Mechanicville Light Industrial Park

MECHANICVILLE, SARATOGA COUNTY, NEW YORK

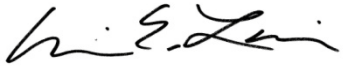
Periodic Review Report

NYSDEC Site Number: E546050

Prepared for:
City of Mechanicville, New York
36 North Main Street
Mechanicville, NY 12118

Prepared by:
HRP ASSOCIATES, INC.
dBA HRP ENGINEERING, PC.
1 FAIRCHILD SQUARE SUITE 110
CLIFTON PARK, NEW YORK 12065
(518) 877-7101

Patrick Rodman
Senior Project Geologist



Cailyn E. Locci
Project Manager

JUNE 2013

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Periodic Review Report (PRR)
Mechanicville Light Industrial Park (Site ID#E*546050*)
Mechanicville, Saratoga County, New York 12118

Report Submittal Date: June 5, 2013
Prepared by:

HRP Associates, Inc.
dba HRP Engineering, P.C.
1 Fairchild Square, Suite 110
Clifton Park, New York 12065
Phone: (518) 877-7101 / Fax: (518) 877-8561

Project Address: Mechanicville Light Industrial Park, Mechanicville, New York

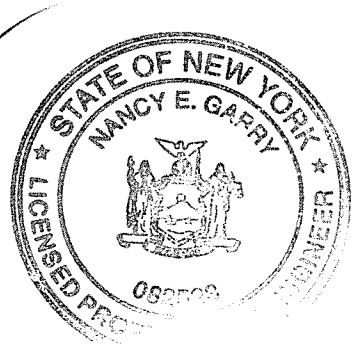
Certification, Limitations, and Statement of Independence

For each instructional or engineering control identified for the site, I certify that all of the following statements are true;

(a) 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 DER;
(b) Nothing has occurred that would impair the ability of such a control to protect public health and the environment;
(c) Nothing has occurred that would constitute a violation or failure to comply with any Site Management Plan for this control; and
(d) Access to the site will continue to be provided to DER to evaluate the remedy, including access to evaluate the continued maintenance of this control.

Environmental Contractor: HRP Engineering, P.C.

By:
Nancy Garry, P.E.



LIST OF ABBREVIATIONS

BCP	Brownfield Cleanup Program
bgs	below ground surface
COC	Contaminants of Concern
DUSR	Data Usability Summary Report
EC	Engineering Controls
HRP	HRP Associates, Inc.
IC	Institutional Controls
LEL	Lower Explosive Limit
LTMP	Long Term Monitoring Plan
mg/kg	milligram per kilogram
NYSDEC	New York State Department of Environmental Conservation
O&M	Operations and Maintenance
PCB	Polychlorinated biphenyl
PID	Photoionization Detector
PRR	Periodic Review Report
QC	Quality Control
RA	Remedial Action
RACR	Remedial Action Completion Report
RI	Remedial Investigation
ROD	Record of Decision
Site	Mechanicville Light Industrial Park Site # 546050
SMP	Site Management Plan
SVOC	Semi-Volatile Organic Compound
TOC	Total Organic Compound
TOGS	Technical and Operations Guidance Series
ug/L	Micro grams per liter or parts per billion
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound

1.0 INTRODUCTION

This document is required as an element of the remedial program at the Mechanicville Light Industrial Park (hereinafter referred to as the "Site") under the New York State (NYS), Environmental Restoration Program (ERP) administered by New York State Department of Environmental Conservation (NYSDEC). The site was investigated in accordance with State Assistance Contract (SAC) # C303093, (ERP site number E546050), which was executed on March 21, 2006. The site remediation was conducted in conformance with *DER-10: Technical Guidance for Site Investigation and Remediation* (NYSDEC, June 2010). This report is intended to meet the requirements of the Site Management Plan (SMP).

A Periodic Review Report (PRR) will be submitted to the Department every twelve (12) months. The report will be prepared in accordance with NYSDEC DER-10 and submitted within 45 days of the end of each certification period.

