NEW YORK STATE OF OPPORTUNITY. | Department of Environmental Conservation

FINAL STATEMENT OF BASIS CORRECTIVE MEASURES SELECTION

Former Hampshire Chemical Corp. Facility

Operable Unit 03 – Former Village of Waterloo Landfill – SWMU 1

Waterloo, Seneca County

NYSDEC Site Number 850001A-OU3

EPA ID No. NYD 002234763

March 2015

PREPARED BY

DIVISION OF ENVIRONMENTAL REMEDIATION

DECLARATION STATEMENT – STATEMENT OF BASIS
FINAL CORRECTIVE MEASURES SELECTION

Former Hampshire Chemical Corp. Facility
Operable Unit 03-former Village of Waterloo Landfill – SWMU 1
Waterloo, Seneca County
NYSDEC Site Number 850001A-OU3
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Statement of Purpose and Basis

This document presents the selected final corrective measures for the Former Hampshire Chemical Corp. Facility's Solid Waste Management Unit (SMWU) 1. The final corrective measures were selected in accordance with 6 NYCRR 373. This decision is based on the Administrative Record for the New York State Department of Environmental Conservation (the Department) for the Former Hampshire Chemical Corp. Facility (see Attachment B) and the public's input to the proposed corrective measures presented in the Statement of Basis (SB).

The selected remedy was made available for public comment between February 11, 2015 and March 28, 2015. The release of the draft Statement of Basis (dSB) was announced by sending a fact sheet to the Seneca County public contact list via Listserve, informing the public of the opportunity to comment on the selected remedy. The fact sheet and the draft Statement of Basis were also issued to the document repository at the Waterloo Public Library to facilitate public availability and review of documents related to the selected action. All comments and/or requests for a public hearing were required to be submitted no later than March 28, 2015.

The comment period ended March 28, 2015. No public meeting or availability session was requested or took place for this project. Comments received from the public on the corrective measures selected in the dSB together with the Department's responses are provided in Attachment A.

Description of Selected Remedy

The remedy selected for SWMU 1 addresses the area of impacted soil, debris, and bottle waste within the property line of the former Hampshire Chemical Corp (HCC) facility, the New York State Canal Corporation (NYSCC) right-of-way, and a former residential property demolished in 2013. The remedy addresses limiting exposure and direct contact with the waste and a means to monitor the potential of future landfill bottle breakage and the consequential release of the bottles' liquid constituents into groundwater.

The elements of the selected remedy are as follows:

1 – Cover System – consisting of the existing asphalt access road with an extension to the north toward the site's raceway to be used in that area to protect against rutting or other damage from site truck traffic; a soil cap for the areas between the existing asphalt access road and the Cayuga-Seneca Canal. The cover will consist of 2 feet of imported compacted soil with a hydraulic conductivity of less than 1.0×10^{-7} cm/sec overlain with a 6-inch topsoil layer; and a demarcation layer will be installed before placement of the soil cap and extended asphalt cap to alert future workers to the presence of the underlying impacted soil in the event of future excavation.

2 – Institutional Controls – consisting of the imposition of an environmental easement for the property that would require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls; restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment; requiring the notification of the New York State Canal Corporation regarding the determination of contamination along the canal right-of-way.

3 – Site Management Plan – consisting of an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls (i.e. establishing an environmental easement and access controls on the impacted property; implementing the cover system); monitoring plan that would access the performance and effectiveness of the remedy (i.e. verify the use has not changed or the area/cover have not been disturbed; groundwater monitoring; restoration monitoring should the canal bank be disturbed); and an Operation and Maintenance (O&M) Plan that would ensure continued operation, maintenance, monitoring and inspection of remedy components.

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 corrective measure 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 31, 2015
Date

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

STATEMENT OF BASIS FOR SELECTED REMEDY

Former Hampshire Chemical Corp. Facility
Waterloo, Seneca County
EPA No. NYD002234763 / Site No. 850001A
Operable Unit 03 – former Village of Waterloo Landfill – SWMU 1

March 2015

INTRODUCTION

The New York State Department of Environmental Conservation (the Department) has determined the need to address an area of impacted soil, debris and bottle waste within the property line of the former Hampshire Chemical Corp (HCC) facility, the New York State Canal Corporation (NYSCC) right-of-way, and a former residential property demolished in 2013. This area is identified as SWMU 1 – the former Village of Waterloo Landfill. The selected remedy addresses limiting exposure and direct contact with the waste and a means to monitor the potential of future landfill bottle breakage and the consequential release of the bottles' liquid constituents into groundwater.

