

RECORD OF DECISION

Pioneer Street Mill
Environmental Restoration Project
Amsterdam, Montgomery County
Site No. E429013
March 2013



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - RECORD OF DECISION

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Amsterdam, Montgomery County
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Statement of Purpose and Basis

This document presents the remedy for the Pioneer Street Mill site, an environmental restoration site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Pioneer Street Mill site and the public's input to the proposed remedy 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.

Description of Selected Remedy

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. 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 (RI) or alternatives analysis (AA). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRMs, 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 is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the remedy for the site.

The IRMs conducted at the site attained the remediation objectives identified for this site in Section 6.5 for the protection of public health and the environment.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy 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. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.



March 19, 2013

Date

Robert W. Schick, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

Pioneer Street Mill
Amsterdam, Montgomery County
Site No. E429013
March 2013

SECTION 1: SUMMARY AND PURPOSE

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 above referenced site. The disposal of contaminants at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. 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 (RI) or feasibility study (FS). The IRMs undertaken at this site are discussed in Section 6.2. Contaminants include hazardous wastes and/or petroleum.

Based on the implementation of the IRMs, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRMs conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the remedy selected by this Record of Decision (ROD). A No Further Action remedy may include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This ROD identifies the IRMs conducted and discusses the basis for No Further Action.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Brownfields are abandoned, idled, or under-used properties where redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. Under the Environmental Restoration Program, 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.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

Town of Amsterdam
Attn: Linda Bartone Hughes
Town Hall
283 Manny's Corners Road
Amsterdam, NY 12010
Phone: (518) 842-7961

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is a 1.3-acre former textile mill on Chuctanunda Creek, located near the end of Pioneer Street, a dead-end residential street in the Town of Amsterdam. There are only a few residences in the vicinity of the site. It is located approximately 1,700 feet north of the City of Amsterdam line and 400 feet south of the Village of Hagaman line.

Site Features: The site slopes slightly from north to south and is divided into an upper and a lower level by the foundation of the mill building. Much of the site was taken up by the mill, but there were areas of soil along the edges of the foundation. Chuctanunda Creek runs from the northeast to the southwest along the southern border of the site. Harrower Pond, immediately east of the site, was formed by a dam on the creek. A raceway between the site and the main

channel of the creek discharged water from Harrower Pond after it went through turbines used to power the mill. The dam structure is in a state of disrepair and the spillway was lowered as a safety measure, decreasing the size and volume of Harrower Pond.

When accepted into the Environmental Restoration Program in 2007, the mill building was in poor condition and partially collapsed. Numerous drums were visible inside the building, however parts of the structure were too unstable to be safely entered for inspection.

Current Zoning/Use(s): The site is currently inactive. It is zoned commercial, but the mill was the only non-residential building in the area.

Past Use of the Site: The oldest part of the mill was believed to have been constructed in 1871 and was used for production of textiles. In later years, the mill building was used for other purposes, reportedly including boat construction and general storage. The building was unused since at least 2000.

Site Geology and Hydrogeology: The site is underlain by dolostone bedrock, although no bedrock was encountered in borings advanced to a depth of 22 feet. Groundwater was encountered between five and eleven feet below the ground surface in a silty sand. Based on elevations in the on-site monitoring wells, groundwater is flowing from the northwest to the southeast, toward Chuctanunda Creek.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

No PRPs have been documented to date.

Since no viable PRPs 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 Town of Amsterdam will assist the state in its efforts by

providing all information to the state which identifies PRPs. The Town of Amsterdam will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to 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 contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCG in the footnotes. For a full listing of all SCGs see: <http://www.dec.ny.gov/regulations/61794.html>

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

benz(a)anthracene	dibenz(a,h) anthracene
benzo(a)pyrene	indeno(1,2,3-cd)pyrene
benzo (b)fluoranthene	phenanthrene
benzo (k) fluoranthene	pyrene
chrysene	dieldrin

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRMs described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

6.2: 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 issuance of the Record of Decision.

The following IRMs have been completed at this site based on conditions observed during the RI.

