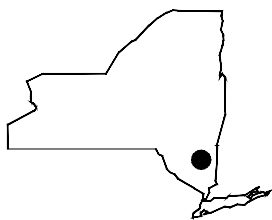
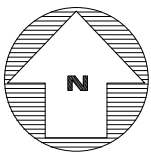
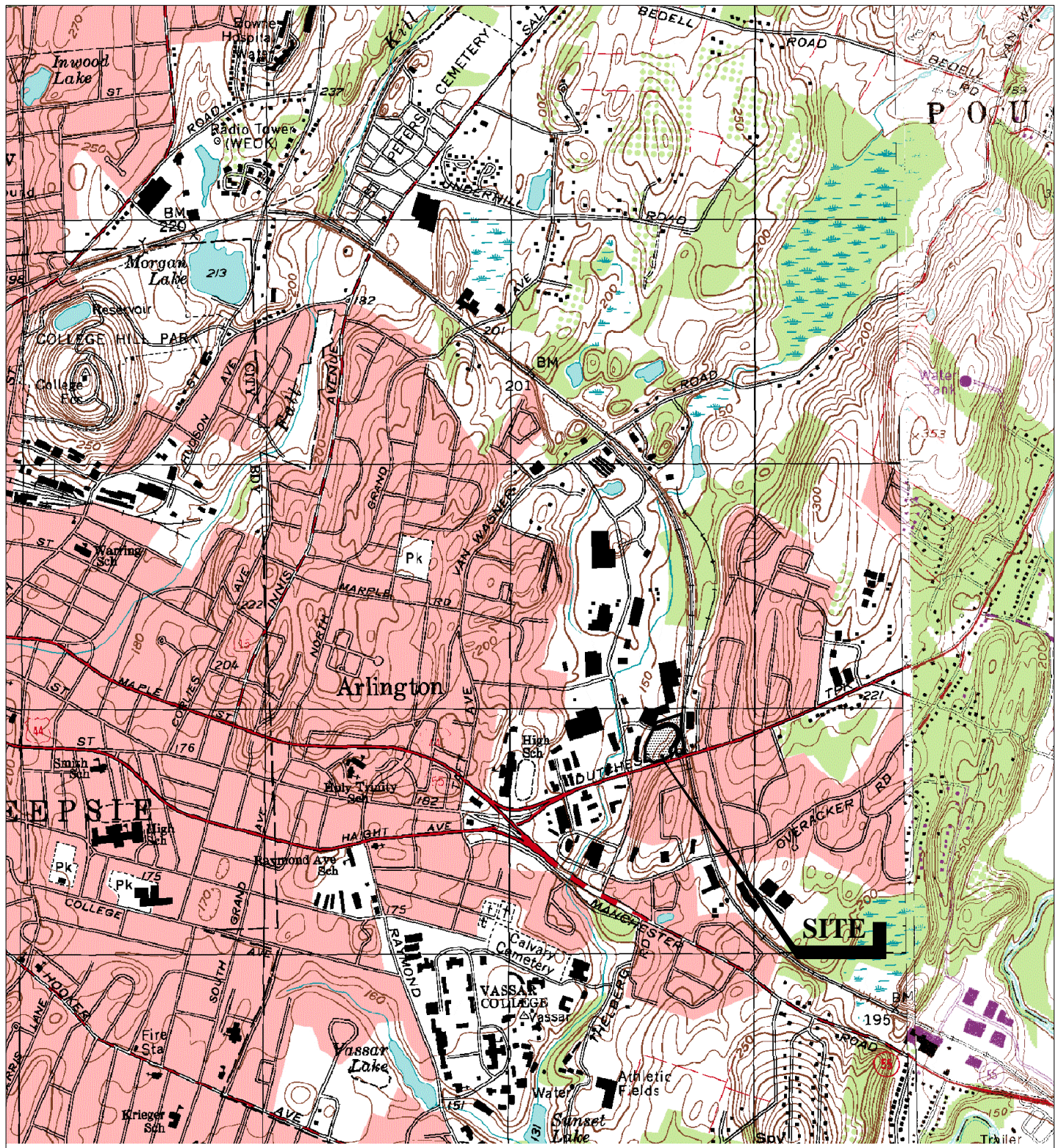
7.2 Performance and Effectiveness of the Remedy

Groundwater monitoring suggests that limited residual VOCs remain in groundwater following the remedy to remove impacted soil. Future monitoring is likely to show continued attenuation of remaining VOC impacts in groundwater.