This Statement of Basis (SB) provides background information related to the site contaminants and investigation of SWMU 1, and identifies the remedy selected by the New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), and discusses the basis for the remedy's selection.

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.

PUBLIC 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 comments on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting the remedy for the site's SWMU 1. Site-related reports and documents were made available for review by the public at the following repository:

Waterloo Public Library
31 E. William Street
Waterloo, NY 13165
Telephone: (315) 539-3313

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.

FACILITY DESCRIPTION

This site is listed as a Class 'A' site in the Non-Registry RCRA Corrective Action Program. A Class 'A' site is a non-registry site in any remedial program where work is underway and not yet completed – in this particular case, RCRA Corrective Action. 6NYCRR Part 373 Hazardous Waste Management regulations require owners and/or operators of RCRA facilities to investigate and, when appropriate, remediate releases of hazardous wastes and/or constituents to the environment. The former Hampshire Chemical Corp (HCC) is a wholly owned subsidiary of the Dow Chemical Company. HCC has retained environmental liabilities for the facility in accordance with the terms described in the purchase agreement between HCC and the current property owner. The site is comprised of a total of 46 Solid Waste Management Units (SWMUs) and Areas of Concern (AOCs). The Department has determined that no further action is necessary for many of these SWMUs and AOCs. Four AOCs and one SWMU require further action. SWMU 1 is the subject of this Statement of Basis (SB). The Department issued an Order of Consent to HCC on August 12, 2011 (Index Number 8-20000218-3281) and all remedial actions described in this SB will be performed under the authority of the order. The remaining SWMUs and AOCs will be addressed under separate SBs.

Location: This facility is located at 228 East Main Street, in the Village of Waterloo, in the north-central portion of Seneca County, New York. The site is bordered to the north by East Main Street, to the east by Gorham Street, to the west by East Water Street, and to the south by the Cayuga-Seneca Canal.

SWMU 1 – the former Village of Waterloo landfill is in the western area of the site. It is bounded to the east by the facility, to the south by the Cayuga-Seneca Canal, to the west by East Water Street, and to the north by the facility raceway. The facility purchased the land containing the landfill in 1952 to acquire water rights from the Cayuga-Seneca canal. It was identified as a SWMU because of the presence of solid waste placed there by the Village of Waterloo and the former Hampshire Chemical Corp facility.

Site Features: The facility consist of 8.3 acres of industrially developed land, containing several interconnected buildings which house offices; a quality control laboratory; manufacturing, maintenance, and shipping/receiving operations; and a wastewater treatment plant. The site also includes outside drum storage areas and several aboveground storage tanks.

SWMU 1 area (the former Village of Waterloo Dump) is defined as the area known to have accepted solid waste from the Village and industrial waste from the Hampshire Chemical facility until approximately 1954. The waste and debris extends from the facility property south onto New York State Canal Corporation (NYSCC) property. NYSCC owns the right-of-way extending south of SWMU 1 and parallel to the Cayuga-Seneca Canal. The total area of waste and debris disposal has an approximate extent of 2.1 acres.

Current Zoning and Land Use: This site is currently zoned for industrial use. The primary chemicals manufactured at the facility are divalent organic sulfur intermediates used for the cosmetic, pharmaceutical, and plastic industries.

The site is surrounded by residential properties (north, east, and southwest), commercial businesses (to the west), and the Cayuga-Seneca Canal (to the south). South of the canal are residences, warehouses, and further downstream, the village wastewater treatment plant.

Past Use of the Site: The facility as a whole was first owned and operated by the Waterloo Woolen Manufacturing Company, which operated a woolen textile mill from before 1839 until approximately 1936, when the mill was closed. The facility was later reopened in 1943 by Evans Chemetics and produces divalent organic sulfur chemical intermediates to this day.

SWMU 1 area was used for woolen mill operations (known as the West Mill) from 1886 to 1911. Based on Sanborn fire insurance maps of the site, the area along the western side of SWMU 1 was identified as the Village of Waterloo Dump as early as 1918 and was in operation at the western edge of the site until approximately 1951, suggesting an operation period of at least 33 years. Based on aerial photographs the dump was closed by 1954.

