RECORD OF DECISION

Ithaca Falls Overlook
Environmental Restoration Project
Ithaca, Tompkins County
Site No. E755018
September 2017

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

DECLARATION STATEMENT - RECORD OF DECISION

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Environmental Restoration Project
Ithaca, Tompkins County
Site No. E755018
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Statement of Purpose and Basis

This document presents the remedy for the Ithaca Falls Overlook 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 Ithaca Falls Overlook 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 IRM(s) 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.

September 25, 2017
Date

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

RECORD OF DECISION

Ithaca Falls Overlook
Ithaca, Tompkins County
Site No. E755018
September 2017

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 IRM(s) 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:

Tompkins County Public Library
101 East Green Street
Ithaca, NY 14850
Phone: 607-272-4557

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 Ithaca Falls Overlook site is an approximately 0.95-acre parcel in an urban area within the City of Ithaca, Tompkins County. The site has a narrow access from Lake Street on the south and extends north to the Fall Creek gorge. Portions of the site share a property boundary with the Former Ithaca Gun Factory, Brownfield Cleanup Program (BCP) site (Site No. C755019). The off-site area of the BCP site, identified as Former Ithaca Gun Factory - Off-site (Site No. C755019A), is located to the west.

Site Features: The site is composed of four different areas described separately as the: Western Accessway; Former Walkway; Raceway; and Island. The Western Accessway is a narrow north-south trending land corridor providing access from Lake Street, most of this area is steeply sloping to the west. The Former Walkway is an area that extends from the Western Accessway to the former bridge over the Raceway. The Raceway is a narrow water channel constructed in

bedrock which was part of the water power canal for the former Ithaca Gun Company. The Island area is an elevated area located between the Raceway and the Fall Creek gorge. There are no existing buildings on the site.

Current Zoning and Land Use: The site is currently inactive, and zoned for public and institutional use. The surrounding parcels are currently used for a combination of public, residential, and commercial uses. The nearest residential area is across Lake Street to the south.

Past Use of the Site: The site was part of the former Ithaca Gun Company property. The Ithaca Gun Company manufactured firearms at this property from 1885 to 1986. Site contamination appears to be associated with this prior manufacturing activity and the disposal of related waste (e.g., lead shot). In 2002, removal actions were conducted in isolated areas of the site by the United States Environmental Protection Agency (USEPA). During the removal actions, buildings on the Island area were removed and areas of soil on the site were excavated for off-site disposal. In some excavation areas, where necessary, clean backfill and topsoil was placed and native vegetation was re-established. In addition, temporary erosion control measures were placed on the western slope of the Island area. In 2015, the USEPA performed a removal action to excavate contaminated soil along the base of the south Fall Creek gorge wall. All USEPA removal actions were completed meeting cleanup criteria for restricted-residential use (includes active recreational uses).

Site Geology and Hydrogeology: The predominantly shale bedrock underlying the site is at or near the surface. Therefore, soil, where it exists, may range from only a few inches to less than a few feet thick. Greater thickness of soil appears to exist in portions of the Western Accessway and in isolated portions of the Island area. Depth to groundwater within the bedrock is typically greater than 20 feet below ground surface. Groundwater flow direction is generally to the west-northwest.

A site location map is attached as Figure 1. The different areas of the site, referred to above and described within this document, are shown on the site map included as Figure 2.

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 that restricts 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) 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. City of Ithaca will assist the state in its efforts by providing all information to the state which identifies PRPs. City of Ithaca 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
- soil
- 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 contaminant(s) of concern identified at this site is/are:

benzo(a)anthracene	tetrachloroethene (PCE)
benzo(a)pyrene	trichloroethene (TCE)
benzo(b)fluoranthene	vinyl chloride
indeno(1,2,3-CD)pyrene	arsenic
cis-1,2-dichloroethene	lead

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 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.

IRM Soil Excavation and Cover - Western Accessway Area

Excavation and off-site disposal of the lead contaminated soil in areas of the Western Accessway portion of the site began in August 2013 and was completed in January 2014. Soil with lead concentrations exceeding the restricted-residential use soil cleanup objective (SCO) of 400 parts per million (ppm), as defined by 6 NYCRR Part 375-6.8, were excavated from two separate areas to a depth of two feet below grade and removed from the site. The excavation area in the northern portion of the Western Accessway covered an area of approximately 5,400 square feet, and the excavation area in the southern portion, near Lake Street, covered an area of approximately 600 square feet. In the southern excavation area, bedrock was encountered within two feet of the ground surface, in these areas the bedrock surface was vacuumed to remove any loose soil/debris. A total of 785 tons of lead contaminated soil was removed from the Western Accessway area.

Following excavation in the northern area, a demarcation layer (i.e., orange snow fence) was placed above the remaining soil with lead at concentrations exceeding the restricted-residential use SCOs. Above the demarcation layer, a soil cover with a minimum thickness of two feet was constructed using imported fill material and topsoil meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted-residential use. The soil cover also included the use of erosion control mats and was revegetated with a steep slope vegetation mix.

IRM Soil Excavation and Cover- Island, Raceway, and Former Walkway Areas

Excavation and off-site disposal of lead contaminated soil from the Island, Raceway, and Former Walkway areas was conducted from November 2014 through June 2015. An additional small area of soil with exposed lead shot was removed from the Island Area and the Raceway sidewall in April 2017.

Prior to excavation of soil on the Island area, concrete and asphalt slabs were removed and disposed of off-site. Excavation on the Island area consisted of removing non-native lead contaminated industrial soil. The excavation area extended off-site to include the steep western slope of the Island area. Thickness of the lead contaminated soils ranged from approximately two to seven feet. The greatest thicknesses were found along edges of the Island where bedrock dropped off to the west and south. Clearance sampling was conducted through grid based sampling over the entire excavation area. Excavation was continued until analytical results for soil in each grid met the restricted residential use SCOs. In areas that encountered competent bedrock, the surface of the bedrock was vacuumed to remove any loose soil/debris. The bridge to the Island area was removed during excavation activities in order to access contaminated soil around the bridge foundation. A total of 1,750 tons of lead contaminated soil and 327 tons of concrete were removed from the Island area.