Waste Removal and Building Demolition

In 2008 and 2009, the town completed IRM work to excavate and remove three storage tanks containing over 4,000 gallons of petroleum product, remove and dispose of 4.8 tons of hazardous materials left inside the building in various drums and other containers, and demolish the building. The hazardous materials included solvents, paints, adhesives, compressed gas cylinders, and fluorescent light ballasts. Asbestos abatement could not be safely accomplished prior to demolition due to the instability of the structure. The demolition included removal and disposal of approximately 2,930 tons of asbestos-contaminated debris and 59 tons of hazardous waste (from surfaces coated with lead-based paint.) Contaminated soil from two sump pits was excavated and removed. All that remained after demolition of the mill was concrete slabs and a wall separating the upper and lower levels. This work allowed access to the site to do the field work for the Remedial Investigation.

Site Cover System

In October 2012, this IRM dealt with on-site consolidation of contaminated soil. The excavated soil was regraded to eliminate the steep drop-off between the two levels, thus making the site

significantly safer. A demarcation layer (orange plastic snow fence) was placed over the contaminated soil and a two-foot layer of clean soil placed on top of it. The clean soil met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

6.3: Summary of Environmental Assessment

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

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 01, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Prior to the demolition of the mill, numerous drums could be seen inside the building, but because parts of the building were in danger of collapse it could not be determined if they contained anything. Soil in two on-site sump pits was contaminated with PAHs, metals, and pesticides. These sumps were cleaned out and the soil was disposed off-site in 2010.

There was widespread contamination of on-site surface soil and less so in sub-surface soil with a class of contaminants called polycyclic aromatic hydrocarbons (PAHs) and some metals above the restricted residential Soil Cleanup Objective (SCO). There were only a few scattered detections of pesticides above the SCO, but these are not indicative of disposal of hazardous waste.

Groundwater in one of five monitoring wells (MW-5) had volatile (petroleum components) and semi-volatile (phenolic compounds) contamination just slightly above groundwater standards. Several metals detected in groundwater above their respective standards were the result of natural conditions.

Surface water was not contaminated.

The soil vapor sampling indicates soil vapor intrusion is not a concern for on-site or off-site buildings. The soil vapor samples did not find any site-related volatile organic contamination which would require off-site mitigation measures or monitoring, and no further soil vapor evaluation is needed.

Special Resources Impacted/Threatened: Sediment in the off-site raceway had manganese and zinc concentrations which were slightly above the Severe Effect Level (SEL) Sediment Criteria values, and low levels of four SVOCs. The SEL relates to exposure of benthic aquatic life to inorganic contaminants in sediment.

The IRM to consolidate and cover contaminated on-site soil was completed in November 2012.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

Persons who dig below the ground surface may come into contact with contaminants in subsurface soil and groundwater. People are not drinking the contaminated groundwater since the area is served by a public water supply that is not affected by this contamination.

6.5: Summary of the Remediation Objectives

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 feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

SECTION 7: SUMMARY OF SELECTED REMEDY

Based on the results of the investigations at the site, the IRMs that have been completed, and the evaluation presented here, the Department is proposing No Further Action and the implementation of institutional and engineering controls as the proposed remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The elements of the IRMs already completed and the institutional and engineering controls are listed below:

1. During the IRMs, hazardous substances/wastes in the old mill building were removed and the building was demolished. This material was disposed off-site. Three storage tanks were removed. Soil from the two sump pits was excavated and disposed off-site. Contaminated soil was consolidated on-site and covered with a 2-foot thick soil cover.

2. Site Cover System - The existing site cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will maintain a site cover, which may consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use, placed over a demarcation layer. The existing soil cover has been placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site for the IRM met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

3. Institutional Control - Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- a. requires the remedial party or 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);
- b. allows the use and development of the controlled property for restricted residential uses (which would also include commercial or industrial uses) as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- c. restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- d. requires compliance with the Department-approved Site Management Plan.

4. Site Management Plan - A Site Management Plan is required, which includes the following:

- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The environmental easement and groundwater use restriction discussed above.