Site Geology and Hydrogeology: The site topography slopes gently southward toward the canal with elevations ranging from 457 to 429 feet above mean sea level at the canal bank. Man-made fill was placed over the native deposits across most of the site. Beneath the historical man—made fill, three distinct indigenous units are present: soft native deposits (silt and clay), glacial till (very hard silt and clay), and bedrock (Onondaga Limestone).

At SWMU 1, the unconsolidated materials consist of non-native soil (fill material) at the ground surface over waste and debris mixed with non-native soil. The fill materials are usually underlain by native clay and/or glacial till, which in turn are underlain by limestone bedrock. At some locations, as within the former raceways, non-native material mixed with waste extends to the bedrock surface.

The water table intersects the non-native soil/waste and debris layer at approximately 9 to 23 feet below ground surface. The groundwater flow direction at SWMU 1 flows south toward the Cayuga-Seneca Canal.

ENVIRONMENTAL ASSESSMENT

Based upon investigations conducted to date, the primary contaminants of concern at SWMU 1 include the volatile organic compound (VOC) – acetone and the polynuclear aromatic hydrocarbons (PAHs) - benzo(a)pyrene and dibenzo(a,h)anthracene. The existing waste and debris at SWMU 1 is comprised of residential and industrial waste that was generated by the Village of Waterloo and the facility. The waste and debris below the non-native soil layer include glass and plastic fragments, scrap metal, black ash, coal, ceramics, shoes, brake pads, copper wire, tires, cobbles, bricks, wood, scrap metal, porcelain, and/or wood fragments. Numerous intact glass bottles containing white and clear liquids are present in some areas.

Soil data collected from surface and sub-surface sample locations at SWMU 1 show limited impact to soil. PAHs (benzo(a)pyrene and dibenzo(a,h)anthracene) were detected just above the NYSDEC SCO industrial screening criteria of 1.1 parts per million (ppm) in one surface, and one surface and sub-surface sample location in close proximity of the access road to Evans Chemetics. Sampling results also indicate that no other SVOCs, VOCs, metals, or PCBs/pesticides are present at levels exceeding industrial use soil clean-up objectives. Soil contamination does not extend off-site.

Groundwater samples were collected from the existing monitoring well network in the SWMU 1 area. The only VOC exceedance occurred in 2002 from a groundwater sample which reported acetone exceeding the Technical and Operational Guidance Series (TOGS) standard of 50 parts per billion (ppb). Acetone has not been detected since 2002.

PAHs historically have been detected in SWMU 1 groundwater samples. Five of the site wells have reported concentrations of select PAHs above their associated TOGS standards, as shown in the table below. Based on groundwater data from 2002 to present, PAHs in groundwater appear to be decreasing in concentrations over time. PAHs are not believed to be associated with landfilling activities but rather from runoff associated with the asphalt access road.

Metals (iron, manganese, magnesium, and sodium) have historically been detected above their associated TOGS in the SWMU 1 monitoring wells. The elevated concentrations in groundwater at SWMU 1 are consistent with concentrations in background groundwater. The concentration of constituents in site groundwater appear to be stable or generally trending lower over time.

Soil Vapor and Methane Gas evaluations have been made at SWMU 1. Two vapor points along the site's boundary and one ambient air sample were collected. Various VOCs, including acetone, MIBK, toluene, carbon tetrachloride, chloroform, m,p-xylene, trichloroethene, and tetrachloroethene were detected in the on-site soil vapor samples. See Table 1 below. VOCs were detected in the ambient air sample at levels generally consistent with levels found in outdoor air. One off-site residential home was also sampled as part of this evaluation. One of the reported VOCs in SWMU 1 soil vapor (i.e., trichloroethene or TCE) was detected in the residential crawl space air sample at 49 mcg/m^3. Despite this elevated concentration, TCE was not detected in the first floor indoor air sample. Other VOCs detected in the first floor indoor

air sample were consistent with levels of VOCs commonly found in the indoor air of homes. The constituents detected in the soil vapor and indoor air samples historically were not detected in nearby groundwater monitoring wells. No actions were taken and the residence was subsequently demolished.