2.0 SITE OVERVIEW

The site is located in the City of Mechanicville, Saratoga County, New York and consists of two tax parcels, S/B/L 261.-51-1-2 and 261.-1-3.112. The site is approximately 25.0± acres area bounded by Yankee One Dollar Warehouse to the northwest, Canadian Pacific Railroad to the northeast, Elizabeth Street Extension, and then vacant woodlands to the west, and Clement Street, then Residential and Mechanicville/Stillwater Little League Baseball Fields to the South (see Figure 2).

At the time when the SMP was approved and implemented, the site was planned to be broken up into three areas for proposed future use. The main portion of the site (or approximately 17 acres or 68% of the site), was proposed as industrial use. The City was also proposing two separate areas, which are adjacent and contiguous to be used as restricted residential use (8 acres or approximately 32% of the site). This restricted residential use would apply to the existing baseball field, (approximately 2-acres or 8% of the site), and the remaining undeveloped area, proposed soft ball fields. Currently at this time, the need for the new softball recreational playing fields may no longer be as great. The City plans to remediate the area for restricted residential use as provided for in the ROD. The City will be notifying the Department of a new proposed use for this eight (8) acre area that is likely commercial or industrial in nature.

2.1 Site History

Based on HRP's historical research, which included the review of available newspaper articles and previous environmental reports, as well as interviews with City officials, the majority of the site was historically occupied by Boston and Maine Railroad, who used the site as a rail yard starting in 1921. Principal structures at the subject property included the Power House, Sand House, Engine House, Round House and Coal Trestle (concrete structure). The Engine House was demolished by 1945 and by 1967, the Round House and Power House buildings were demolished, and the water tank was removed. Operations reportedly ceased during the mid- to late-1980's, and by 1990, the Sand House was also demolished. The only remaining structures onsite were the coal trestle, concrete slab remains of the Round House, and a small structure reportedly used as sleeping quarters for the engineers.

In 1996, the subject site was purchased from Boston and Maine Railroad by the City of Mechanicville. During 1996/1998, the site was improved with an office, garage, salt shed and paved parking lot for the DPW facility. In addition, Industrial Park Road was constructed, running east/west along the site and ending in a cul-de-sac in the southwestern corner. The Mechanicville/Stillwater Little League has leased a section of the southwest corner of the site since 1995. A ball field, known as Field "C" was constructed in this area at that time, and batting cages were installed following that. Reportedly, clean fill from offsite was used as a surface covering when Field "C" and the batting cages were constructed.

A Remedial Investigation (RI) was performed by HRP Associates for the City of Mechanicville under the ERP from June 2007 through May 2009 to characterize the nature and extent of contamination at the Mechanicville Light Industrial Park site. The investigation consisted of a Ground Penetrating Radar (GPR) survey, the installation of test pits, monitoring wells and soil borings; groundwater, surface and subsurface soil sampling and analysis; completion of public well survey and a professional survey of locations of the test pits, surface soil samples, subsurface soil boring samples and newly installed groundwater monitoring wells; and soil vapor collection and analysis.

Various compounds were detected in the proposed industrial area of the site among the surface and subsurface soil samples collected, however they were contained to the central portion of the subject site. Of the compounds detected, with two exceptions, no volatile or semi-volatile organic compounds (VOCs or SVOCs), metals, PCBs or pesticides were detected in the proposed industrial area at concentrations that exceeded 6 NYCRR Subpart 375-6 Protection of Public Heath SCOs for commercial or industrial use. The two exceptions include Benzo(a)pyrene, which was detected in three surface soil samples, and Arsenic, which was detected in seven surface soil samples at a concentration slightly exceeding Commercial and Industrial SCOs. Although the majority of the proposed SCGs were met in this area, it should be noted that during field activities several test pits as well as one soil boring, all located in the central portion of the site, exhibited strong petroleum odors within the subsurface soils and Non-aqueous Phase Liquid (NAPL) was observed on the groundwater. To address the contaminated soils in the central portion of the subject property IRM activities were performed. In total, approximately 2,292 tons of contaminated soil was removed and disposed of offsite. In addition, approximately 105,200 gallons of contaminated water was evacuated and treated for petroleum contamination from the excavation prior to discharge to the sanitary sewer.