Engineering Control: The site cover discussed above.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination, including implementation of a Community Air Monitoring Plan;
- descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;

- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation (RI) for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Waste material removed during the demolition Interim Remedial Measure (IRM) consisted of solvents, paints, adhesives, compressed gas cylinders, and fluorescent light ballasts. Contaminated soil was removed from two sump pits. Figure 3 shows where samples were collected during the RI.

Groundwater

Groundwater samples were collected from on-site monitoring wells to assess groundwater conditions in the upper water table (up to a depth of 22 feet). The results indicate that contamination in groundwater at the site slightly exceeds the SCGs for volatile organic compounds, semi-volatile organics, and inorganics.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
VOCs			
Ethylbenzene	ND-9.6	5	1 of 5
m/p/o Xylene	ND-24.9	5	1 of 5
Toluene	ND-51	5	1 of 5
SVOCs			
2,4-Dimethylphenol	ND-6J	1	1 of 5
2-Methylphenol	ND-9J	1	1 of 5
3- and 4-Methylphenols	ND-4.2J	1	1 of 5
Inorganics			
Iron	94.7-2,010	300	2 of 5
Manganese	47.6-645	300	2 of 5
Sodium	11,900-23,700	20,000	4 of 5

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.

b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface Water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

The volatile and semi-volatile contaminants in the groundwater are at very low concentrations which do not represent gross contamination expected from the disposal of hazardous waste or hazardous substances. The VOCs are indicative of petroleum products, which are readily biodegradable. The single-digit parts per billion SVOC concentrations may be the result of boat construction activities formerly done on-site.

The inorganic compounds found in the groundwater samples are naturally occurring compounds which are present in the monitoring wells due to high turbidity of the water samples. They are not considered site-specific contaminants of concern.

Based on the findings of the RI, there is some minor contamination of on-site groundwater, confined to a single monitoring well. Public water is available in the area and utilization of on-site groundwater is unlikely. Additionally, the effort required to address this small area of low concentration groundwater contamination would not be cost-effective. Therefore, no remedial alternatives need to be evaluated for groundwater.

Soil

Surface and subsurface soil samples were collected at the site during the RI. Fifteen on-site and five off-site surface soil samples were collected from a depth of 0-2 inches to assess direct human exposure. Subsurface soil samples were collected from borings used to install five groundwater monitoring wells, six other soil borings, and one of two test pits. Samples were collected from as deep as eight feet below the ground surface to assess soil contamination impacts to groundwater. The results indicate that soils at the site exceed the unrestricted SCG for semi-volatile organics, metals, and pesticides. It should be noted that almost all the samples exceeding the SCG were the surface soil samples. The Department has no concerns about off-site soil.

With the exception of SVOCs, these soil samples did not show significant contamination above the restricted residential Soil Cleanup Objectives (SCO) found in 6NYCRR Part 375, nor were the results widespread across the site. Metals above the SCO were likely the result of burning of coal (there was a layer of cinders mixed in with soil beneath a one- to two-foot soil layer in the northwest portion of the site). The pesticides are probably the result of incidental use either on-site or in the general vicinity. Concentrations are low and the distribution of detections is not indicative of disposal of hazardous waste or hazardous substances.

Almost all the SVOCs detected are representatives of a class of chemicals called polycyclic aromatic hydrocarbons (PAHs) which are associated with incomplete combustion of coal or oil. PAHs have low solubility in water and tend to attach to soil and sediment. This fits in with the fact that these PAHs were found primarily in the surface soil, but not at deeper depths.

The areas of primary PAH contamination were the areas of the site not covered by concrete slab floors, most notably the soil between the building and the retaining wall of the raceway and the soil between the former mill and the road.

The following table shows analytical results for both on-site and off-site soil samples which were collected during the RI and prior to the Soil Cover IRM.