7.3 Future PRR Submittals

Monitoring for the next reporting period will include an annual site-wide inspection. Semi-annual groundwater sampling will be performed and results reported to NYSDEC. The next PRR will be submitted by May18, 2020, unless the reporting cycle is changed as recommended in Section 1.4.

FIGURES



MAP REFERENCE

THIS MAP WAS PREPARED FROM THE FOLLOWING 7.5 MINUTE USGS MAPS:
 Poughkeepsie Quadrangle 1964, Photorevised 1980
 Poughkeepsie Quadrangle 1963, Photorevised 1980

SCALE:	
HORZ.: 1" = 2000'	
VERT.: N/A	
DATUM:	
HORZ.: N/A	
VERT.: N/A	
GRAPHIC SCALE	



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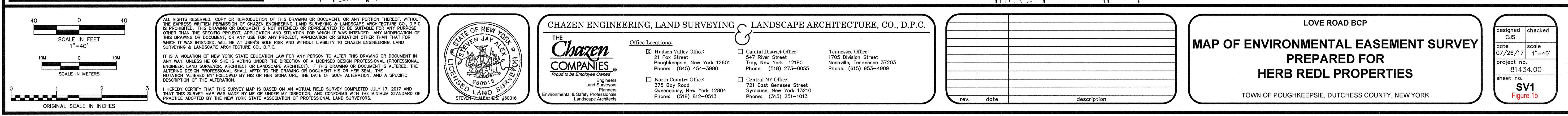
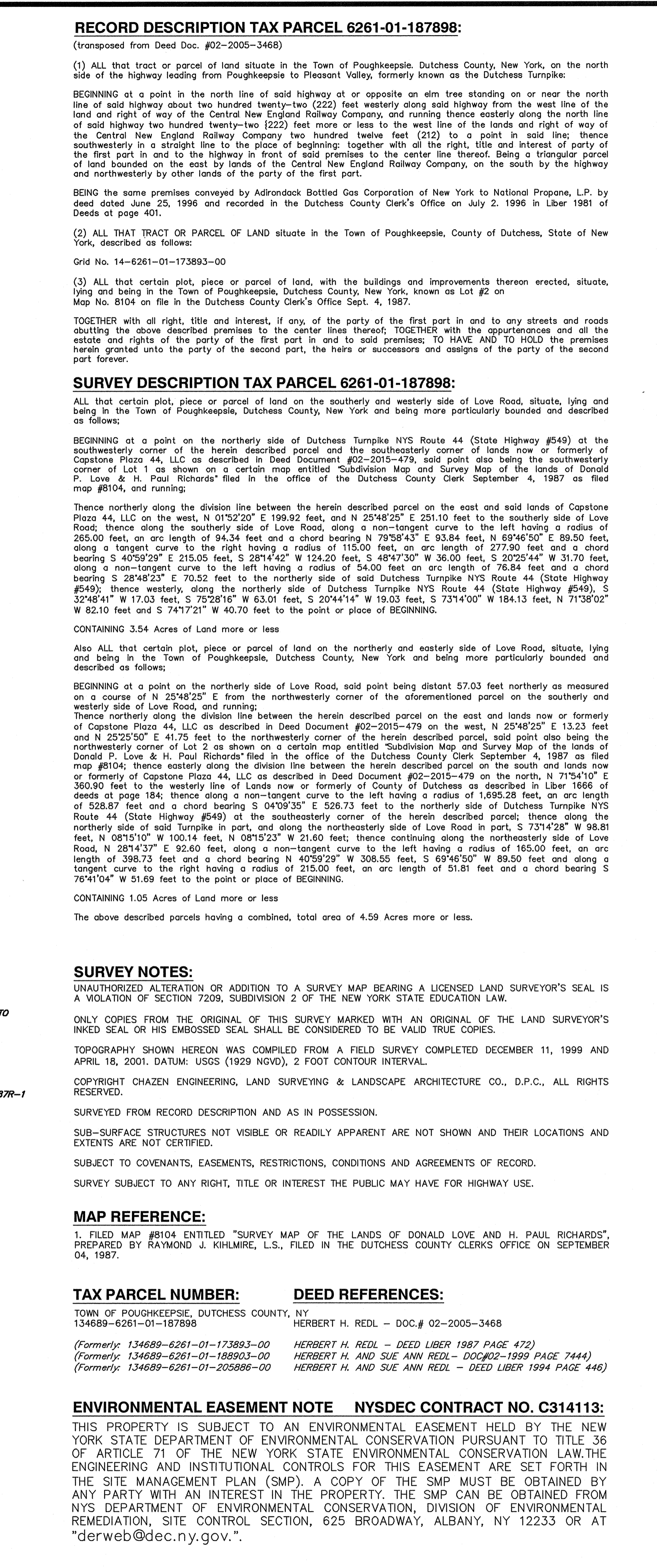
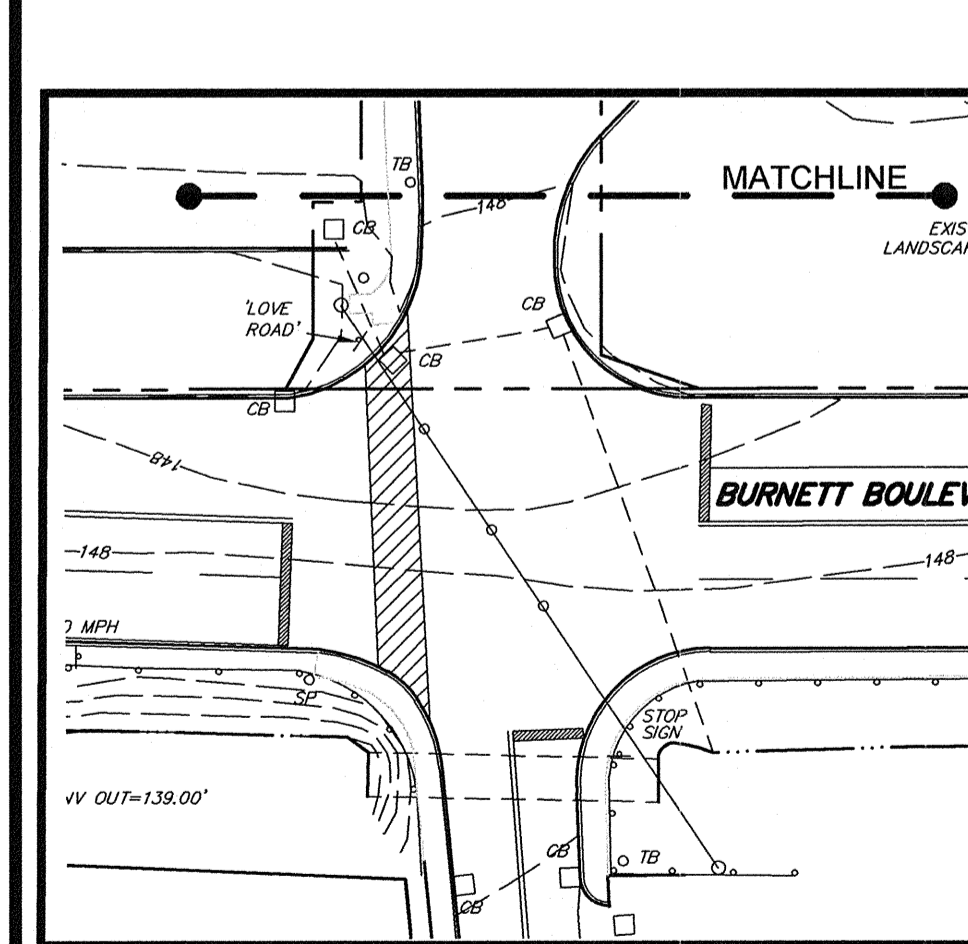
HERBERT REDL
 USGS LOCATION MAP
 2 LOVE ROAD