Any compounds detected in the existing baseball field area were compared to 6 NYCRR Subpart 375-6 SCOs Protection of Public Health for unrestricted and restricted residential use. All compounds detected in the baseball field area were below Unrestricted SCOs with the exception of slight exceedances among both the surface and subsurface soil samples collected. Among the subsurface samples one pesticide, 4,4-DDE and metals including Nickel and Zinc slightly exceeded Unrestricted SCOs, while only one compound, Manganese, marginally exceeded Restricted Residential SCOs. Among the surface samples analyzed, two pesticides, 4,4-DDE and 4,4 DDT, as well as Copper exceeded Unrestricted SCOs. There were no exceedances above Restricted Residential SCOs. All compounds detected in the subsurface soil sample collected from the proposed softball field area, which is adjacent and contiguous to the baseball field, were below Unrestricted and Restricted

Residential SCOs. Minimal exceedances above Unrestricted SCOs for metals were detected for Arsenic, Copper, Lead and Zinc. All other compounds were below Unrestricted and Restricted Residential objectives.

Groundwater samples collected during the RI showed the presence of one VOC, Bromomethane, one SVOC, Bis (2-Ethylhexl) phthalate and sixteen metals above groundwater standards. The metals detected at levels exceeding NYSDEC TOGS 1.1.1 groundwater standards include Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Nickel, and Sodium. There were no other exceedances above the TOGS values in the groundwater samples.

The results of the soil vapor sampling conducted during the RI showed low levels of chlorinated compounds (commonly associated with solvent degreasing), and non-chlorinated compounds (commonly associated with petroleum products) were detected at low levels across the site. The findings indicate a general degradation of the soil and groundwater on-site from chlorinated and non-chlorinated compounds. Trace levels of PCE (well below NYSDOH Guidance Values) and Methylene Chloride were detected in soil vapor point SV-05 located in the northern area of the site, north of the D.P.W. Garage, however concentrations for those compounds were not detected in the results for the nearest soil boring sample (SB-19) or the nearest groundwater sample (MW-3). A correlation can be made between the subsurface soil and groundwater samples in relationship to the soil vapor in the central portion of the site only, and as a result, the central portion of the site was considered a source area. The IRM soil and groundwater removal tasks completed removed and treated much of the source area.

In July 2011 HRP supervised the decommissioning of the eleven (11) monitoring wells (MW-2, MW-3, MW-6 through MW-14) located at the Mechanicville Light Industrial Park Site. HRP contracted Aztech Environmental of Ballston Spa, New York to provide labor and equipment to facilitate the monitoring well decommissioning. The bottom of each well was punctured and the well was filled with bentonite grout. The casing and screen of the monitoring well was then removed using a truck mounted crane and the borings were then backfilled with grout to grade. One monitoring well (MW-1) was unable to be located during the well decommissioning activities and is presumed destroyed. In addition, monitoring wells MW-4 and MW-5 were previously removed by HRP during excavation remediation activities.

2.1.1 Current Status

The site currently consists of a proposed future industrial use area which includes the DPW facility and transfer station on the north side of Davenport Street and vacant land to the south side of the street and east of the cul-de-sac (see Figure 2). The existing ballfield and areas to the north (vacant land east and west of the cul-de-sac) are proposed for future restricted residential use. Other that the existing soil cover at the ballfield, no engineering controls have been implemented. As indicated in the ROD, the soil cover requirement needs to be implemented before the site can be occupied or used for its intended future use. No additional soil cover is required for the existing ball fields as the RI results confirm that during the construction of the

ballfield and batting cages clean fill from off-site was used as surface covering. The existing soil cover in the ballfield appeared to be intact, and no other engineering controls were evaluated since the remainder of the soil cover has not yet been installed.