Removal of lead contaminated soil in the Raceway included areas along the base of the Raceway and the sidewalls. Throughout most of the Raceway, soil was removed using a combination of hand tools and vacuuming; however, in the plunge pool area of the Raceway, a mini-excavator was used along with hand tools to remove soil. Soil was transported out of the plunge pool to the soil staging area by a crane and two-yard skip boxes. The excavation of the plunge pool area extended off-site beyond the western property boundary. Soils were fully removed to bedrock in the Raceway with the exception of sidewall areas along the northern side of the Raceway where post-excavation sampling confirmed that the soil met the restricted-residential use SCOs. The IRM area was extended beyond the eastern property boundary to include the eastern limits of the raceway. A total of 42 tons of lead contaminated soil was removed from the Raceway area.

Lead contaminated soil was removed from the Former Walkway area. Soil in the approximately 3,200 square foot area was removed to a depth of up to two feet. A total of 76 tons of lead contaminated soil was removed from the Former Walkway area. Following excavation, a demarcation layer was placed above the remaining soil with lead at concentrations exceeding the restricted-residential use SCOs. Above the demarcation layer, a soil cover with a minimum thickness of two feet was constructed using imported fill material and topsoil meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted-residential use. The soil cover also included use of erosion control mats and was revegetated.

Post-IRM soil screening conducted in October 2016 identified an approximate 600 square foot area of contaminated surficial soil in a steeply sloped area of the site. The contaminated soils overlapped the general boundary between the Island and Raceway areas. The surficial soils were removed in April 2017 using hand tools and vacuuming.

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.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Nature and Extent of Contamination: Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), inorganics, polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations conducted to date, the primary contaminants of concern that are site related appear to be SVOCs and inorganics (metals) in soil associated with the past operational history of the former Ithaca Gun factory. The VOC groundwater contamination present in an isolated portion of the site appears to be the result of disposals that occurred on the adjacent Former Ithaca Gun Factory site.

Soil – Remedial actions conducted as interim remedial measures (IRMs) have successfully achieved soil cleanup objectives (SCOs) for restricted-residential use. Remaining subsurface soil contamination exists beneath the cover systems constructed in portions of the Western Accessway and Former Walkway areas. Primary soil contaminants below the cover system include polycyclic aromatic hydrocarbons (PAHs), which are a subset of SVOCs, and metals including arsenic and lead. Lead is the most prevalent contaminant in soil at the site, based on frequency of occurrence and concentrations detected. Soil contamination with similar characteristics has been found off-site and has been addressed through USEPA removal actions and will continue to be addressed through the Former Ithaca Gun Factory remedial program.

Groundwater – The primary contamination of concern in site groundwater consist of the following VOCs: cis-1,2,-dichloroethene (cis12DCE), tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride. However, the distribution of these contaminants appears to indicate that the source for the impacts to groundwater is hydraulically upgradient on the adjacent Former Ithaca Gun Factory site. The groundwater contamination passes beneath the Western Accessway portion of this site and continues to migrate off-site. The off-site area of groundwater contamination has been and continues to be investigated as part of the Former Ithaca Gun Factory – Off-site remedial program. Where contamination exists in off-site groundwater it consists mostly of detections of TCE at concentrations below the groundwater standard.

Soil Vapor – VOCs present at elevated concentrations in soil vapor samples included 1,1,1-tricholoethane, cis12DCE, PCE, and TCE with maximum concentrations of 213, 75, 61, and

3,154 µg/m^3, respectively. VOCs present in the soil vapor mostly correspond to VOCs detected in groundwater and occur in the same general area. An off-site vapor intrusion evaluation continues to be conducted by the Department as part of the Former Ithaca Gun Factory – Off-site remedial program. Based on sampling results for TCE, mitigation has been conducted at eight off-site structures.

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.*

Access to the site is unrestricted. However, contact with the contaminated soil is unlikely unless they dig below the two feet of clean cover. People are not drinking contaminated groundwater associated with the site because the area is served by a public water supply that obtains its water from a different source not affected by this contamination. Volatile organic compounds in the groundwater can move into the soil vapor (air between soil particles), which in turn may move into overlying buildings and affect indoor air quality. This process, similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Since there are no buildings on-site, soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Sub-slab depressurization systems (systems that ventilates/remove the air beneath a building) have been installed in several off-site structures as part of the remedial program for the Former Ithaca Gun Factory - Off-Site site (Site #C755019A) to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the buildings. Sampling is ongoing to identify whether soil vapor intrusion is a concern for other off-site buildings.

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.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

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.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: SUMMARY OF SELECTED REMEDY

No Further Action

Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here, the Department is selecting No Further Action as the remedy for the site. This No Further Action remedy includes the implementation of an institutional control in the form of an environmental easement and site management plan, as well as the engineering control consisting of a cover system, installed for portions of the site by the IRMs, as the selected 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 are discussed in Section 6.2 and the institutional and engineering controls are as follows:

1. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

• require 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);
• allow the use and development of the controlled property for restricted residential, commercial, and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
• 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
• require compliance with the Department approved Site Management Plan.

2. 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 discussed in Paragraph 1 above.

Engineering Controls: The Cover System discussed in Section 6.2 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;
• descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
• a provision for evaluation of the potential for soil vapor intrusion for any new buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
• 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 engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to monitoring of soil vapor intrusion for any new building developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance Plan to ensure continued operation, maintenance, monitoring, inspection and reporting of any mechanical or physical components of the remedy.

