Department of Environmental Conservation

Division of Environmental Remediation

Environmental Restoration
Record of Decision
Mohawk Valley Warehouse Site

Village of Mohawk, Town of German Flatts, Herkimer County, New York
Site Number E622022

March 2009

New York State Department of Environmental Conservation
DAVID A. PATERSON, *Governor* ALEXANDER B. GRANNIS, *Commissioner*

DECLARATION STATEMENT
ENVIRONMENTAL RESTORATION RECORD OF DECISION

Mohawk Valley Warehouse Environmental Restoration Site
Village of Mohawk, Town of German Flatts
Herkimer County, New York
Site No. E622022

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Mohawk Valley Warehouse site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Mohawk Valley Warehouse Environmental Restoration Site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

Actual or threatened release of hazardous substances from this site has been addressed by the interim remedial measure conducted by the United States Environmental Protection Agency described in this ROD. The removal of contaminated material from the site has significantly reduced the threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Site Investigation/Alternatives Analysis Report (SI/AAR) for the Mohawk Valley Warehouse site and the criteria identified for evaluation of alternatives, the Department has selected No Further Action with Site Management. The components of the remedy are as follows:

A. Engineering Controls:

1. When future development of the property takes place, a minimum one foot thick soil cover must be maintained over those areas of the site that will not otherwise be covered by building footprints or paved surfaces. The one foot thick cover will consist of clean soil underlain by a demarcation

layer (such as orange plastic snow fence) to delineate the cover soil from the subsurface soil. The top six inches of soil will be of sufficient quality to support vegetation. Clean soil will meet the Division of Environmental Remediation's criteria for backfill or local site background pursuant to 6NYCRR 375-6.

2. The existing fence and gravel cover must be maintained and kept secure to prevent future exposures to site trespassers until the property is developed.

B. Institutional Controls:

1. Since the selected remedy will result in contamination remaining at the site, the remedy requires Department approved Site Management Plan for the site which will include the following:

(a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering systems for the site and manages future development of the site including:

(i) provisions for management of future excavations in areas of residual contamination;

(ii) maintenance of, and when necessary, construction of an equivalent cover system; and

(iii) and maintaining site access controls and Department notification; and

(b) a Monitoring Plan to assess performance and effectiveness of the remedy for soil vapor. The plan will include:

(i) a provision to evaluate of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified.

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that will:

(a) limit the use and development of the controlled property to commercial use, which will also permit industrial use, and/or certain passive recreational uses;

(b) require compliance to the Department approved Site Management Plan;

(c) maintain the existing concrete slab, gravel cover and fence until such time as any future site development occurs and the minimum twelve inch soil

cover meeting the requirements of Part 375-6.8 or buildings), asphalt parking lot, concrete, etc, cover the site; and

(d) require the municipality or future site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

MAR 3 0 2009

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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Environmental Restoration
RECORD OF DECISION

Mohawk Valley Warehouse Site
Village of Mohawk, Town of German Flatts
Herkimer County, New York
Site No. E622022
March 2009

SECTION 1: SUMMARY AND PURPOSE OF THE SELECTED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the Mohawk Valley Warehouse site.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration Program (ERP), the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

As more fully described in Sections 3 and 5 of this document, the fire that destroyed the former warehouse building resulted in the disposal of hazardous substances, including primarily semivolatile organic compounds. These substances have contaminated the soil at the site, resulting in:

- a potential threat to human health associated with exposure to contaminated soil.

Prior to the remedial investigation, an action known as an interim remedial measure (IRM) was undertaken at the Mohawk Valley Warehouse site in response to potential threats posed by the presence of hazardous contaminants. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation/alternatives analysis report (RI/AAR). The IRM was conducted at this site by the United States Environmental Protection Agency (EPA) in 2005 prior to the RI, and consisted of the removal of building debris, including asbestos-contaminated material that resulted from the June 2000 fire. An underground fuel tank and associated impacted soil were also removed by the EPA as part of the IRM. Gravel was brought in to backfill excavated areas and grade the site.

Based on the implementation of the above IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action with Site Management is selected as the remedy for this site.

The selected remedy, discussed in detail in Section 6, is intended to attain the remedial action objectives identified for this site in Section 6. This remedy selection does not constitute an assessment of, or any determination with respect to, any injury to or loss of natural resources that has or may have resulted from releases at or from the site. Natural resource injury and damages are subject to a separate assessment by the State's trustee for nature resources. The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Mohawk Valley Warehouse site is located in a commercial and residential neighborhood at 9 Canal Street in the Village of Mohawk, Herkimer County (see Figure 1). The site is just over a half acre in size, bounded by Ann Street, Canal Street, and Elizabeth Street to the east, south and west, respectively, and on the north by commercial property. Presently vacant, approximately two-thirds of the site is covered by the slab of the former factory building. The remainder of the surface is gravel or scrub vegetation. The entire site is surrounded with a secure chain-link perimeter fence.