3.0 EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

3.1 Remedial Action Objectives

The contamination identified during the remedial investigations remains on the site. Institutional Controls (ICs) and Engineering Controls (ECs) have been incorporated into the site remedy by the NYSDEC to provide proper management of remaining contamination in the future to ensure protection of public health and the environment. The interim site management plan (SMP) prepared in August 2010 is a detailed description of all procedures required to manage contamination at the site, including: (1) implementation and management of all ICs and ECs; and (2) performance of periodic inspections, certification of results, and submittal of Periodic Review Reports.

The remediation goals for this site are to eliminate or reduce to the extent practicable:

- Exposures of persons at or around the site to elevated SVOCs detected in the surface soils in the proposed softball field area and contamination detected in the subsurface soils in the central portion of the site;
- Exposures of persons at or around the proposed industrial area of the site to inorganics (metals) in the surface soil;
- The release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- The release of contaminants from subsurface soil into indoor air through soil vapor.

3.2 Institutional and Engineering Control Plan

The Institutional Control system for this site includes the following:

- The restricted residential area will only be used for restricted residential use, commercial use, and/or industrial use as defined by the NYSDEC and recorded in an Environmental Easement recorded on February 8, 2011.
- The industrial area will only be used for industrial use as defined by NYSDEC as “land use category which shall only be considered for the primary purpose of manufacturing, production, fabrication or assembly processes and ancillary services. Industrial use does not include any recreational component.” Ancillary services include warehousing and equipment storage.
- The following are prohibited on the property: residential homes, apartments, vegetable gardens and farming, raising livestock or producing animal products for human consumption.
- The use of groundwater as a source of potable or processed water will be restricted.
- Continued evaluation of the potential for vapor intrusion for any buildings developed onsite is required.
- The property owner will provide a periodic certification to the NYSDEC to certify the ECs and ICs are in place (or currently compliant with the ROD) and land uses have not changed.

The Engineering Control system for this site includes or will include the following:

- **Industrial Area** (17 acres) - Minimum of 12 inches of soil cover underlain by a demarcation layer (i.e. snow fencing).
- **Restricted Residential Area** (8 acres) - Minimum of 24 inches of soil cover underlain by a demarcation layer.
- **Any Vegetative Areas**- The top 6 inches of the soil cover would be of sufficient quality to support vegetation (i.e. top soil).
- **Any Non-Vegetative Areas** (i.e. buildings, roadways, parking lots) would be covered by a paving system or concrete at least 6 inches thick.
- **Any future intrusive work** that will penetrate or disturb the soil cover will be performed in compliance with the Excavation Work Plan (found in Appendix A of SMP).

Certification of the ECs cannot be completed because the engineering controls for this site have not yet been implemented.

3.3 Monitoring Plan Compliance

3.3.1 Confirm Compliance with Monitoring Plan

An annual site wide inspection must be conducted by the site owner at least once a year or within 5 days after all severe weather conditions that may have affected soil covers. An inspection form will be completed and kept on file in City Hall in the City of Mechanicville. This inspection was conducted on May 3, 2013 and the completed inspection form is provided as Appendix A.

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 1 below.

Table 1: Schedule of Monitoring/Inspection Reports

Task	Reporting Frequency	Inspection Date
Annual Site Wide Inspection	Once a year for first 5 years	Completed May 3, 2013
Site Wide Inspection	As directed by NYSDEC from the 6th year onward	