3. Green Remediation

Green remediation principles and techniques will be implemented to the extent feasible in the site management of the remedy as per DER-31. The major green remediation components are as follows:

• considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
• reducing direct and indirect greenhouse gas and other emissions;
• increasing energy efficiency and minimizing use of non-renewable energy;
• conserving and efficiently managing resources; and
• reducing waste, increasing recycling, and increasing reuse of materials which would otherwise be considered a waste.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation 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. Soil and groundwater samples were analyzed for VOCs, SVOCs, inorganics (metals), PCBs, and pesticides.

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 categories depending on what constituents were detected in each medium sampled. 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.

Groundwater

Groundwater samples were collected from bedrock monitoring wells. Prior to conducting the soil removal IRMs described in Section 6.2, samples were collected during two groundwater sampling events and were used to assess groundwater conditions on and off-site. The results indicate that contamination in the groundwater at the site exceeds the SCGs for certain VOCs, one SVOC, and certain inorganics. Table 1 summarizes all contaminants that exceed the groundwater SCGs

Table 1 - Groundwater

Detected Constituents	Concentration Range (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
1,1-Dichloroethane	ND – 19	5	2 of 10
1,1-Dichloroethene	ND – 18	5	2 of 10
Benzene	ND – 2.1	1	2 of 10
Cis-1,2-Dichoroethene	ND – 1,800	5	6 of 10
Tetrachloroethene	ND - 230	5	3 of 10
Trans-1,2-Dichloroethene	ND – 11	5	2 of 10
Trichloroethene	ND – 1,700	5	7 of 10
Vinyl chloride	ND – 91	2	2 of 10
SVOCs			
Bis(2-Ethylhexyl)phthalate	ND – 7	5	1 of 10
Inorganics			
Antimony	5.42 JN – 18.9 N	3	10 of 10

Detected Constituents	Concentration Range (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
Chromium	ND – 86.5	50	1 of 10
Iron	80.6 – 1,100	300	5 of 10
Manganese	20.4 – 3,140	300	2 of 10
Sodium	13,200 – 271,000	20,000	9 of 10

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).
ND – compound was not detected.
J – reported value was obtained from a reading that was less than the quantification limit, but greater than the method detection limit.
N – matrix spike recovery was outside control limits.

The distribution of VOC contaminants appears to indicate that groundwater has been impacted by disposals that occurred hydraulically upgradient on the adjacent Brownfield Cleanup Program (BCP) site referred to as the Former Ithaca Gun Factory. Based on the magnitude of SCG exceedances and the frequency of detection, primary contamination of concern in groundwater consist of cis12DCE, PCE, TCE, and vinyl chloride. Figure 3 shows the distribution of total VOCs from the groundwater sampling events performed during the RI. As depicted, the contaminated groundwater passes beneath the Western Accessway portion of this site and migrates off-site generally to the west. The off-site area of groundwater contamination has been and continues to be investigated as part of the Former Ithaca Gun Factory – Off-site remedial program. Where site-related contamination exists in off-site groundwater, it contains TCE only and at concentrations below the groundwater standard.

Antimony, an inorganic constituent, has been detected in all on and off-site wells at concentrations greater than the groundwater SCG. However, laboratory data qualifiers indicate that antimony at these levels may be difficult to quantify. Presence of antimony is likely due to natural occurrence and not related to industrial contamination. Investigation boring logs show that the monitoring wells have been completed within rock types that make up the Ithaca and Renwick bedrock formations. These formations include pyritic silty shales and black shales that may contain higher levels of antimony. Additionally, it is unlikely that antimony would be detected in groundwater without presence of other inorganic constituents associated with contamination from munitions and present at higher concentration in soil at this site (i.e., lead, copper, and zinc).

The SVOC, bis(2-Ethylhexyl)phthalate and the inorganic constituent, chromium, each had only one exceedance of the groundwater SCG at one off-site well and for only one groundwater sampling event. The inorganic constituents, iron, manganese, and sodium, are all likely to be naturally occurring and in this setting are unrelated to industrial activities.

The primary contaminants of concern in groundwater as identified during the RI does not appear to be site-related, and therefore, no remedial alternatives need to be evaluated for groundwater as part of this remedial program. However, based on the findings of the RI, past disposal of hazardous waste and prior industrial activities that occurred at the adjacent Former Ithaca Gun Factory BCP site have resulted in the contamination of groundwater with VOCs. Further investigation and evaluation of remedial alternatives for VOC contaminants in groundwater will be addressed as part of the Former Ithaca Gun Factory remedial program. Further investigation of VOCs that have migrated off-site in groundwater will continue to be performed as part of the Former Ithaca Gun Factory – Off-site remedial program.

Soil

Surface and subsurface soil samples were collected at the site during the RI. Surface soil samples were collected from a depth of 0-2 inches to assess direct human exposure. Subsurface soil samples were collected from a depth of 2 inches to 16 feet to determine vertical distribution of contamination and assess the soil contamination impact to groundwater. Results indicate that soils at the site exceeded the unrestricted use SCOs and restricted-residential use SCOs for the protection of public health for specific SVOCs and inorganics. Table 2 shows the contaminant constituents detected, the concentration ranges, and frequency in which they exceeded SCGs before the IRMs were implemented.

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					
Benzo(a)anthrecene	ND - 10	1	10 of 14	1	10 of 14
Benzo(a)pyrene	ND – 8.3	1	10 of 14	1	10 of 14
Benzo(b)fluoranthene	ND – 9.9	1	10 of 14	1	10 of 14
Benzo(b)fluoranthene	ND - 4	0.8	6 of 14	3.9	1 of 14
Chrysene	ND – 9.8	1	6 of 14	3.9	4 of 14
Dibenzo(a,h)anthracene	ND – 1.3	0.33	3 of 14	0.33	3 of 14
Indo(1,2,3-cd)pyrene	ND – 5.3	0.33	10 of 14	0.5	10 of 14
Inorganics					
Arsenic	7.15 - 939	13	11 of 15	16	9 of 15
Cadmium	ND – 13.6	2.5	2 of 14	4.3	2 of 14
Copper	20.5 – 7,440	50	7 of 14	270	3 of 14
Lead	15.5 – 131,000	63	107 of 111	400	88 of 111
Manganese	ND - 9,790	1,600	2 of 14	2,000	2 of 14
Mercury	0.098 – 2.91	0.18	10 of 14	0.81	3 of 14
Zinc	64.5 – 13,700	109	12 of 14	10,000	2 of 14

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.
ND – compound was not detected.