The ground surface of the site slopes down from south to north. The upper three to five feet of overburden material is fill, consisting of sand, silt and clay with brick fragments. The fill is underlain by a three to four foot thick sand layer, below which is a sandy clay layer, which in turn is underlain by a dense silty clay. The deepest boring into the overburden was approximately 25 feet. Bedrock was not encountered during the investigation. Groundwater is present at depths ranging from three feet to 27 feet below ground surface. Groundwater appears to flow to the north, toward an intermittent drainage swale along Route 5S.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

From the early 1900s until 1985, a textile factory was located on the site. After the facility closed in 1985, the factory building was used as a warehouse until June 2000 when it was destroyed by fire. Following the fire, the village demolished the entire structure for safety reasons. It is not known what disposal(s) may have occurred when the factory was operating or what materials may have been stored inside the warehouse at the time of the fire.

A small manufactured gas plant (MGP) was once located in the southeastern corner of the site. From historic maps, it appears to have been a "gas house" where gas was manufactured in the late 1800s from coal, and is believed to have operated for less than 10 years. The successor to the operator of the MGP, National Grid, conducted an investigation on that portion of the property in 2006. More information on that investigation is included in Sections 3.2 and 5.1.3.

3.2: Remedial History

At the request of the Village, the EPA conducted a removal action at the site between July and December 2005. Among the debris removed by the EPA was asbestos containing material from two boilers and associated pipe wrap, asphalt roofing and siding materials, and transite panels. The EPA also removed a 5,000 gallon fuel oil underground storage tank (UST) and approximately seven to ten feet of petroleum- impacted soil associated with the UST.

The MGP located in the southeastern corner of the site was the subject of an independent investigation by the successor to the operator of the MGP, National Grid. National Grid conducted an investigation on that portion of the property in 2006, prior to the ERP RI, to determine if evidence of the MGP or any impacts of its operations remained at the site. Test pits were excavated, soil borings were advanced, and groundwater monitoring wells were installed to investigate potential impacts to soils and groundwater as a result of the gas manufacturing process. It was concluded that only limited evidence of the MGP remained that required no direct action. The results of this investigation are summarized in Section 5.1.3.

SECTION 4: ENFORCEMENT STATUS

Potential Responsible parties (PRPs) are those who may be legally liable to contamination at a site. This may include past of present owners and operators, waste generators, and haulers.

Since no viable PRPs for this site have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be identified. The Village of Mohawk will assist the state in its efforts by providing all information to the state which identifies PRPs. The Village will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 5: SITE CONTAMINATION

The Village of Mohawk has recently completed a remedial investigation (RI) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between November 2006 and November 2007. The field activities and findings of the investigation are described in the RI report.

The RI tasks consisted of a ground penetrating radar survey to locate any additional underground storage tanks, installation of groundwater monitoring wells, sampling to evaluate groundwater quality, and several soil borings to collect and analyze soil and soil vapor samples. The sampling locations are shown on Figure 2.

5.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

To determine whether the contamination identified by the RI is present in soil, groundwater, and soil vapor at levels of concern, the data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" (TOGs 1.1.1), "Use and Protection of Waters" (6 NYCRR Part 608), and Part 5 of the New York State Sanitary Code.

- Soil SCGs are based on the Soil Cleanup Objectives Tables found in Part 375-6.8.

- Concentrations of VOCs in air were compared to typical background levels of VOCs in indoor and outdoor air using the background levels provided in the NYSDOH guidance document titled "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," dated October 2006. The background levels are not SCGs and are used only as a general tool to assist in data evaluation.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized in Section 5.1.2. More complete information can be found in the RI report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

As described in the RI report, soil, soil vapor and groundwater samples were collected to characterize the nature and extent of contamination. As summarized in Tables 1 through 5, the main categories of contaminants that exceed their SCGs are semivolatile organic compounds (SVOCs). For comparison purposes, where applicable, SCGs are provided for each contaminant. Chemical concentrations are reported in parts per million (ppm) for soil.

Tables 1 through 5 summarize the degree of contamination for the contaminants of concern in soil and soil vapor and compare the data with the SCGs for the site. The following are the media which were investigated and a summary of the findings of the investigation.

Waste Materials

No site-related waste areas were identified during the RI. Therefore, no remedial alternatives

were evaluated to address source areas.

Surface Soil

Three surface soil samples were collected on-site, and one off-site sample was collected for comparative purposes. The samples were collected approximately two to four inches below the vegetative cover.

Five semivolatile organic compounds were identified above soil cleanup criteria for unrestricted uses. These exceedences occurred in a single surface soil sample that was collected along Elizabeth Street. One metal, arsenic, was identified above soil cleanup criteria for unrestricted uses and is not considered site-related.

Surface soil contamination identified during the RI was addressed in the remedy selection process.