Table 2 - Soil

Detected Constituents	Concentration Range Detected (ppm) ^a	Unrestricted SCG ^b (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG ^c (ppm)	Frequency Exceeding Restricted SCG
SVOCs					
Acenaphthene	ND - 230	20	3 of 32	100	1 of 32
Anthracene	ND - 880	100	2 of 32	100	2 of 32
Benzo(a)anthracene	ND - 2,100	1	14 of 32	1	14 of 32
Benzo(a)pyrene	ND - 1,400	1	14 of 32	1	14 of 32
Benzo(b)fluoranthene	ND - 2,000	1	14 of 32	1	14 of 32
Benzo(k)fluoranthene	ND - 660	0.8	13 of 32	3.9	7 of 32
Chrysene	ND - 1,900	1	14 of 32	3.9	11 of 32
Dibenz(a,h)anthracene	ND - 240	0.33	13 of 32	0.33	13 of 32
Dibenzofuran	ND - 300	7	8 of 32	59	1 of 32
Fluoranthene	ND - 5,100	100	5 of 32	100	5 of 32
Fluorene	ND - 350	30	2 of 32	100	1 of 32
Indeno(1,2,3-cd)pyrene	ND - 800	0.5	14 of 32	0.5	14 of 32
Naphthalene	ND - 800	12	4 of 32	100	1 of 32
Phenanthrene	ND - 4,300	100	5 of 32	100	5 of 32
Phenol	ND - 8.3	0.33	2 of 32	100	0 of 32
Pyrene	ND - 4,400	100	5 of 32	100	5 of 32
Inorganics					
Arsenic	1.62 - 40.4	13	3 of 32	16	2 of 32
Cadmium	0.23 - 3.47	2.5	1 of 32	4.3	0 of 32
Chromium	4.54 - 132	30	3 of 32	110	1 of 32
Copper	7.81 - 81.3	50	2 of 32	270	0 of 32
Lead	7.21 - 1,910	63	18 of 32	400	1 of 32
Mercury	0.009 - 1.2	0.18	7 of 32	0.81	2 of 32
Selenium	ND - 5.82	3.9	1 of 32	180	0 of 32
Zinc	28.5 - 311	109	9 of 32	10,000	0 of 32

Detected Constituents	Concentration Range Detected (ppm) ^a	Unrestricted SCG ^b (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG ^c (ppm)	Frequency Exceeding Restricted SCG
Pesticides/PCBs					
4,4-DDD	ND - 0.046	0.0033	3 of 32	13	0 of 32
4,4-DDE	ND - 0.042	0.0033	4 of 32	8.9	0 of 32
4,4-DDT	ND - 0.052	0.0033	10 of 32	7.9	0 of 32
Dieldrin	ND - 15	0.005	7 of 32	0.2	1 of 32
Endrin	ND - 0.16	0.014	1 of 32	11	0 of 32

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

b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.

c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Restricted Residential Use, unless otherwise noted.

Soil contamination identified during the RI was addressed during the IRM described in Section 6.2.

Surface Water

Surface water samples were collected during the RI from upstream, on-site, and downstream locations. The samples were collected to assess the surface water conditions on- and off-site. No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediments

Sediment samples were collected during the RI from the off-site raceway immediately adjacent to the site and from Harrower Pond, upstream of the site. The results indicate that sediment in the off-site raceway exceed the Department's SCGs for sediments for four semi-volatile compounds. Several metals exceeded the Lowest Effects Level, but only manganese and zinc exceeded the Severe Effects Level. Chromium was detected at the highest concentration in the Harrower Pond sample, thus indicating that chromium contamination (above the Lowest Effects Level but below the Severe Effects Level) is not site-related. Aroclor-1260 was found at an estimated concentration above the SCG in two samples, however it, too, was found at the highest concentration in the Harrower Pond sample.

Table 3 - Sediment

Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
SVOCs			
Benzo(a)anthracene	ND - 830	360 ^d	2 of 3
Benzo(a)pyrene	ND - 630	39 ^c	2 of 3
Fluorene	ND - 300	240 ^d	1 of 3
Phenol	ND - 59J	15 ^d	2 of 3