The primary soil contaminants, benzo(a)anthrecene, benzo(a)pyrene, benzo(b)fluoranthene, indo(1,2,3-cd)pyrene, arsenic, and lead, are associated with manufacturing activities and disposals of waste by the former

Ithaca Gun Company. Based on the RI and previous investigations associated with the former Ithaca Gun Company property, lead is the most prevalent contaminant in both frequency of occurrence and in the magnitude at which the SCOs are exceeded. Analysis for lead has often been used to determine the distribution and limits of contamination in soil at this site and on adjacent properties where soil removal actions have been conducted by the USEPA.

Based on the investigation results, comparison to SCGs, and the potential public health and environmental exposure routes, contaminated surface soil at this site was remediated through completion of IRMs described in Section 6.2 and summarized below according to the area of the site for which they occurred:

- Western Accessway (southern area) – full removal of contaminated soil to restricted residential SCOs.
- Western Accessway (northern area) – removal of contaminated soil to a depth of two feet or greater and construction of a clean soil cover with a minimum thickness of two feet for restricted-residential use.
- Island – full removal of contaminated soil to restricted residential SCOs.
- Raceway – full removal of contaminated soil to restricted residential SCOs.
- Former Walkway – removal of contaminated soil to a depth up to two feet and construction of a clean soil cover with a minimum thickness of two feet for restricted residential use.

Figure 4 shows areas where IRMs were performed and where contaminated subsurface soil remains beneath clean soil cover. The SVOC and inorganic contaminants present in soil at this site have not been found to be impacting groundwater.

Soil contamination with similar characteristics has been found off-site and has either already been addressed through USEPA removal actions or will be addressed at the adjacent property through the Former Ithaca Gun Factory remedial program.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of 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 samples were collected from four soil vapor points installed on-site within the Western Accessway area. VOCs present at elevated concentrations in soil vapor samples included 1,1,1-trichloroethane, cis-1,2-dichloroethene, tetrachloroethene, and trichloroethene with maximum concentrations of 213, 75, 61, and 3,154 $\mu g/m^3$, respectively. VOCs present in soil vapor correspond to VOCs detected at higher concentrations in groundwater and exist in the same general area.

Based on the findings of the RI, past disposal of hazardous waste and the prior industrial activities that occurred at the adjacent Former Ithaca Gun Factory BCP site have resulted in the contamination of soil vapor. Further investigation and evaluation of remedial alternatives for VOCs in soil vapor will be conducted as part of remedial program for the Former Ithaca Gun Factory site.

Off-site evaluation of the potential for soil vapor intrusion continue to be conducted as part site characterization for the Former Ithaca Gun Factory – Off-site area.