Table 1 – Summary of Soil Vapor and Ambient Air Results for SWMU 1:

Compound (ug/m^3)	NYSDOH Indoor Air 90th Percentile Background	Ambient 2007	Ambient 2010	SGP-09 2007	SGP-09 2010	SGP-10 2007	SGP-10 2010
Acetone	110	---	14	---	57	20	12
MIBK	2.2	12	0.49	71	1.7	0.65	0.31
Toluene	58	2.3	1.2	9.5	3.1	23	1.1
Carbon Tetrachloride	0.8	0.43	0.56	0.34	0.51	1.2	0.54
Chloroform	1.4	---	---	---	---	7.7	0.13
m,p-xylene	12	1.3	---	8.5	1.1	34	---
Trichloroethene	0.5	---	---	0.52	---	---	---
Tetrachloroethene	2.9	---	0.19	0.68	---	16	---

In 2012, a methane gas survey was conducted at SWMU 1 to evaluate conditions within the subsurface. It was concluded that the current methane, oxygen, and carbon dioxide levels measured at each of the SWMU 1 sampling locations appear to indicate more aerobic conditions that would not favor the production of methane gas. The methane levels in all six monitoring locations were not higher than 0.1 percent (by volume) and significantly lower than the lower explosive limit (5 percent by volume). The duration of time that the waste has been buried at SWMU 1 (more than 60 years) is significantly beyond the peak of landfill gas production (generally 5 to 7 years after burial). The presence of methane gas in the subsurface due to waste decomposition would not be expected. Low to non-detected levels of methane in SWMU 1 would not present a concern for on-site or off-site vapor intrusion. The closest off-site business is located approximately 400 feet northwest of the center of SWMU 1.

Most of SWMU 1 is vegetated by grass, brush, or small trees, and a small section of the northern area is covered with gravel and asphalt.

HEALTH ASSESSMENT

People are not coming into contact with the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Fencing exists in portions of the site to restrict public access, but persons who trespass onto the site in unfenced areas could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil.

Volatile organic compounds in the groundwater may move into the soil vapor (air between soil particles), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because there is no on-site building, inhalation of site contaminants in indoor air due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site development.

REMEDIATION OBJECTIVES

The objectives for the corrective measures have been established through the remedy selection process. The Remedial Action Objectives (RAOs) are operable-unit-specific objectives for the protection of public health and the environment and are developed based on contamination-specific standards, criteria, and guidance (SCGs) to address the contamination identified at the site.

The remedial action objectives for this site's SWMU 1 are:

Groundwater

- Human Health
  - Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Environment
  - Prevent discharge of contaminants to surface water.

Soil

- Human Health
  - Prevent ingestion/direct contact with contaminated soil.
- Environment
  - Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

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

The RAO for SWMU 1 is to minimize potential future exposure to humans and the environment posed by waste and debris within the SWMU 1 boundary, the canal right-of-way, and the area around the former residential property.

CONTAMINANTS OF CONCERN DETECTED – SWMU 1 – FORMER VILLAGE OF WATERLOO LANDFILL – FORMER HAMPSHIRE CHEMICAL FACILITY

Media	**Contaminant**	**Maximum Concentration (mg/kg)[1]**	**Action Level (mg/kg)**
On-site Soil	Benzo(a)pyrene Dibenzo(a,h)anthracene	7.9 1.39	1.1 1.1
Media	**Contaminant**	**Maximum Concentration (ug/L)[1]**	**Action Level (ug/L)[2]**
On-site Groundwater	acetone	194	50

Notes:

1. Maximum observed concentrations are for the highest observed concentration during the entire investigation period beginning in 1996.

2. Groundwater action levels/cleanup goals as referenced in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Water Guidance Values.

mg/kg – milligrams per kilogram or parts per million
ug/L – micrograms per liter or parts per billion

SELECTED REMEDY

The components of the selected remedy include:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and 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 gases and other emissions;

- Increasing energy efficiency and minimizing use of non-renewable energy;

- Conserving and efficiently managing resources and materials;

- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;

- Maximizing habitat value and creating habitat when possible;

- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Cover System

A site cover will be required to allow for industrial use of the site. The cover will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the 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 industrial use. The soil cover will be 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 will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

The Cover System for SWMU 1 will consist of:

- The existing asphalt access road with an extension further to the north toward the raceway to be used in that area to protect against rutting or other damage from site truck traffic;

- A soil cap for the other areas between the existing asphalt access road and the canal. The cover will consist of 2 feet of imported compacted soil with a hydraulic conductivity of less than 1.0×10^{-7} cm/sec overlain with a 6-inch topsoil layer and complies with the requirements of DER-10 5.4(e). Clearing and grubbing of vegetation to the limit of waste extents would be required, along with grading to create a slope of no less than 3

percent to prevent future ponding and promote runoff away from adjacent properties and toward the canal or raceway. Disturbed areas would be seeded after construction to re-establish vegetation for stabilization and erosion control;

- A demarcation layer would be installed before placement of the soil cap and the extended asphalt cap to alert future workers to the presence of the underlying impacted soil in the event of future excavation. A demarcation layer would not be included in areas where existing asphalt would act as a cap; and

- A vegetated buffer to separate SWMU 1 from the bank of the Cayuga-Seneca Canal. Any disturbance within this buffer area will be restored in-kind using natural stream restoration techniques with no additional hardening.