Detected Constituents	Concentration Range Detected (ppb) ^a	SCG ^b (ppb)	Frequency Exceeding SCG
Inorganics			
Cadmium	0.87 - 1.49 (ppm)	LEL = 0.6	3 of 3
		SEL = 9	0 of 3
Chromium	20.4 - 80.1 (ppm)	LEL = 26	2 of 3
		SEL = 110	0 of 3
Copper	12.8 - 47 (ppm)	LEL = 16	2 of 3
		SEL = 110	0 of 3
Iron	15,600 - 27,700 (ppm)	LEL = 20,000	2 of 3
		SEL = 40,000	0 of 3
Lead	35.6 - 97.6 (ppm)	LEL = 31	3 of 3
		SEL = 110	0 of 3
Manganese	112 - 1,290 (ppm)	LEL = 460	1 of 3
		SEL = 1,100	1 of 3
Zinc	69.6 - 538 (ppm)	LEL = 120	2 of 3
		SEL = 270	1 of 3
Pesticides/PCBs			
Aroclor-1260	ND - 10J	0.024 ^c	2 of 3

a - ppb: parts per billion, which is equivalent to micrograms per kilogram, ug/kg, in sediment unless otherwise noted;

b - SCG: The Department's "Technical Guidance for Screening Contaminated Sediments."

c - Value is based on Human Health Bioaccumulation

d - Value is based on Benthic Aquatic Life Chronic Toxicity

LEL = Lowest Effects Level and SEL = Severe Effects Level. Sediment is considered contaminated if either of these criteria is exceeded. If the SEL criteria are exceeded, the sediment is severely impacted. If only the LEL is impacted, the impact is considered moderate.

J - Data indicates the presence of a compound that meets the identification criteria. The result is less than the quantitation limit but greater than the method detection limit. The concentration given is an approximate value.

SVOCs and several metals have been observed in off-site sediment at concentrations above the guidance for screening contaminated sediment. Based on the findings of the Remedial Investigation, the contamination is not significant and it would not be practical to remove it. Therefore, no remedial alternatives need to be evaluated for sediment.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of soil vapor. At this site, no buildings were present in impacted areas, so only soil vapor was evaluated. Soil vapor around the perimeter of the site was sampled in April 2012.

Based on the concentration detected, and in comparison with the NYSDOH Soil Vapor Intrusion Guidance, no site-related soil vapor contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for soil vapor.

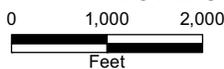
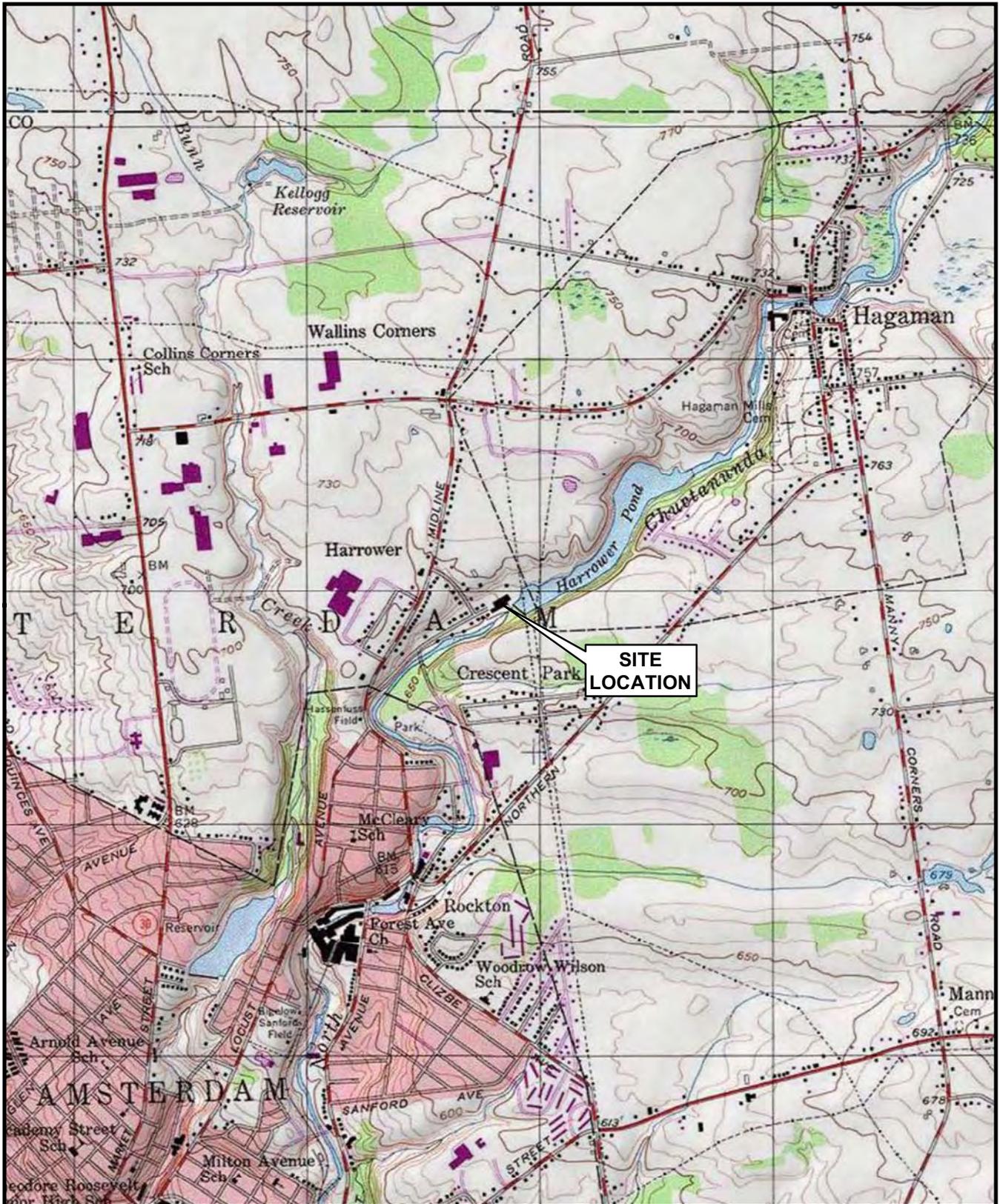