Table 1: Surface Soil Contamination

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG
SVOCs			
Benz(a)anthracene	ND - 28	1	1 of 4
Benzo(b)fluoranthene	0.061 - 36	1	1 of 4
Benzo(a)pyrene	ND - 26	1	2 of 4
Indeno(1,2,3-cd)pyrene	ND - 8.8	1	1 of 4
Dibenz(a,h)anthracene	ND - 9.8	0.3	1 of 4
Metals			
Arsenic	4 - 115	13	2 of 4

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Standards, criteria, and guidance values ; State of New York (6 NYCRR) Part 375-6.8 Unrestricted Soil Cleanup Objective
ND: non-detect

Subsurface Soil

Ten subsurface soil samples were collected from depth of two to 22 feet below ground surface and analyzed. Only one organic compound, methylene chloride, and one metal, arsenic, were detected above soil cleanup objectives for unrestricted uses. Those results are shown in the table below.

Table 2: Subsurface Soil Contamination			
Detected Constituents	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)	Frequency Exceeding SCG
VOCs			
Methylene chloride	ND - 79	50	2 of 10
Phenol	ND - 2.5	0.33	1 of 10
Metals			
Arsenic	5.0 - 36.7	13	3 of 10

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Standards, criteria, and guidance values; State of New York (6 NYCRR) Part 375-6.8 Unrestricted Soil Cleanup Objective
ND: non-detect

As part of the investigation conducted by National Grid where the MGP was located, subsurface soil samples were collected from test pit excavations and analyzed, and a summary of the constituents that were detected above soil cleanup objectives for unrestricted uses is shown in Table 3.

Subsurface soil contamination identified during the RI was addressed in the remedy selection process.

Table 3: Manufactured Gas House - Subsurface Soil Contamination			
Detected Constituents	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)	Frequency Exceeding SCG
SVOCs			
Benz(a)anthracene	2 - 3.8	1	2 of 2
Benzo(a)pyrene	1.5 - 3	1	2 of 2
Benzo(b)fluoranthene	2.2 - 2.3	1	2 of 2
Benzo(k)fluoranthene	0.84 - 0.98	0.8	2 of 2
Chrysene	2.2 - 3.6	1	2 of 2
Dibenzo(a,h)anthracene	0.14 - 1.9	0.33	1 of 2
Indeno(1,2,3-cd)pyrene	0.29 - 0.63	0.5	1 of 2
Metals			
Arsenic	18.8	13	1 of 1

Copper	463	50	1 of 1
Lead	334	63	1 of 1

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

b - SCG: Standards, criteria, and guidance values; State of New York (6 NYCRR) Part 375-6.8 Unrestricted Soil Cleanup Objective

Groundwater

Groundwater monitoring wells installed during the ERP RI and the National Grid investigation of the manufactured gas house were sampled during the RI. Some metals were identified in groundwater above groundwater standards: magnesium, manganese and sodium. All of these metals are commonly naturally present in groundwater at levels above groundwater standards, and are not considered site-related.

No site-related groundwater contamination of concern was identified. Therefore, no remedial alternatives were evaluated for groundwater.

Surface Water

No surface water is present at the site and therefore, no surface water samples were collected and no remedial alternatives were evaluated for surface water.

Sediment

No sediment is present at the site and therefore, no sediment samples were collected and no remedial alternatives were evaluated for sediment.

Soil Vapor

Soil vapor samples were collected on-site and at adjacent off-site locations. Two volatile organic compounds (VOCs) were identified in on-site soil vapor that exceed NYSDOH indoor air guidelines. These are isolated results and do not correlate with any soil or groundwater contamination. Soil vapor will be addressed in the remedy.

Table 4: Soil Vapor

Detected Constituents	Concentration Range Detected (ug/m^3)[a]	SCG[b] (for Indoor Air) (ug/m^3)	Frequency Exceeding SCG
methylene chloride	0.4 - 335	60	1 of 9
trichloroethene	ND - 67.5	5	1 of 9

a - ug/m^3: microgram per cubic meter ND: non-detect

b - SCG: Standards, criteria, and guidance values; New York State Department of Health "Guidance for Evaluating Soil Vapor Intrusion in the State of New York," October 2006.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI/AA.

There were no IRMs performed at this site during the RI/AA. However, as stated in Section 3.2, the EPA conducted a debris removal at the site at the request of the Village of Mohawk prior to the ERP RI. Following the June 2000 fire, the Village had demolished the remains of the warehouse to eliminate an imminent public health hazard posed by the extensively damaged building. The demolition resulted in piles of intermingled brick, structural steel, piping, roofing material, etc. distributed over the property.

The EPA mobilized to the site in July 2005 to separate and consolidate the debris by type. Once segregated, EPA sampled the debris to determine appropriate disposal or recycling facilities, and began transporting materials off-site.

Among the debris removed by EPA was material containing friable asbestos from two boilers and associated pipe wrap, asphalt roofing and siding materials, scrap metals, charred wood and timber and transite panels. Over 100 truck loads of debris were removed from the site. The EPA also removed a 5,000 gallon fuel oil underground storage tank, 910 gallons of product from within the tank and approximately seven to ten feet of petroleum-impacted soil associated with it, as well as the boilers. The concrete pad was sampled to verify that all asbestos containing material had been removed.