3. Institutional Control

Imposition of an institutional control (IC) in the form of an environmental easement for the controlled property that:

- 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);

- Allows the use and development of the controlled property for 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;

- Requires notifying the New York State Canal Corporation (NYSCC) regarding the determination of contamination along the canal right-of-way; and

- 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: Establishing an environmental easement and access controls on the parcels of impacted property, which documents the impacted soil and waste and limits. The IC implementation will affect the future potential use of the area. The NYSCC will be notified of the determination of the contamination along the NYSCC canal right-of-way.

Engineering Controls: The site cover system as discussed above.

This plan includes, but may not be limited to:

- Descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- Provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- Provisions for the management and inspection of the identified engineering controls;
- Site-specific materials management plan (MMP) that would be used to ensure that soil and waste movement activities would be managed appropriately;
- Maintaining site access controls and Department notifications; and
- The steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Inspections and monitoring performed to verify the use has not changed, or the area and cover have not been disturbed;
- Implementation of a sentinel groundwater monitoring program that includes one up-gradient and five down-gradient monitoring wells;
- Monitoring that consists of annual sampling events focused on the Contaminants of Concern (COCs) for SWMU 1, which include VOCs, PAHs, and target analyte list (TAL) metals;

- Monitoring for soil vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above;

- Restoration monitoring should the riverbank be disturbed by the chosen remedy; and

- Monitoring that would be conducted for a period of 30 years, with 5-year reviews during the monitoring period to allow for the cessation of monitoring before the 30-year period has ended.

c. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, and optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan may include, but is not limited to:

- Maintaining site access controls and Department notification; and

- Providing the Department access to the site and O&M records.

The remedial objectives and actions to attain them are found in the following table:

Remedial Objectives	Remedial Action
1. Minimize potential future exposure to humans and the environment posed by waste and debris within the SWMU 1 boundary, the canal right-of-way, and the area around the former residential property.	Establish an environmental easement and access controls on the parcels of impacted property. As part of a site-wide Site Management Plan (SMP) a site-specific materials management plan (MMP) would be used to ensure that any invasive activities involving soil, cap material or waste will be managed appropriately.
2. Eliminate hazards posed by exposed waste and debris.	A combination of engineering controls would be used to eliminate direct exposure to impacted soil.
3. Manage contaminated soil and bottleware waste appropriately to prevent human and ecological exposure, and prevent migration from the facility.	Following implementation of the engineering controls inspections would be performed to verify the use has not changed or the area and cover have not been disturbed.

4. Ensure that contaminated soil or groundwater on or migrating from the facility does not pose a threat to human health or the environment.	Because of potential for release of liquid materials into the subsurface from the landfilled bottleware if breakage were to occur, continued groundwater monitoring is planned.

Based on the administrative record compiled for this corrective action the Department has determined that the selected remedy for this Solid Waste Management Unit (SWMU 1) is appropriate and will be protective of human health and the environment.

The Responsible Party (RP) estimates their cost for implementation of the selected remedy is $1,872,000. Their estimated capital costs are $1,720.000.