3.3.2 Description of Site Inspection

A site-wide inspection was conducted on May 3, 2013 and is recorded on the Inspection Form in Appendix A. HRP visually inspected the entire site and a log of site inspection photographs is located in Appendix B. The areas inspected included the proposed future industrial use area which includes the DPW facility and transfer station on the north side of Davenport Street and vacant land to the south side of the street and east of the cul-de-sac. The existing ballfield and areas to the north (vacant land east and west of the cul-de-sac) which are proposed for future restricted residential use were also inspected. Other that the existing soil cover at the ballfield, no engineering controls have been implemented. The existing soil cover in the ballfield appeared to be intact, and no other engineering controls were evaluated since the remainder of the soil cover has not yet been installed. No changes in site use since the ROD was implemented were noted. During the inspection, a plastic vertical riser was observed protruding from from the IRM excavation backfill area. Conversations with Mr. Dave Higgins of the Mechanicville DPW indicate that the riser provides access to the abandoned storm water drainage system encountered during the IRM excavation. The riser does not have a cap or cover and therefore surface and/or groundwater was observed to be accumulated inside the base of the riser.

Currently the site remedy currently does not rely on any mechanical systems, such as sub-slab depressurization systems or air sparge/soil vapor extraction systems to protect the public health and the environment. However, should a sub-slab depressurization be installed in the future based on the results of a soil vapor intrusion (SVI) evaluation, then the SMP will be amended as appropriate to include an Operation and Maintenance Plan and an associated Section 5.0, Inspection Reporting and Certifications.

3.3.3 Performance and Effectiveness Monitoring

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

- The Monitoring Plan is being implemented;
- The Institutional Controls (IC) in the form of an Environmental Easement have been implemented;
- No change in site use has occurred; and
- The site remedy continues to be compliant with provisions specified in the ROD.

3.3.4 Summary of Monitoring

The areas inspected on May 3, 2013 included the proposed future industrial use area which includes the DPW facility and transfer station on the north side of Davenport Street and vacant land to the south side of the street and east of the cul-de-sac. The existing ballfield and areas to the north (vacant land east and west of the cul-de-sac) which are proposed for future

restricted residential use were also inspected. Other that the existing soil cover at the ballfield, no engineering controls have been implemented. The existing soil cover in the ballfield appeared to be intact, and no other engineering controls were evaluated since the remainder of the soil cover has not yet been installed. No changes in site use since the ROD was implemented were noted. The monitoring plan and environmental easement for this site are being implemented.

3.3.5 Comparisons to Remedial Objectives

The site remedial action objectives of exposures to surface soils in the proposed softball field area, central portion of the site, and at or around the proposed industrial use area are not being met since the soil cover is not in place. This portion of the site remedy is not in compliance with the ROD.

3.3.6 Monitoring Deficiencies

No monitoring deficiencies were noted; however, as indicated in the ROD, the soil cover requirement needs to be implemented in the industrial and restricted-residential area before the site can be occupied or used for its intended future use. No additional soil cover is required for the existing ball fields as the RI results confirm that during the construction of the ballfield and batting cages clean fill from off-site was used as surface covering. The existing soil cover in the ballfield appeared to be intact, and no other engineering controls were evaluated since the remainder of the soil cover has not yet been installed.

As previously discussed, a plastic vertical riser was observed protruding from the IRM excavation backfill area. Conversations with Mr. Dave Higgins of the Mechanicville DPW indicate that the riser provides access to the abandoned storm water drainage system encountered during the IRM excavation. Surface and/or groundwater was observed to be accumulated inside the base of the culvert and as such should be noted as an engineering control deficiency.

3.3.7 Conclusions and Recommendations

The remedial measures in place are not effective in protecting human health and the environment, and are not compliant with provisions specified in the ROD. As indicated in the ROD, the soil cover requirement needs to be implemented before the site can be occupied or used for its intended future use. No additional soil cover is required for the existing ball fields as the RI results confirm that during the construction of the ballfield and batting cages clean fill from off-site was used as surface covering. The vertical riser/culvert in the IRM excavation area should be removed to reduce the potential for exposure to onsite groundwater and eliminate a possible contamination pathway to the subsurface.

4.0 COST EVALUATION

Periodic Review Report preparation is expected to be approximately $950 per event (every twelve months).