Figure 1
 Site Location Map
 Pioneer Street Mill
 Town of Amsterdam, Montgomery County
 Site No. E429013



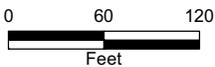
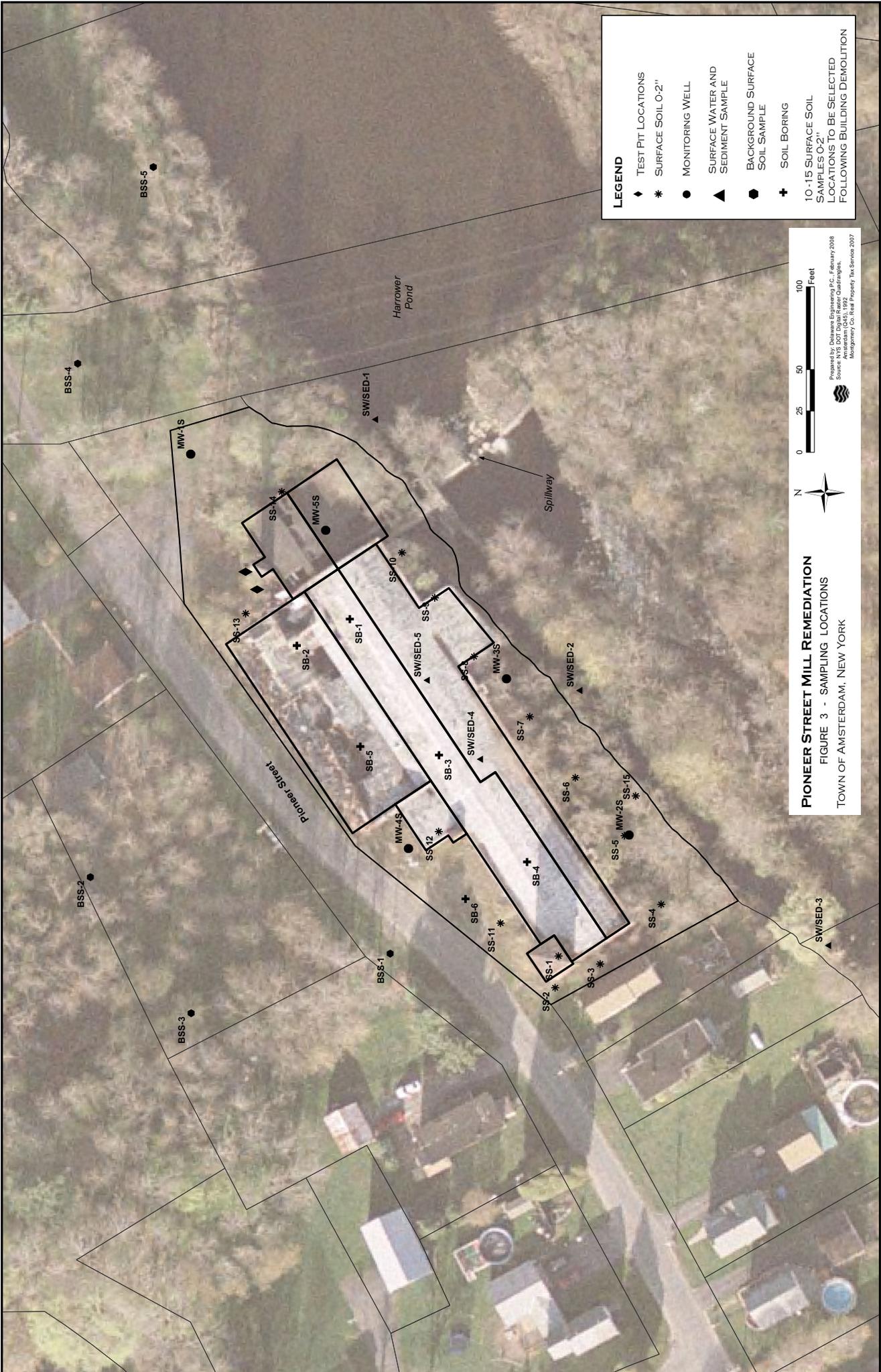