TOWN OF POUGHKEEPSIE

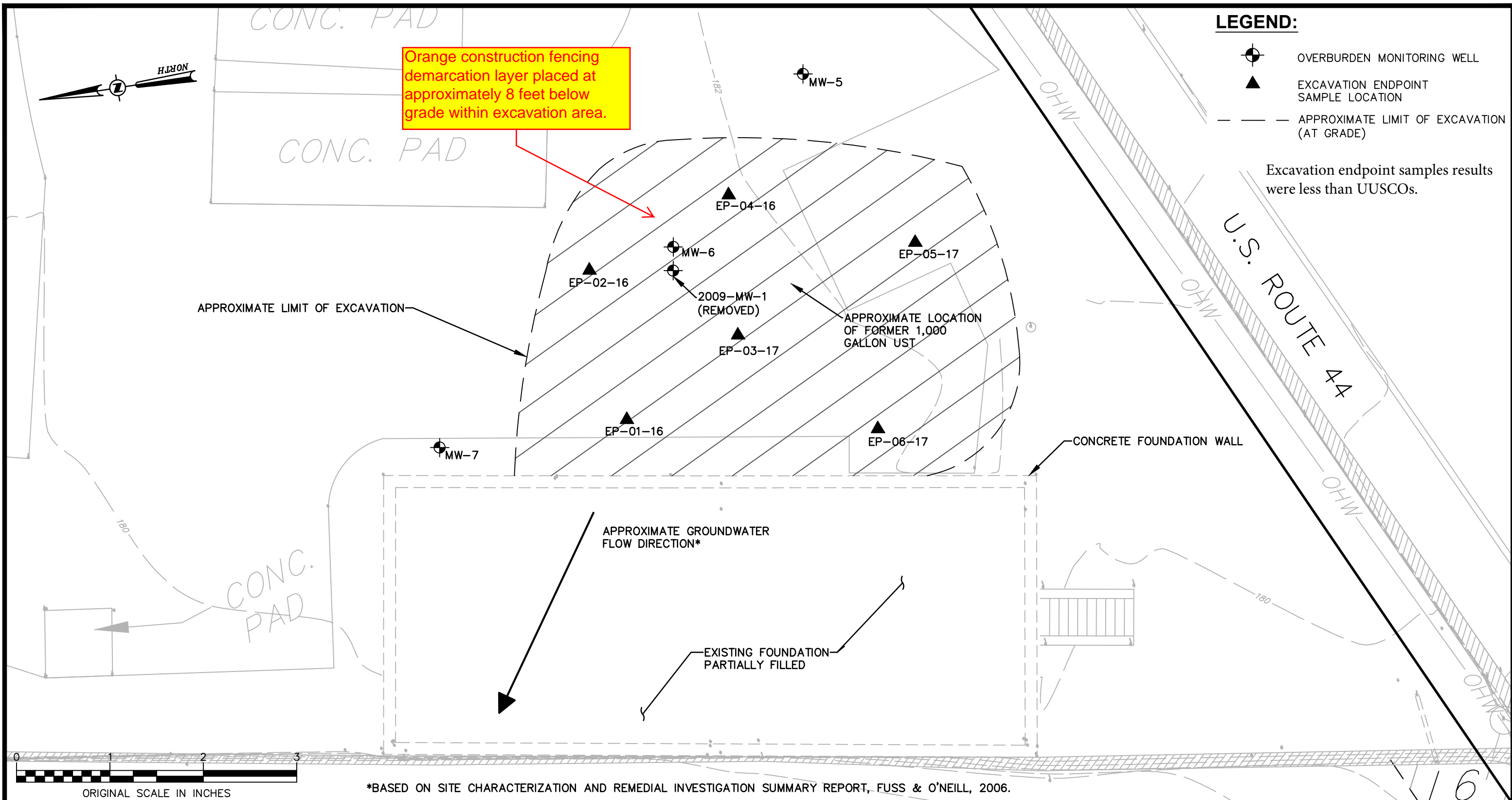
NEW YORK

PROJ. No.: 20040761.A8N
 DATE: JULY 2012

FIG 1a



Drawing Name: Z:\projects\81400-81499\81434-00 Herb Red_Love Rd BCP\DWG\01_81434_SOIL EXCAVATION MAP.dwg Date Printed: Sep 28, 2017, 3:04pm



LEGEND:

- OVERBURDEN MONITORING WELL
- EXCAVATION ENDPOINT SAMPLE LOCATION
- APPROXIMATE LIMIT OF EXCAVATION (AT GRADE)

Excavation endpoint samples results were less than UUSCOs.

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Phone: (615) 380-1359

AOC-2 REMEDIAL EXCAVATION MAP

designed WC	checked WGO
date 09/27/17	scale 1"=10'
project no. 81434.00	
sheet no. FIG 2b	

APPENDIX A:
Engineering Control/ Institutional Control
Certification and Annual Site Inspection
Forms



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. C314113 **Site Details** **Box 1**

Site Name Love Road Development Site

Site Address: 20-50 Love Road Zip Code: 12603
City/Town: Poughkeepsie
County: Dutchess
Site Acreage: 4.590

Reporting Period: December 18, 2017 to April 18, 2019

- | | YES | NO |
|--|-------------------------------------|-------------------------------------|
| 1. Is the information above correct? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| If NO, include handwritten above or on a separate sheet. | | |
| 2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form. | | |
| 5. Is the site currently undergoing development? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Box 2

- | | YES | NO |
|---|-------------------------------------|--------------------------|
| 6. Is the current site use consistent with the use(s) listed below?
Restricted-Residential, Commercial, and Industrial | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 7. Are all ICs/ECs in place and functioning as designed? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Box 2A

YES NO

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

☐ ☒

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid?
(The Qualitative Exposure Assessment must be certified every five years)

☒ ☐

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C314113**Box 3****Description of Institutional Controls**ParcelOwnerInstitutional Control

14-6261-01-187898

Herbert Redl

Ground Water Use Restriction
Soil Management Plan
Landuse Restriction
Monitoring Plan
Site Management Plan
IC/EC Plan

Institutional controls required by the environmental easement include groundwater use restrictions, land use restrictions (restricted residential) and the requirement that the site adheres to the approved SMP. Future buildings erected at the site must evaluate the potential for soil vapor intrusion.

Box 4**Description of Engineering Controls**ParcelEngineering Control

14-6261-01-187898

Monitoring Wells
Cover System

The engineering controls required by the environmental easement include maintenance and annual inspection of the site's cover system. Existing groundwater monitoring wells will be maintained and sampled in accordance with the SMP to assess the natural attenuation of contamination.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

- a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;
- b) 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 is accurate and complete.