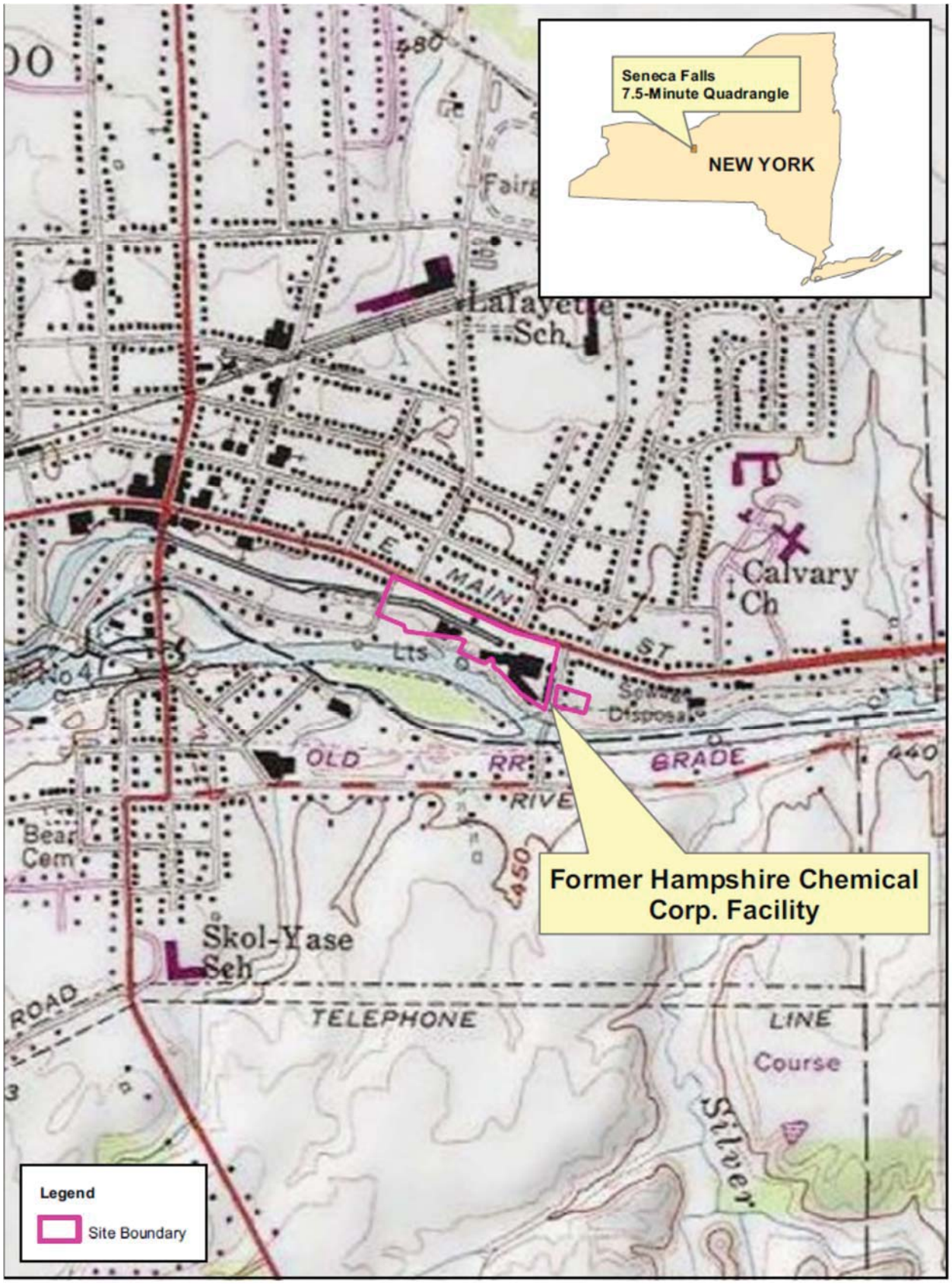

Figure 1
Facility Location Map
Corrective Measures Study for AOC A - Cayuga-Seneca Canal
Former Hampshire Chemical Corp. Facility
Waterloo, New York