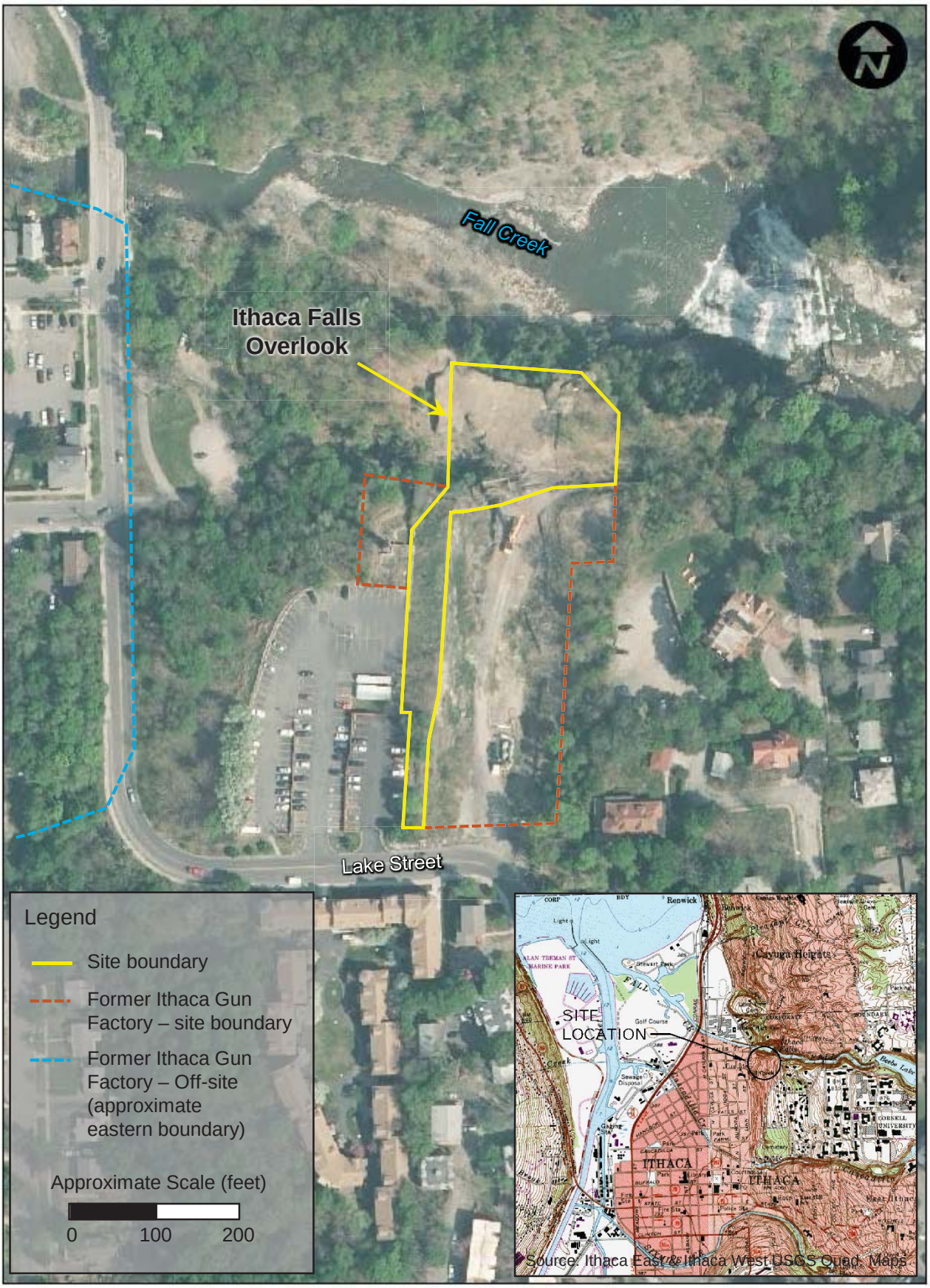

FIGURE 1 – SITE LOCATION MAP

Ithaca Falls Overlook, E755018

City of Ithaca, Tompkins County

0 37.5 75 150 Feet

Scale

FIGURE 2 – SITE AREAS

Ithaca Falls Overlook, E755018

City of Ithaca, Tompkins County

FIGURE 3 – GROUNDWATER VOC DISTRIBUTION

Ithaca Falls Overlook, E755018

City of Ithaca, Tompkins County

FIGURE 4 – IRM AREAS
Ithaca Falls Overlook, E755018
City of Ithaca, Tompkins County

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Ithaca Falls Overlook
Environmental Restoration Project
Ithaca, Tompkins County, New York
Site No. E755018

The Proposed Remedial Action Plan (PRAP) for the Ithaca Falls Overlook 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 May 31, 2017. The PRAP outlined the remedial measure proposed for the contaminated groundwater, soil, and soil vapor at the Ithaca Falls Overlook 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 June 20, 2017, which included a presentation of the remedial investigation (RI) and interim remedial measures (IRMs) for the Ithaca Falls Overlook 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 July 17, 2017.

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

Comments generated during the June 20, 2017 public meeting included the following:

COMMENT 1: Is contaminated groundwater migrating from the site impacting the water quality in Fall Creek?

RESPONSE 1: As discussed in Section 6.3 and Exhibit A of the Record of Decision (ROD), there are no impacts to groundwater from the site related contaminants of concern (e.g., lead).

COMMENT 2: How will site management protect the public?

RESPONSE 2: The purpose of site management is to ensure the remedy continues to be effective and protective in order to allow the reuse of properties where contamination remains in place. The Site Management Plan (SMP) is a comprehensive document that serves as the basis for maintaining the protection of public health and the environment through monitoring and the continued operation and maintenance of completed remedial actions and engineering controls, as well as, the maintenance and enforcement of institutional controls. Components of the SMP are listed in Section 7 of the ROD.

COMMENT 3: Is site management the responsibility of the City of Ithaca and how will we ensure site management activities are continued and are effective?

RESPONSE 3: Site management is the responsibility of the City of Ithaca. Site management is overseen by the Department in consultation with the NYSDOH. Also, see RESPONSE 2.

The SMP includes the steps necessary for periodic reviews and certification of institutional and engineering controls. Period reviews will evaluate: compliance with the ROD and the SMP; and the condition of the remedial components (e.g., soil cover). Certifications are provided to attest that: institutional controls and engineering controls remain in-place, and remain effective, as well as, protective of public health and the environment.

COMMENT 4: I don't believe the assertions that the site has been cleaned up to restricted-residential soil cleanup objectives.

RESPONSE 4: Contaminated surface soils at this site were remediated through completion of the IRMs described in Section 6.2 of the ROD. Figure 4 of the ROD shows the areas where these IRMs were performed. The IRMs are summarized below according to the area of the site for which they occurred:

- Western Accessway (southern area) – full removal of contaminated soil to restricted-residential Soil Cleanup Objectives (SCOs) (e.g., 400 ppm for lead).
- Western Accessway (northern area) – removal of contaminated soil to a depth of two feet or greater and construction of a clean soil cover with a minimum thickness of two feet for restricted-residential use.
- Island – full removal of contaminated soil to restricted-residential SCOs.
- Raceway – full removal of contaminated soil to restricted-residential SCOs.
- Former Walkway – removal of contaminated soil to a depth up to two feet and construction of a clean soil cover with a minimum thickness of two feet for restricted-residential use.

COMMENT 5: My biggest concern is the northern edge of the island area, at the top of the gorge wall, it is loaded with ash and clinker. A photo was shown by the commenter for the area being discussed.

RESPONSE 5: The area shown by the commenter appears to be an off-site area along the northwest boundary of the site. Quality assurance, post remedial sampling conducted in this area confirmed that the soil met the restricted-residential SCOs. Surface areas on-site do have some presence of clinker or slag; however, this material has been analyzed and its constituents are below restricted-residential SCOs. Analytical results for the clinker/slag material will be included in the Final Engineering Report to be submitted after issuance of the ROD.

COMMENT 6: I don't believe in IRMs, it's a very complicated site. The site needs to be fully investigated, cleaned up, remediated, without further delay.

RESPONSE 6: Comment noted, also see RESPONSE 4 for details regarding the IRMs performed at the Ithaca Falls Overlook site. The reference to "the site" in COMMENT 6 includes off-site

areas with on-going remedial programs that are beyond the scope of the ROD for this site, but will be addressed under those remedial programs.

COMMENT 7: Why did the EPA walk away and not clean up the hot spot they identified in the Western Accessway area during their removal action work from 2002 to 2004?