YES NO

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2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

- (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;
- (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;
- (c) 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;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

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**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C314113

Box 6


SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 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 HERBERT A. REDL at 80 Washington Street, Poughkeepsie, NY 12601
print name print business address

am certifying as Owner (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

4/9/19
Date

IC/EC CERTIFICATIONS

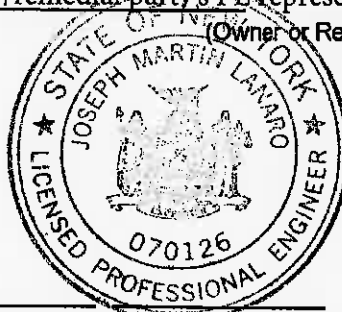
Box 7

Signature

I certify that all information in Boxes 4 and 5 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 Joseph M. Lanaro at The Chazen Companies, 21 Fox Street, Poughkeepsie, NY
print name print business address

am certifying ~~as a~~ for the as the site owner/remedial party's PE representative
(Owner or Remedial Party)



Signature of , for the Owner or Remedial Party,
Rendering Certification

Stamp
(Required for PE)

4/17/2019
Date

ANNUAL SITE INSPECTION FORM

Love Road Development Site BCP Site No. C314113
Love Road, Poughkeepsie, Dutchess County

Page 1
of 1

Performed by:

Will Olsen

Date:

2/22/19

Time: 14:00-16:00

Part 1 - Institutional and Engineering Controls (circle one)		
1A - Is site still an unused lot with two areas of soil cover? If "NO" describe new use.	No	<u>Yes</u>
1B - Is there evidence of ground disturbance or other intrusive activities?	<u>No</u>	Yes
1C - Is there evidence of cover stresses, including settling or erosion of surface materials?	No	<u>Yes</u> *
1D - Are there discolored, stressed, or areas absent of vegetation in soil cover area?	<u>No</u>	Yes
1E - Is site groundwater being used for any purpose (i.e., has a well been installed)?	<u>No</u>	Yes
1F - Have any buildings been constructed on the eastern area of AOC-2?	<u>No</u>	Yes
1G - If YES to question 1F, what were results of soil vapor intrusion investigation?		
1H - If SVI investigation documented need for vapor mitigation, describe mitigation measures taken/installed.		

Part 2 - General Site Conditions
2A - Describe changes since last inspection *
<u>Some settling of soil occurred within remedial excavation area.</u>

Part 3 - Compliance with Excavation Work Plan
3A - Describe site construction activities that have been conducted since last inspection (see SMP for soil management criteria)
<u>N/A</u>
3B - Describe soil excavation and disposition (on site/off site). Map excavation areas and on site placement.
<u>N/A</u>

Part 4 - Confirm that site records are up to date
<div> <input type="radio"/> No <input type="radio"/> Yes </div> <div> 4A - Are there any changes that need to be documented in site records (e.g., change of ownership, site usage) </div>
<div> <input type="radio"/> No <input type="radio"/> Yes <input checked="" type="radio"/> NA </div> <div> 4B - Has DEC received notice of any proposed ground intrusive activities? </div>



Photo #1 (facing north): View of soil cover system in lower region of AOC-2.



Photo #2 (facing southwest): View of soil cover system in lower region of AOC-2.



Photo #3 (facing north): View of soil cover system in upper region of AOC-2.



Photo #4 (facing northwest): View of soil cover system in upper region of AOC-2.



Photo #1 (facing north): View of soil cover system in lower region of AOC-2.



Photo #2 (facing southwest): View of soil cover system in lower region of AOC-2.



Photo #3 (facing north): View of soil cover system in upper region of AOC-2.



Photo #4 (facing northwest): View of soil cover system in upper region of AOC-2.

APPENDIX B:
Table – Summary of Monitoring Data

TABLE 1a
SUMMARY OF GROUNDWATER SAMPLE ANALYTICAL RESULTS

Future Love Road Development Site (BCP Site C314113)
Poughkeepsie, Dutchess County, New York