At the completion of removal activities, 64 loads of crushed stone were brought to the site to complete the backfilling of excavated areas and grade the surface. The majority of the site is currently covered with gravel or the concrete foundations of the former factory buildings. When site activities were completed, EPA installed a secure chain-link perimeter fence to eliminate trespassing across the site.

5.3 Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 6.0 of the RI report. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

There are no known complete exposure pathways to site contaminants. Potential exposure pathways may be present under certain future site use scenarios and are discussed below.

Site access is restricted by fencing and the majority of the site is covered with a building slab, gravel and vegetation. Therefore, exposure to contaminants in soil are not expected. The site is currently undeveloped and current exposures to volatile contaminants in subsurface soil vapor are considered unlikely. Volatile contaminants in soil vapor can potentially affect the indoor air quality of future structures through the process of vapor intrusion. Future building occupants could be exposed, via inhalation, to VOCs in indoor air through the process of soil vapor intrusion.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as groundwater aquifers, surface water and wetlands.

No ecological resources were identified during the RI, no site related groundwater contamination has been identified, and no surface water resources are located at or near the site. Therefore, no remedial alternatives were evaluated for the protection of ecological resources.

5.5: Summary of Contaminants of Concern

Based on the findings of the Remedial Investigation, the following site contaminants are found in surface and subsurface soil and are considered to be the site specific contaminants which need to be addressed by the remediation: benz(a)anthracene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND THE PROPOSED USE OF THE SITE

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent practicable. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and/or the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

6.1: Remedial Action Objectives (RAOs)

The remedial objectives for this site for the protection of public health are:

- Prevent ingestion/direct contact with contaminated soil.

- Mitigate impacts to public health resulting from the potential for soil vapor intrusion into buildings to be constructed on the site.

6.2: Use of the Site

For the Mohawk Valley Warehouse site, alternatives that remediate the site soils to allow commercial use were evaluated because the property is currently zoned for commercial use. Additionally, the Village of Mohawk's application to the Department for ERP funding stated that the intended future use is commercial or industrial. The soil cleanup objectives (SCOs) for restricted commercial use are more stringent than for restricted industrial use, therefore restricted commercial SCOs found in Part 375-6.8 (b) were evaluated in the remedy selection process (see Table 5). Commercial use includes passive recreational uses, which are public uses with limited potential for soil contact, such as parks.

Table 5 - Surface Soil Contaminants Compared to Commercial Reuse

Constituents of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm) Restricted Commercial	Frequency Exceeding SCG
SVOCs			
Benz(a)anthracene	ND - 28	5.6	1 of 3
Benzo(b)fluoranthene	0.061 - 36	5.6	1 of 3
Benzo(a)pyrene	ND - 26	1	2 of 3
Indeno(1,2,3-cd)pyrene	ND - 8.8	5.6	1 of 3
Dibenz(a,h)anthracene	ND - 9.8	0.56	1 of 3

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Standards, criteria, and guidance values; State of New York (6 NYCRR) Part 375-6.8 Commercial Soil Cleanup Objective
ND: non-detect

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the Mohawk Valley Warehouse site were identified, screened and evaluated in the AA Report which is available at the document repositories established for this site.

A summary of the remedial alternatives that were considered for this site is discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated soil at the site.

Alternative 1: No Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment. There would be no costs associated with this alternative.

Alternative 2: No Further Action with Site Management Plan

Under this alternative, the existing site cover would be maintained to prevent potential exposure to surface soil containing SVOCs above commercial soil cleanup objectives. Surface soil contamination is confined to a small area in the northwestern corner of the site within the fence, restricting exposures.

A site management plan (SMP) would be developed that would include a requirement to maintain the existing soil cover. The SMP would also include a provision to evaluate the potential for vapor intrusion for any buildings constructed on the site, and mitigation of any impacts identified. The SMP would also include a requirement to develop a site-specific excavation management plan to manage potentially contaminated soil during future site construction activities. The existing fence and gravel cover must be maintained and kept secure to prevent future exposures to site trespassers until the property is developed.

An environmental easement would be required to limit future development to commercial uses and require implementation of the SMP. A periodic certification by the property owner that the institutional controls are in place and in compliance with Part 375-1.8 (h)(3) would also be required.

The SMP would require that if future development of the property takes place, a minimum one foot thick soil cover must be maintained over those areas of the site that would not otherwise be covered by building footprints or paved surfaces areas to prevent exposure to any remaining contaminants in soil. The soil cover would consist of clean soil underlain by a demarcation layer (such as orange plastic snow fence) to delineate the cover soil from the subsurface soil. The top six inches of soil would be of sufficient quality to support vegetation. The clean soil would meet the Division of Environmental Remediation's criteria for backfill or local site background.

The present worth cost estimate is based on preparation of a periodic certification annually for 30 years.