Figure 2 Site Map

Pioneer Street Mill
Town of Amsterdam, Montgomery County
Site No. E429013





LEGEND

- ◆ TEST PIT LOCATIONS
- * SURFACE SOIL 0'-2"
- MONITORING WELL
- ▲ SURFACE WATER AND SEDIMENT SAMPLE
- BACKGROUND SURFACE SOIL SAMPLE
- + SOIL BORING

10-15 SURFACE SOIL SAMPLES 0'-2" LOCATIONS TO BE SELECTED FOLLOWING BUILDING DEMOLITION

N

0 25 50 100 Feet

Prepared by: Delaware Engineering P.C., February 2008
 Source: NYS DOT Digital Aerial Orthorectification, Montgomery Co. Real Property Tax Service 2007

PIONEER STREET MILL REMEDIATION
 FIGURE 3 - SAMPLING LOCATIONS
 TOWN OF AMSTERDAM, NEW YORK

APPENDIX A

Responsiveness Summary

Responsiveness Summary

**Pioneer Street Mill
Environmental Restoration Project
Amsterdam, Montgomery County, New York
Site No. E429013**

The Proposed Remedial Action Plan (PRAP) for the Pioneer Street Mill 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 January 31, 2013. The PRAP outlined the remedial measure proposed for the contaminated soil, sediment, and groundwater at the Pioneer Street Mill 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 February 20, 2013, which included a presentation of the remedial investigation for the Pioneer Street Mill site 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 16, 2013.

This responsiveness summary responds to all questions and comments raised during the public comment period.

No comments were received during the public comment period.

APPENDIX B

Administrative Record

Administrative Record

**Pioneer Street Mill
Environmental Restoration Project
Town of Amsterdam, Montgomery County New York
Site No. E429013**

Proposed Remedial Action Plan for the Pioneer Street Mill, dated January 2013, prepared by the New York State Department of Environmental Conservation.

The Department and the Town of Amsterdam entered into a State Assistance Contract, Contract No.C303791, April 11, 2008.

“Pioneer Street Mill Remediation - Remedial Investigation Report”, October 2010, revised June 2011, prepared by Delaware Engineering, P.C.

“Pioneer Street Mill Interim Remedial Measures Construction Completion Report”, February 2013, prepared by Delaware Engineering, P.C.

“Interim Remedial Measures - Pioneer Street Mill Remediation”, January 2011, revised May 2011, prepared by Delaware Engineering, P.C.