RESPONSE 7: Work areas for the USEPA in 2002 to 2004 were limited by site accessibility and the approved scope of the removal action.

COMMENT 8: I strongly request that you do not adopt the No Further Action remedy until all of these matters are resolved.

RESPONSE 8: Comment noted. Many of the matters referred to in COMMENT 8 include public comments regarding off-site areas with on-going remedial programs that are beyond the scope of the ROD for this site.

COMMENT 9: The City's intention is that this site property be part of a park. I assume the remedy must be no further action for the property to be certified as a park?

RESPONSE 9: The selected No Further Action remedy is based on the results of the investigations at the site, the Interim Remedial Measures (IRMs) that have been performed and the evaluations presented in the Record of Decision (ROD).

Certification as a park does not require selection of a No Further Action remedy. In this case, the allowable use achieved by the remedy, restricted residential use, includes use as a park.

COMMENT 10: Can you review the area that the proposed remedy applies to and explain who is dealing with the off-site areas that are being commented on?

RESPONSE 10: The remedy applies to the Ithaca Falls Overlook site which is shown in Figures 1, 2, and 4 of the ROD. Off-site areas are summarized below:

- Former Ithaca Gun Factory site – work is being conducted by IFR Realty, LLC within the New York State Brownfield Cleanup Program with oversight by the Department and the NYSDOH (the State). This site is shown on Figure 1 of the ROD.
- Former Ithaca Gun Factory – Off-site – work is being conducted by the State as an off-site element of the BCP site. This action includes a portion of the Fall Creek neighborhood.
- Fall Creek Gorge – work is being conducted by the United States Environmental Protection Agency (USEPA), Removal Action Branch. The removal action area is located within the Fall Creek Gorge along the south gorge wall.

An Ithaca Resident, submitted an electronic mail dated June 1, 2017, which included the following comments:

COMMENT 11: "As a lifetime resident of Ithaca, my input at this point is to go ahead and build on the old Ithaca Gun Plant site. I don't see how more dollars and site disturbance is going to be advantageous in any way. It's time to move forward and I agree with the DEC regarding a no further action required status."

RESPONSE 11: Comment noted.

COMMENT 12: I 100% support the NYSDEC's following statement regarding the Ithaca Falls Overlook site: Based on the results of the investigations at the site and the interim remedial measures and post-IRM screening that have been performed, the NYSDEC is proposing No Further Action as the remedy for the site. Periodic site inspections and reporting, which include additional removals of lead shot as needed, will ensure continued protection for the environment and public health.

RESPONSE 12: Comment noted.

Cynthia Brock, City Official, submitted an electronic mail dated June 16, 2017, which included the following comments:

COMMENT 13: "Despite extensive remediation efforts conducted since 1998 by the DEC and EPA to address the high levels of lead contamination found in the Overlook site, Raceway, Ithaca Falls and neighboring areas, lead contamination remains at levels exceeding the 400 ppm threshold. Remediation efforts, institutional controls and site management plans instituted to date have been: a) ineffective at removing the sources of lead contamination both on-site and off-site, and b) ineffective in preventing the migration of lead to the surface and to adjacent areas, and c) ineffective in eliminating exposure pathways in a manner that is protective of the environment or public health. As such, I request that the reclassification for the site to "No Further Action" be denied.

RESPONSE 13: The selected remedy described in the ROD applies to the Ithaca Falls Overlook Environmental Restoration Program (ERP) site only. The ERP site is the area owned by the City of Ithaca, for which, state funding of 90% of the cost of the investigation and remediation was provided to the City to undertake the work. The off-site remedial programs under the Brownfield Cleanup Program and work associated with the USEPA removal actions are on-going. Aspects of these off-site efforts are mentioned in Sections 3, 6.3, and 6.4, and in Exhibit A of the ROD.

Based on the investigation results, comparison to Standards, Criteria, and Guidance (SCGs), and the potential public health and environmental exposure routes, contaminated surface soil at this site was remediated through completion of IRMs. See RESPONSE 4.

To date, no institutional controls or site management plans have been implemented; however, they are required as elements of the selected remedy for the site and are described in Section 7 of the ROD.

Through the removal of contaminated soil to achieve restricted-residential SCOs and construction of clean soil cover systems over areas with remaining contaminated soil, completion of the IRMs has eliminated the potential for migration of soil with lead concentration above 400 ppm.

As documented in the ROD, the Department and the NYSDOH have determined that the selected remedy is protective of public health and the environment and satisfies the remediation objectives described in Section 6.5 of the ROD.

COMMENT 14: "From 2013 through 2015, lead-contaminated soil was removed to bedrock in the Western Accessway and near Lake Street and on the Island, Raceway, and Former Walkway areas. Concrete and asphalt slabs were removed from the Island. A two-foot cap was installed to prevent migration and eliminate exposure pathways. However, EPA testing of areas in the Fall Creek Gorge, subsequent cleanup efforts, and post-cleanup testing to the gorge area conducted in September - December of 2015, demonstrate that despite the clean fill cover installed on the Island and surrounding areas earlier in 2015, the gorge area continues to be re-contaminated due to lead migration originating on the Island."

RESPONSE 14: The activities that are summarized by COMMENT 14 are not correctly represented. For example, as indicated in RESPONSE 4, the Island area IRM consisted of the full removal of contaminated soil to restricted-residential SCOs and therefore did not include a clean soil cover. For specific details related to the IRMs see Section 6.2 of the ROD.

Additionally, regarding the origin of contamination in the Fall Creek Gorge, the USEPA, in their June 2016 Final Removal Action Report, states the following:

> "It is suspected that contaminated soil and debris is migrating from the cliff face to the talus slope and valley floor areas below through wet deposition of sediment and debris present in runoff from storm water as well as dry deposition of falling rocks and debris. These depositional patterns resulted in contaminated soil and debris that was dispersed in a random and heterogeneous matter throughout the Site, which presented challenges in attaining post excavation soil samples that were consistently below the Site-Specific Cleanup Criteria."