5.0 CONCLUSIONS AND RECOMMENDATIONS

The periodic review process is used for determining if a remedy continues to be properly managed, and if the remedy continues to be protective of human health and the environment. The remedial measures in place are not effective in protecting human health and the environment and are not compliant with provisions specified in the ROD.

5.1 Conclusions

The following conclusions discuss the effectiveness of the site's remedial system in comparison to the applicable site remedial goals derived from the SMP and ROD for the Site and DER-10.

1. The soil cover system has not yet been placed on-site in the designated areas outlined in Section 3.2 of this PRR. The site is planned to be broken up into three areas for proposed future use. As indicated in the ROD, the soil cover requirement needs to be implemented before the site can be occupied or used for its intended future use. No additional soil cover is required for the existing ball fields as the RI results confirm that during the construction of the ballfield and batting cages clean fill from off-site was used as surface covering.

   As previously discussed, a plastic vertical riser was observed protruding from the IRM excavation backfill area. Conversations with Mr. Dave Higgins of the Mechanicville DPW indicate that the riser provides access to the abandoned storm water drainage system encountered during the IRM excavation. Surface and/or groundwater was observed to be accumulated inside the base of the culvert and as such should be noted as an engineering control deficiency.

2. Maintenance and compliance of engineering and institutional controls.

   The Institutional Controls were recorded in an Environmental Easement dated February 8, 2011. The Engineering Controls currently in place are not effective in protecting human health and the environment, and are not compliant with provisions specified in the ROD.

5.2 Recommendations

The following recommendation is made for the Mechanicville Light Industrial Park Site:

- As indicated in the ROD, the soil cover requirement outlined in the Engineering Control System needs to be implemented before the site can be occupied or used for its intended future use.

- The vertical riser in the IRM excavation area should be removed to reduce the potential for exposure to onsite groundwater and eliminate a possible contamination pathway to the subsurface.

Appendix A

Inspection Form

INSPECTION FORM
Mechanicville Light Industrial Park
Industrial Park Road, Mechanicville, NY
NYSDEC Site # E546050

Inspection completed by: PR

Date of inspection: 5/3/13

Is this inspection (check one): ✓ Annual ______ Prompted by sever weather event

Describe weather event: ______

INDUSTRIAL AREA:

List current use for this area: - undeveloped, vacant with ~~baseball~~ ~~field~~ and existing DPW

Has the useage changed since the last inspection?
______ YES* X NO

Is the demarcation layer exposed? ______ YES* ______ NO - N/A

Is the 1 ft of soil cover still in place in vegetated areas?
______ YES ______ NO* - N/A

Are the top 6 inches of soil cover sufficient to support vegetation?
______ YES ______ NO* - N/A - current site, veg.

Are the non-vegetative areas (i.e. buildings, roadways, parking areas) covered by 6 inches of a paving system or concrete?
X YES ______ NO*
* pre-existing, no new cover

RESTRICTED RESIDENTIAL AREA:

List current use for this area: vacant, baseball field

Has the useage changed since the last inspection?
______ YES* X NO

Is the demarcation layer exposed? ______ YES* ______ NO - N/A

Is the 2 ft of soil cover still in place in vegetated areas?
______ YES ______ NO* - N/A

Are the top 6 inches of soil cover sufficient to support vegetation?
______ YES ______ NO* - N/A

Are the non-vegetative areas (i.e. buildings, roadways, parking areas) covered by 6 inches of a paving system or concrete?
X YES ______ NO*

* If you answereed "yes" or "no" with an astericks (*), please contact the NYSDEC to report your findings

Alicia
- drain below culvert (to be placed) - found during excavation
- wells / concrete hidden behind block

Appendix B

Photograph Log

Photograph of north side of the DPW building.

Photograph of north side of the DPW building.

Photograph of baseball field.

Photograph of plastic culvert in former excavation area.

Representative photograph of site looking north.

Photograph of site area facing south of cul-de-sac.