Present Worth: . . . . . *$ 7,700*
Capital Cost: . . . . . *$ 0*
Annual Costs: . . . . . *$ 500*

Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

The goal for the remedial program would be to restore the site to pre-disposal conditions to the extent practicable. This remedy would meet all of the SCGs listed in Section 5.1.1 and soil would meet the unrestricted soil clean objectives listed in Part 375-6.8 (a). The remedy would include excavation and off-site disposal of all soil contamination above the unrestricted soil cleanup objectives. Design of the remedy would take six months and the remedy could be completed in one year. The remedy would not need to rely on any engineering or institutional controls to prevent future exposures. There would be no site management plan, no restrictions, no periodic review and no future annual costs.

Present Worth: . . . . . *$ 76,000*
Capital Cost: . . . . . *$ 76,000*
Annual Costs: . . . . . *$ 0*

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York. A detailed discussion of the evaluation criteria and comparative analysis is included in the AA report.

The first two evaluation criteria are termed “threshold criteria” and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative’s ability to protect public health and the environment.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The next six “primary balancing criteria” are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or

implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The costs for each alternative are presented in Table 6.

This final criterion is considered a “modifying criterion” and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

9. Community Acceptance. Concerns of the community regarding the RI/ AA reports and the PRAP were evaluated. A responsiveness summary has been prepared that describes public comments received and the manner in which the Department has addressed the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Table 6
Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
1: No Action	0	0	0
2: No Further Action with Site Management Plan	$ 0	$ 500	$7,700
3: Restoration to Pre-Disposal or Unrestricted Conditions	$ 76,000	0	$ 76,000

SECTION 8: SUMMARY OF THE SELECTED REMEDY

The Department has selected Alternative 2, No Further Action with Site Management Plan, as the remedy for this site. The elements of this remedy are described at the end of this section.

8.1 Basis for Selection:

The selected remedy is based on the results of the RI and the evaluation of alternatives presented in the AAR.

Alternative 2 (No Further Action with Site Management Plan) was selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It will achieve the remediation goals for the site by restricting future development to restricted commercial uses, preventing future exposures to contaminated soil by the maintenance of a soil cover and including a provision to evaluate the potential for vapor intrusion for any buildings developed on the site, including mitigation of any impacts identified

Alternative 1 (No Action) would not meet the threshold criteria and will not be evaluated further. Alternative 3 (Restoration to Pre-Disposal or Unrestricted Conditions), by removing all soil contaminated above the "Unrestricted" soil cleanup objective, would meet the threshold selection criteria. Alternative 2 will also comply with the threshold criteria but to a lesser degree or with lower certainty. Because Alternatives 2 and 3 satisfy the threshold criteria, the six balancing criteria are particularly important in selecting a final remedy for the site.

Alternative 2 will be more easily implemented than Alternative 3. There will be no short term impacts to the community because no remedial construction will take place. Additionally, the site is covered with gravel and concrete foundation pads and fenced so there are no current completed exposure pathways. A site cover will be maintained in future development of the property. Potential exposures to contaminated soil will be prevented until then by the existing cover and fence. Alternative 3 would take longer to implement by requiring development of a work plan, remedial construction and restoration activities, and associated engineering tasks for oversight

and report preparation. There would be short term impacts to the community during excavation activities and site restoration. Those impacts would be managed through development and implementation of a site health and safety plan to protect workers and the community. The long term effectiveness however would also be more certain with Alternative 3 because all contaminated material would be removed from the site.

Alternative 3 is the only alternative that would permanently reduce the toxicity, mobility or volume of site waste by removing it from the site. Alternative 3 would also allow unrestricted future land use.

Alternative 2 will leave contaminated material at the site, however, exposures will be managed by the existing fence and cover and by future site development. An environmental easement will be placed on the property to restrict development to commercial or industrial uses. A site management plan will be prepared to ensure contaminated soils remain covered by buildings or a soil, concrete or asphalt cover, as well as providing requirements for soil handling and disposal during any redevelopment or excavation related activities at the site.

Alternative 3 would cost significantly more than Alternative 2. The only costs that will be incurred by the Village under Alternative 2 will be preparation of the site management plan, the environmental easement and the periodic certification.

The estimated present worth cost to implement the remedy is $7,700, the cost over 30 years to prepare the periodic certification required by the environmental easement. There are no capital costs to the Village, and the estimated average annual costs to prepare the periodic certification is $ 500.

8.2 Elements of the Selected Remedy:

The elements of the selected remedy are as follows:

A. Engineering Controls:

1. When future development of the property takes place, a minimum one foot thick soil cover must be maintained over those areas of the site that will not otherwise be covered by building footprints or paved surfaces. The one foot thick cover will consist of clean soil underlain by a demarcation layer (such as orange plastic snow fence) to delineate the cover soil from the subsurface soil. The top six inches of soil will be of sufficient quality to support vegetation. Clean soil will meet the Division of Environmental Remediation's criteria for backfill or local site background pursuant to 6NYCRR 375-6.

2. The existing fence and gravel cover must be maintained and kept secure to prevent future exposures to site trespassers until the property is developed.