The areas addressed by the USEPA removal actions in the Fall Creek Gorge, including the cliff face or south Fall Creek Gorge wall, represent disposal that occurred off site of the ERP site and are beyond the scope of this ROD.

COMMENT 15: "Lead contamination is found to exist in test pits on the Overlook site at depths of up to 10 feet below grade. However, all lead removal efforts have been limited to excavating the top 0-2 feet, leaving volumes of lead in the soil and shale rock to migrate both on- and off-site."

RESPONSE 15: The referenced test pits were excavated in the Western Accessway area prior to the Ithaca Falls Overlook remedial investigation (RI). However, as part of the RI, soil samples were collected in the same area as the test pits and from depths up to 16 feet below ground surface. The Western Accessway area IRM is summarized in Section 6.2 of the ROD. Soil with lead at

concentrations exceeding the restricted-residential use SCOs does remain beneath a demarcation layer (i.e., orange snow fence) and a clean soil cover with a minimum thickness of two feet. The Environmental Easement and SMP will identify all areas were engineering controls (i.e., clean soil covers) are in use and where contaminants remain. Protectiveness and implementation of the SMP is summarized in RESPONSES 2 and 3.

The two-foot depth limitation for all lead removal efforts referenced in COMMENT 15 is not correct. See Section 6.2 of the ROD.

The potential for erosion and transport (i.e., migration) of contaminated soil remaining on-site has been eliminated through use of clean soil covers and site management measures. Although shale fragments may be incorporated within the contaminated soil, the in-situ shale bedrock is not contaminated with lead. Migration of lead from soil to groundwater has not occurred.

COMMENT 16: "Due to steep slopes and limited accessibility to significant portions of the site, cover systems and site management plans have been not only ineffective at containing the contamination but also ineffective at reducing exposure pathways to lead and lead dust in a manner protective of environmental and human health."

RESPONSE 16: Through the removal of contaminated soil to achieve restricted-residential SCOs and construction of clean soil cover systems over areas with remaining contaminated soil, completion of the IRMs has eliminated the potential for migration of soil with lead concentration above 400 ppm.

To date, no institutional controls or site management plans have been implemented; however, they are required as elements of the selected remedy for the site and are described in Section 7 of the ROD. Protectiveness and implementation of the SMP is summarized in RESPONSES 2 and 3.

COMMENT 17: "Despite site management protocols, lead contamination continues to migrate from the Island onto the Ithaca Falls Natural Area. Not only does the migrating lead deposit on the base of the slope itself, but extends far beyond the areas contained by the fencing installed by the EPA at the base of the talus slope at levels up to 12,000 mg/kg, in exceedance of Restricted Residential Standards of 400 mg/kg. It can be reasonably expected that lead from the Overlook Site continues to deposit not only onto the slope, soil and water of the Ithaca Falls Natural Area, but also migrating within the Ithaca Falls Overlook site and continues to be a significant threat to human health and the environment.

In order to safeguard the environment and human health, I respectfully request that the Ithaca Falls Overlook Site NOT be reclassified and that the Ithaca Falls Overlook site be fully remediated to meet all applicable standards."

RESPONSE 17: The selected remedy, with the engineering controls in place and required implementation of the institutional controls in the form of the environmental easement and SMP, achieves all applicable standards and is protective of public health and the environment for restricted-residential use of the site. Also, see RESPONSE 13.

Walter Hang, submitted a letter dated July 17, 2017, which included the following comments:

COMMENT 18: “This proposal hardly constitutes a "remedy" for toxic contamination that is either visually apparent or documented at the Falls Overlook site as well as on adjoining areas. These include areas to the south at the stunningly contaminated Ithaca Gun factory site, to the north at the toxic-polluted Ithaca Falls Gorge and to the west on the "Island" where lead pellets are strewn all over the ground.”

RESPONSE 18: It has been acknowledged that lead pellets may be found in isolated areas of the Island. Identification and remediation of one such area is described in ROD Section 6.2. Screening and removal of areas of visible lead shot will be continued into the future through periodic site inspections conducted as part of site management. Also, see RESPONSE 13.

COMMENT 19: “As you will see, a composite soil sample collected at the Ithaca Falls Overlook site has just been analyzed and reportedly constitutes lead hazardous waste according to a Toxic Characteristic Leaching Potential (TCLP) analysis. It is inconceivable that your administration would leave lead hazardous waste at the Ithaca Falls Overlook.”

RESPONSE 19: Following proper sample collection procedures and methodologies are important to provide samples that are representative of actual conditions and can be used for regulatory decision making. Using established protocols for sample collection, handling, analysis, and documentation reduces error and bias that can be introduced in the field or in the laboratory. Correspondence provided to the laboratory by the sampler includes the following statements: “This analytical testing is not being done for regulatory compliance purposes, so I do not need to fulfill chain of custody requirements or temperature maintenance protocols”; and “Please note the presence of multiple lead pellets in the sample. I request that you make sure the lead is dissolved during the test to provide and accurate assessment.” Collectively, these statements indicate that results may include significant sampler and sample preparation bias and are not representative of conditions at the site. Also, regarding isolated areas with lead shot, see RESPONSE 18.

COMMENT 20: “DEC's No Further Action proposal must be rejected because it is based on numerous factually incorrect assertions which refute the conclusion that future site management activities can safeguard public health due to Interim Remedial Measures as well as institutional and engineering controls undertaken at the site.

DEC states, "Based on the results of the investigations at the site and the interim remedial measures (IRMs) and post-IRM screening that have been performed, the NYSDEC is proposing No Further Action as the remedy for the site.

"DEC notes, "The proposed No Further Action remedy includes the implementation of the institutional controls described in a separate section below, as well as the engineering control consisting of a cover system, installed for portions of the site by the IRMs. Periodic site inspections and reporting, which include additional removals of lead shot as needed, will ensure continued protection for the environment and public health."