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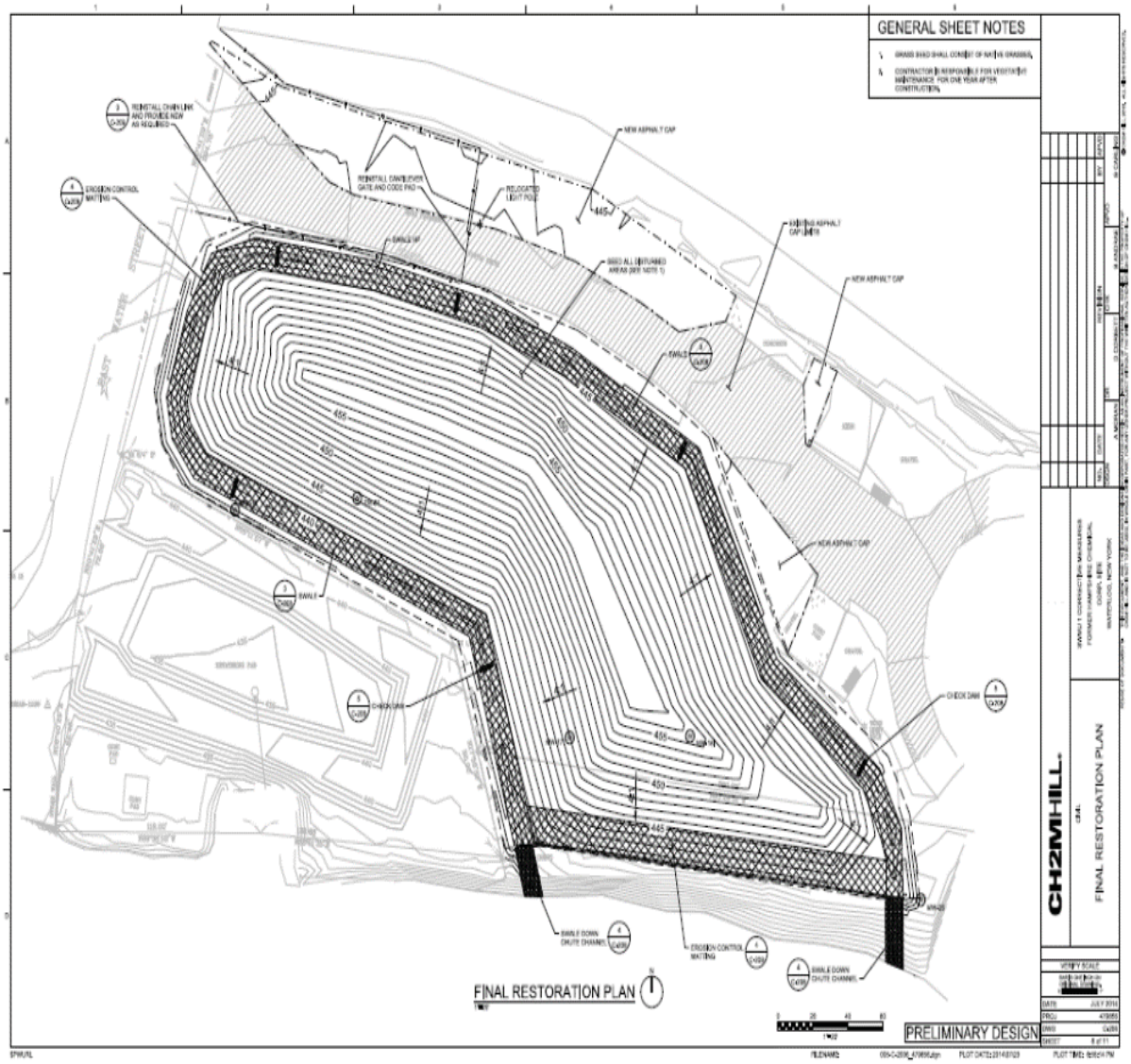
Originator: L. La Fortune Checked By: B. Carling Approved by SM: D. Brodmerkel

CH2MHILL

SWMU 1 Location -

Final Restoration Plan Figure for SWMU 1:



APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Former Hampshire Chemical Corp. Facility
Operable Unit 03 – former Village of Waterloo Landfill – SWMU 1
Waterloo, Seneca County
NYSDEC Site Number 850001A-OU3
EPA ID#NYD 002234763

The draft Statement of Basis (SB) for the referenced 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 for public comment on February 11, 2015. The draft SB outlined the remedial measures selected for the referenced operable unit.

The release of the draft SB was announced by sending a fact sheet to the Seneca County public contact list via Listserve, informing the public of the opportunity to comment on the selected remedy. A fact sheet and the draft Statement of Basis was issued to the document repository at the Waterloo Public Library to facilitate public availability and review of documents related to the proposed action.

The public comment period for the draft SB ended on March 28, 2015. No public meeting or availability session was requested or took place for this project.

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

From Hampshire Chemical Corp.Comments Letter – March 25, 2015:

COMMENT 1: On Page 5, last paragraph, last sentence of draft SB – currently states "no actions were taken and the residence was subsequently demolished". HCC believes it would be more accurate to state "no action was necessary because the detected VOC concentrations did not appear to be related to vapor intrusion and the residence was subsequently demolished".

RESPONSE 1: The concentration of trichloroethene (TCE) in the crawl space air sample of the former residence was reported at 49 mcg/m^3, which is nearly an order of magnitude higher than the current NYSDOH TCE guideline of 5 mcg/m^3. The Department and NYSDOH acknowledge that TCE was not detected in the first floor air sample and subsequently, no follow up actions (e.g., additional air/soil vapor sampling and or inspection of the crawl space area) were completed at the private residence. However, without more specific information, it is not appropriate to assume that TCE in the crawl space was unrelated to soil vapor intrusion. The referenced statement is factual and will not be changed.