B. Institutional Controls:

1. Since the selected remedy will result in contamination remaining at the site, the remedy requires a Department approved Site Management Plan for the site which will include the following:

   (a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering systems for the site and manages future development of the site including:

      (i) provisions for management of future excavations in areas of residual contamination;
      (ii) maintenance of, and when necessary, construction of an equivalent cover system; and
      (iii) maintaining site access controls and Department notification; and

   (b) a Monitoring Plan to assess performance and effectiveness of the remedy for soil vapor. The plan will include:

      (i) a provision to evaluate the potential for vapor intrusion for any buildings developed on the site, including a provision for mitigation of any impacts identified.

2. Imposition of an institutional control in the form of an environmental easement for the controlled property that will:

   (a) limit the use and development of the controlled property to commercial use, which will also permit industrial use, and/or certain passive recreational uses;

   (b) require compliance to the Department approved Site Management Plan;

   (c) maintain the existing concrete slab, gravel cover and fence until such time as any future site development occurs and the minimum twelve inch soil cover meeting the requirements of Part 375-6.8 or buildings, asphalt parking lot, concrete, etc, cover the site; and

   (d) require the municipality or future site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the environmental restoration process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternatives. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established at the Weller Public Library, 41 West Main Street in Mohawk and at the Village of Mohawk Office, 28 Columbia Street.

- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.

- A fact sheet was distributed to the site mailing list in November 2006 announcing the start of the site investigation.

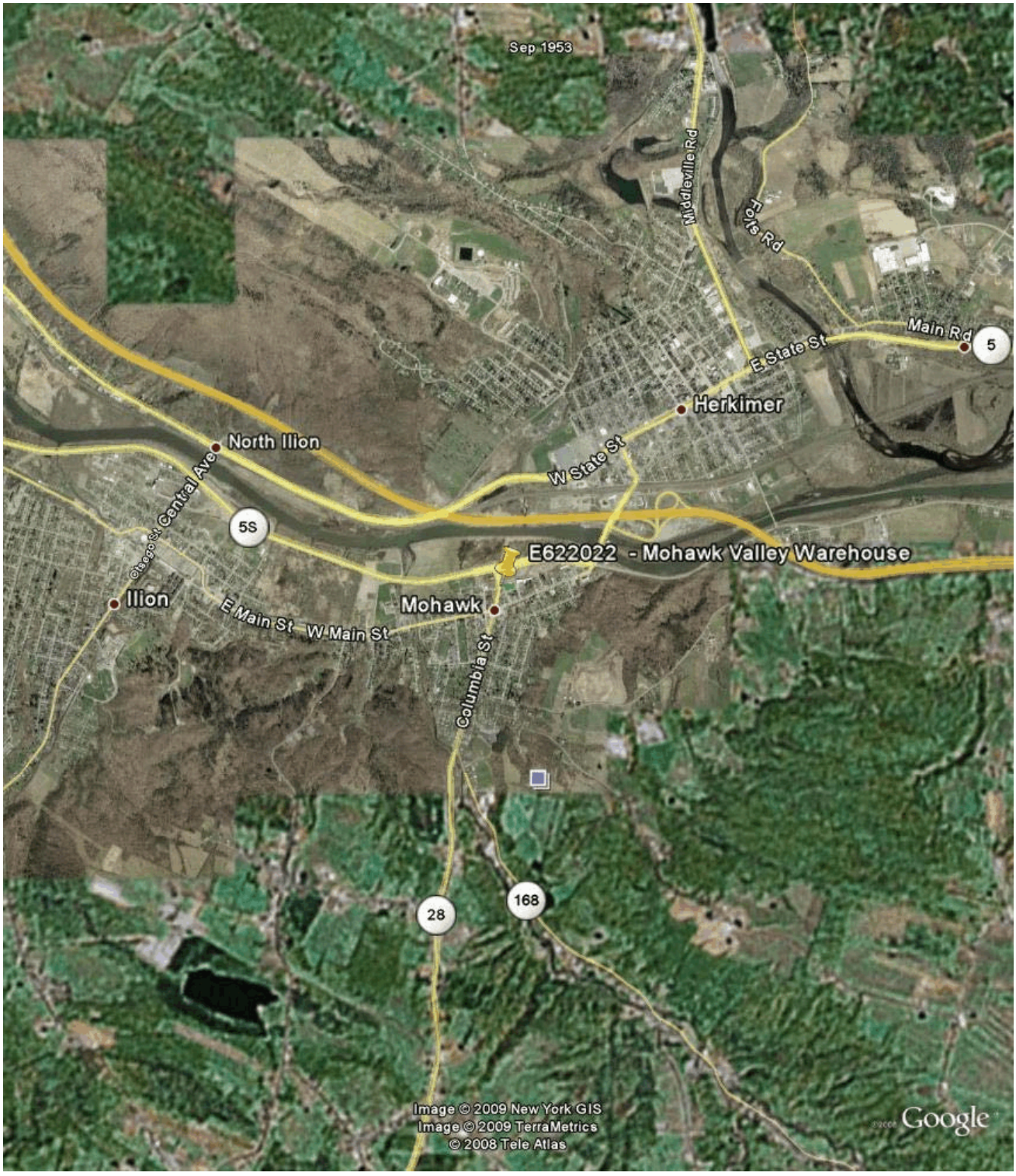
- A fact sheet was distributed to the site mailing list summarizing results of the remedial investigation and announcing a public availability session for September 10, 2008.