This proposal is unacceptable because there is no specific plan to make sure that these requirements are fulfilled."

RESPONSE 20: The institutional controls and the site management plan are implemented after remedy selection. They are included as elements of the selected remedy for the site and described in Section 7 of the ROD. Also, the protectiveness and implementation of the SMP is summarized in RESPONSES 2 and 3.

COMMENT 21: "First, the northern portion of the Falls Overlook site delineated in Figure 1 below remains strewn with coal clinker, shotgun shell remnants, lead pellets and other unmistakable evidence of waste dumping that has not been removed from the "Island" where I first documented massive toxic lead waste nearly 17 years ago.

In particular, the northwestern portion of the Falls Overlook site clearly has large amounts of toxic contaminated debris that should have been removed because the material falls directly into the Ithaca Falls Gorge immediately below. This toxic debris extends down the Ithaca Gorge cliff face that is part of the Falls Overlook site. Adjoining areas of the eastern portion cliff face very likely remain contaminated, but are not easily inspected due to the sheer drop-off.

See: Evidence of Incomplete Remediation of Toxic Contamination at Ithaca Falls, Ithaca, NY 6/16/17

Until this entire area is remediated, DEC must not be allowed to declare that hazards at the Falls Overlook have been sufficiently addressed. That is not true."

RESPONSE 21: Comment noted. Also, see RESPONSES 5 and 18.

COMMENT 22: "Second, the area immediately west and southwest of the Falls Overlook "Island" still has extensive lead pellet pollution that is visually apparent. Due to the force of gravity as well as wind and water erosion, toxic lead is unquestionably migrating south into the immediately adjoining tailrace which courses downhill and terminates in the park where visitors enter the Ithaca Gorge Trail.

The tailrace channel immediately adjoining the "Island" is difficult to inspect due to a sheer drop-off and a highly unstable slope. It is very likely contaminated with lead that can be seen on the upgradient sections of the "Island."

All lead in these pollution-source areas must be removed to the applicable 400 PPM requirement or contamination will eventually migrate down the tailrace channel and contaminate the downgradient park where unsuspecting visitors can be exposed to toxic lead."

RESPONSE 22: The area immediately west and southwest of the Island area will be included in the periodic site inspections and will be subject to site management corrective measures, as necessary. Although highly difficult to access, the Island area and Raceway IRMs did address the areas referenced and are described in ROD Section 6.2. Also, as described in ROD Section 6.2, surficial soils in the referenced area were addressed in April 2017. Soil sampling that has been

conducted in areas west of the Island area and in downgradient areas within the Raceway do not indicate migration of lead contamination.

The following is a listing of comments that were specific to areas subject to other remedial programs as described in RESPONSE 10 and known as the Former Ithaca Gun Factory site, Former Ithaca Gun Factory – Off-site area, and Fall Creek Gorge. These comments were generated during the June 20, 2017 public meeting for the ERP site and were addressed at that time. Remedial activities on-going in each of the off-site areas are beyond the scope of the ROD for the Ithaca Falls Overlook ERP site.

- How many homes have been mitigated and what percentage of homes have responded to sampling offers?
- Did the USEPA removal action areas from 2002 through 2004 have post clean-up site management plans?
- There are shot gun shells all over the place. The area needs a comprehensive solution. Pollution seems to have migrated after most recent remediation efforts.
- Why did the EPA walk away and not clean up the hot spot they identified in the Western Accessway area during their removal action work from 2002 to 2004?
- I have a concern that people don't disclose information about mitigation systems when they sell their houses.
- How do you mark the sub-slab depressurization systems (SSDSs)? Is there a special label if it is for solvents not radon?
- Many areas in the Fall Creek neighborhood have basements that may flood. What risks does that have?
- There is a likelihood that lead contaminated soil still exists on the gorge wall between the Ithaca Falls Overlook site and the gorge floor. How is that being addressed? Who is liable for contamination on the gorge wall?
- The removal action performed by the USEPA in 2015 left an area of lead with levels of 12,000 mg/kg in the walkway, but we aren't doing anything to address that area and keep children and tourists safe? I hold my breath every time I see little kids go into the gorge area.
- There are big rocks and I found shotgun shells in the pathway, we need to continue to remove contamination.
- Is there any time limit on the brownfield cleanup site? At what point do you take over?
- This is a complex area, why wasn't it tackled as one site? This approach is more expensive, you are just treading water and not tackling the problem.

APPENDIX B

Administrative Record

Administrative Record

Ithaca Falls Overlook
Environmental Restoration Project
Ithaca, Tompkins County, New York
Site No. E755018

1. Proposed Remedial Action Plan for the Ithaca Falls Overlook site, dated May 2017, prepared by the Department.

2. The Department and the City of Ithaca entered into a State Assistance Contract, Contract No. C304197, July 15, 2009.

3. "Site Investigation Work Plan", April 2012, prepared by Barton & Loguidice, D.P.C.

4. "Citizen Participation Plan for Ithaca Falls Overlook", April 2012, prepared by Barton & Loguidice, D.P.C.

5. "Interim Remedial Measures (IRM) Work Plan", June 2013, prepared by Barton & Loguidice, D.P.C.

6. "Analysis of Brownfield Cleanup Alternatives (ABCA)", June 2014, prepared by Barton & Loguidice, D.P.C.

7. "Quality Assurance Project Plan", June 2014, prepared by Barton & Loguidice, D.P.C.

8. "Amendment to June 2014 Quality Assurance Plan", December 2014, prepared by Barton & Loguidice, D.P.C.

9. "Site Investigation Report" (includes IRM Construction Completion Reports), March 2016, prepared by Barton & Loguidice, D.P.C.

10. Electronic mail dated June 1, 2017 from Ithaca Resident

11. Letter dated June 16, 2017 from Cynthia Brock, City of Ithaca Common Council

12. Letter dated July 17, 2017 from Walter Hang