Sample Location/ ID:	6 NYCRR Part 703.5	2009-MW-2			MW-5			MW-6			MW-7		
Lab Sample ID:		17I1106-01	18E0898-04	19B0846-01	17I1106-02	18E0898-02	19B0846-04	17I1106-04	18E0898-01	19B0846-03	17I1106-03	18E0898-03	19B0846-02
Sampling Date/ Time:		9/26/17	5/17/18	2/22/19	9/26/17	5/17/18	2/22/19	9/26/17	5/17/18	2/22/19	9/26/17	5/17/18	2/22/19
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
COMPOUND		Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q	Result Q
Volatile Organics, CP-51 List	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	0.29 J	ND	0.97	1.0	ND	ND	ND	ND
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	0.77	0.54	ND	ND	ND	ND
Benzene	1	ND	ND	ND	0.58	11	6.8	0.52	0.46 J	ND	ND	ND	0.22 J
Ethyl Benzene	5	ND	ND	ND	0.82	ND	0.33 J	19	0.47 J	ND	1.2	ND	ND
Isopropylbenzene	5	ND	ND	ND	15	1.8	2.4	31	0.83	ND	ND	0.85	ND
Methyl tert-butyl ether (MTBE)	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.22 J	ND	ND
Naphthalene	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	3.2	ND	ND	ND	ND	ND
n-Propylbenzene	5	ND	ND	ND	0.65	0.25 J	ND	39	0.62	ND	ND	ND	ND
o-Xylene	5	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	2.3	ND	ND
p- & m- Xylenes	5	ND	ND	ND	0.97 J	ND	0.62 J	1.4	ND	ND	5.0	ND	ND
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	0.44 J	ND	ND	ND	ND	ND
sec-Butylbenzene	5	ND	ND	ND	6.4	1.7	2.3	4.0	0.21 J	ND	ND	0.42 J	0.34 J
tert-Butylbenzene	5	ND	ND	ND	4.0	2.3	3.0	0.59	ND	ND	0.40 J	0.80	1.1
Toluene	5	ND	ND	ND	ND	ND	ND	0.27 J	0.65	ND	ND	ND	ND
Xylenes, Total	5	ND	ND	ND	0.97 J	ND	ND	1.7	ND	ND	7.3	ND	ND

NOTES:

Results that exceed the groundwater quality standard are in highlighted yellow.

ug/L = Micrograms per liter

Q is the Qualifier Column with definitions as follows:

J=analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated

ND=analyte not detected at or above the method detection level

TABLE 1b
SUMMARY OF GROUNDWATER QA/QC SAMPLE ANALYTICAL RESULTS

Future Love Road Development Site (BCP Site C314113)
Poughkeepsie, Dutchess County, New York

<i>Sample Location/ ID:</i>	<i>TB-01</i>		<i>Trip Blank</i>		<i>Trip Blank</i>	
<i>Lab Sample ID:</i>	17I1106-07		17I1106-07		19B0846-05	
<i>Sampling Date/ Time:</i>	09/26/17		09/26/17		02/22/19	
<i>Matrix</i>	D.I.		D.I.		D.I.	
COMPOUND	Result	Q	Result	Q	Result	Q
Volatile Organics, CP-51 List	<i>ug/L</i>		<i>ug/L</i>		<i>ug/L</i>	
1,2,4-Trimethylbenzene	ND		ND		ND	
1,3,5-Trimethylbenzene	ND		ND		ND	
Benzene	ND		ND		ND	
Ethyl Benzene	ND		ND		ND	
Isopropylbenzene	ND		ND		ND	
Methyl tert-butyl ether (MTBE)	ND		ND		ND	
Naphthalene	ND		ND		ND	
n-Butylbenzene	ND		ND		ND	
n-Propylbenzene	ND		ND		ND	
o-Xylene	ND		ND		ND	
p- & m- Xylenes	ND		ND		ND	
p-Isopropyltoluene	ND		ND		ND	
sec-Butylbenzene	ND		ND		ND	
tert-Butylbenzene	ND		ND		ND	
Toluene	ND		ND		ND	
Xylenes, Total	ND		ND		ND	

NOTES:

ug/L = Micrograms per liter

D.I. = Deionized Water

ND=analyte not detected at or above the method detection level