- A fact sheet was distributed to the site mailing list On February 12, 2009 to announce the availability of the PRAP, the opening of the public comment period, and the public meeting scheduled for March 2, 2009.

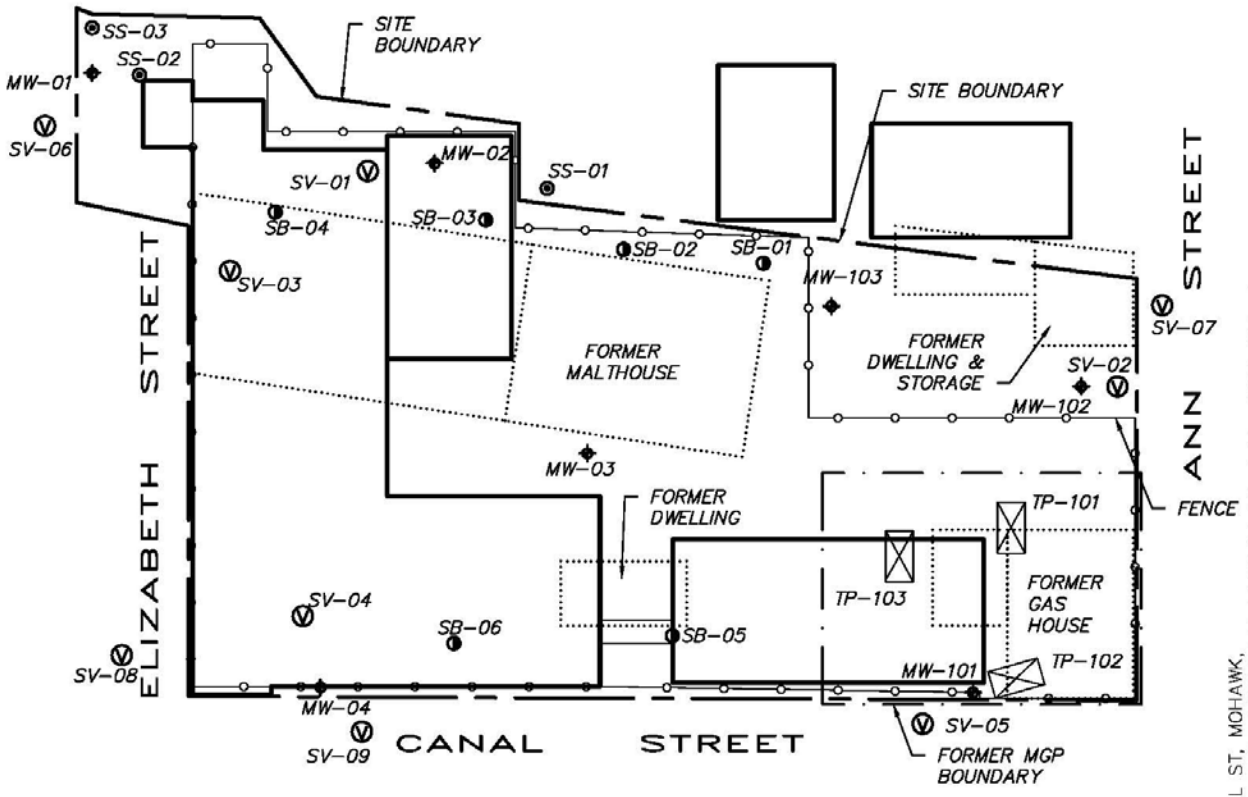
- A public meeting was held on March 2, 2009 to present and receive comments on the PRAP.

- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

In general, the public comments received were supportive of the selected remedy.



Mohawk Valley Warehouse, Site No. E622022
Village of Mohawk, Herkimer County
Figure 1 - Site Location Map



NIAGARA MOHAWKACTIVITIES

- ◆ – MONITORING WELL (MW-101 TO MW-103)
- ⊠ – TEST PIT (TP-101, TP-102)

HRP ACTIVITIES

- ◆ – MONITORING WELL SAMPLING LOCATION (MW-01 TO MW-04)
- ◐ – SOIL BORING SAMPLING LOCATION (SB-01 TO SB06)
- Ⓥ – SOIL VAPOR SAMPLING POINT (SV-01 TO SV-02)
- ◉ – SURFACE SOIL SAMPLING LOCATION (SS-01 TO SS-03: ONSITE, SS-04: OFFSITE)

40 0 10 20 30 40

APPROXIMATE SCALE
(1" = 40')

FIGURE 2
SITE PLAN, SAMPLING LOCATIONS, AND FIELD ACTIVITIES
MOHAWK VALLEY WAREHOUSE
9 CANAL STREET
MOHAWK, NEW YORK
HRP # MOH4001.WM
SCALE 1" = 40'±

J:\V\VILMO - VILLAGE OF MOHAWK\MOHAWK VALLEY WAREHOUSE, CANAL ST, MOHAWK, NY\MOH4001WM\CAD\SAMPLING LOCATIONS AND FIELD ACTIVITIES.dwg, Layout1, 1/23/2009 11:38:34 AM, Adobe PDF, Plot stamp

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Mohawk Valley Warehouse Environmental Restoration Site
Village of Mohawk, Town of German Flatts
Herkimer County, New York
Site No. E622022

The Proposed Remedial Action Plan (PRAP) for the Mohawk Valley Warehouse site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 13, 2009. The PRAP outlined the remedial measure proposed for the contaminated soil at the Mohawk Valley Warehouse site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 2, 2009, which included a presentation of the remedial investigation (RI) and the Alternatives Analysis Report (AAR) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 30, 2009.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received at the public meeting, with the Department's responses:

COMMENT 1: What is the potential for future development of the site and would there be any extra cost to the developer?

RESPONSE 1: Future development of the site is permissible for any commercial use acceptable to the Village with the primary purpose of buying, selling or trading merchandise or services. No residential use would be allowed. A developer would be obligated to meet the requirements of the site management plan, including compliance with an excavation plan, proper management of excavated soil, and maintenance of an approved cover over the site soils.

COMMENT 2: When can the Village put the site on the market?

RESPONSE 2: The Village could start to market the property now, but would be required to complete the Environmental Easement and have an approved Site Management Plan before any transfer of title can be completed.

COMMENT 3: Can the site be used for a residential apartment complex?

RESPONSE 3: The present anticipated land use, as requested by the Village, is commercial, which does not allow for any residential use. Residential land use would require additional investigation and remedial work.

COMMENT 4: Can the site be used for a children's playground?

RESPONSE 4: No. Commercial land use, as defined in 6 NYCRR Part 375, would allow for "passive recreational" activities, such as walking trails or tennis courts. A children's playground could only be considered if the Village presents a formal proposal that is acceptable to the Department and the New York State Department of Health. A ROD amendment would be required to increase the thickness of the cover system to two feet and the cover system would need to be properly maintained.

COMMENT 5: Is the site safe in its present condition? We have noted dust when trucks are driving over the surface of the site. How many inches of gravel are on the site now?

RESPONSE 5: The site currently is protective of public health. The EPA left the site covered with either the existing concrete slab or approximately six inches of gravel. The site is also fenced. The remedy calls for the site fencing and gravel cover system to remain in place until such time as development may occur. Any dust generated from driving over the gravel or the concrete pad would be from clean material and not from site-related contamination.

COMMENT 6: Will the site soil clean itself up over time? What are the possibilities of contaminants rising or floating away if the area floods?

RESPONSE 6: Contaminant degradation (or attenuation) in soil depends on many factors, including the nature of the contaminants, availability of microbes that consume the compounds and the physical properties of the soil (i.e, temperature, moisture content, availability of nutrients, pH, etc.). The semi-volatile organic compounds that remain at this site in subsurface soils are not likely to degrade significantly over time. Therefore, the current cover system must be maintained to prevent any current exposure and the environmental easement will require that the Site Management Plan be followed for any proposed development to minimize the potential for future exposure.

The site does not lie within the 100-year flood zone as indicated on the Federal Emergency Management Agency Flood Insurance Rate Map #3603140001C, published on September 8, 1999, so major floods should not be a concern. Minor street flooding should not impact the current gravel/concrete foundation cover. Any future development would have to follow appropriate storm management criteria and guidance.

COMMENT 7: PCBs were noted at the site. What is the source of the PCBs? Did the EPA removal action remove the PCBs?

RESPONSE 7: All surface and subsurface soil samples collected during the remedial investigation were analyzed for PCBs. One PCB, Aroclor 1260, was detected in one sample, and

it was below the NYSDEC clean-up criteria for unrestricted use. There is no documentation of the source of the PCBs, but low levels of PCBs is not uncommon at older industrial sites such as this one. We are not aware that the soil removed by the EPA contained PCBs. The soil and waste were tested and met the criteria of the disposal facility.

APPENDIX B

Administrative Record

Administrative Record

Mohawk Valley Warehouse Site
Site No. E622022

1. Proposed Remedial Action Plan for the Mohawk Valley Warehouse site, dated February 2009, prepared by the Department.

2. Remedial Investigation Report, Former Mohawk Valley Warehouse, dated September 2008, prepared by HRP Associates, Inc.

3. Alternatives Analysis Report, Former Mohawk Valley Warehouse, dated February 2009, prepared by HRP Associates, Inc.

4. State Assistance Contract C303106 dated October 6, 2006 and Amendment.