COMMENT 2: On Page 6, third paragraph from end, second sentence of draft SB – currently states "fencing exists in portions of the site to restrict public access, but persons who enter the site in unfenced areas could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the

soil". HCC believes it would be more accurate to state "fencing exists around the site, except along the canal, to restrict public access but persons who trespass onto the site from these limited unfenced areas could contact contaminants in the soil be walking on the soil, digging or otherwise disturbing the soil".

RESPONSE 2: The Department has changed the wording of this sentence to now say "fencing exists in portions of the site to restrict public access, but persons who trespass onto the site in unfenced areas could contact contaminants in the soil by walking on the soil, digging or otherwise disturbing the soil".

COMMENT 3: On Page 6, third paragraph from end, final sentence of draft SB – references impacted sediments: however, impacted sediments are not present in the area of SWMU 1 and the ongoing AOC A sediment remediation project will be completed in 2015 removing the potential for trespassers to contact impacted sediment adjacent to the entire site. HCC believes this sentence should be removed.

RESPONSE 3: The Department acknowledges that this statement is not applicable to SWMU 1 and has removed it from the final Statement of Basis for SWMU 1.

COMMENT 4: On Page 7, first paragraph, last sentence of draft SB – this sentence currently states "However, the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future use development". This language suggests that inhalation potential exists; however, based on the absence of VOC detections in SWMU 1 soil, it would seem highly unlikely for inhalation potential in a future use scenario unless a new structure penetrates the cap. HCC believes that the environmental covenant that will be put in place for this unit will prohibit construction of permanent, occupied structures at SWMU 1. HCC believes there is no potential for vapor intrusion and this statement should be removed.

RESPONSE 4: The Health Assessment discusses the current exposure scenarios for this SWMU and the entire site. Once the remedy for SWMU 1 has been implemented, the Health Assessment will be revised, as appropriate should conditions warrant. The Department acknowledges that the environmental easement that will be put in place for the entire site will prohibit construction of new buildings, and the possible scenario of a new structure penetrating SWMU 1's cap.

COMMENT 5: On Page 7, next to last paragraph, last sentence of the draft SB – currently states the RAO for human health is to "mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at the site". Under the current use scenario, there are no existing buildings for which vapor (if present) could migrate into at SWMU 1. Furthermore, the data did not identify a continuous subsurface source of VOCs that could influence vapor intrusion into future site buildings. HCC believes that the environmental covenant that will be put in place for this unit will prohibit construction of permanent, occupied structures at SWMU 1. Finally, the current language may be bringing other potential vapor intrusion areas into the discussion which are not associated with SWMU 1. HCC believes there is no potential for vapor intrusion and this statement should be removed.

RESPONSE 5: The Remediation Action Objectives discusses the current exposure scenarios for this SWMU (pre-environmental easement). The environmental easement that will be put in place for the entire site will prohibit construction of new buildings and the possible scenario of a new structure

penetrating SWMU 1's cap. Since the environmental easement is not currently in place, the statement is accurate.

COMMENT 6: On Page 11, EC's Discussion, second bullet of draft SB – currently states a "provision for evaluation of the potential for vapor intrusion for any buildings developed on the site, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion". There are currently no buildings on SWMU 1, so this should be identified as a future use scenario and the use of the term site should be avoided because this Statement of Basis is only for SWMU 1. HCC believes that the environmental covenant that will be put in place for this unit will prohibit construction of permanent, occupied structures at SWMU 1. Therefore, HCC believes there is no potential for vapor intrusion and this statement should be removed.

RESPONSE 6: The phrase "building developed" is meant to capture future scenarios. Typically the Site Management Plan (SMP) which would include the provision for the evaluation of the potential for soil vapor intrusion is developed for the site as a whole rather than individual SWMUs and AOCs. The environmental easement will specifically reference the SMP and will address the prohibition of the construction of new buildings on SWMU 1 and the scenario of a new structure penetrating SWMU 1's cap. Since neither the environmental easement nor the SMP is currently in place, this statement is accurate.

COMMENT 7: On Page 11, final bullet of the draft SB – currently states "monitoring for soil vapor intrusion for any buildings developed on the site, may be required by the Institutional and Engineering Control Plan discussed above". HCC believes this language is too broad in using the term "site" and needs to be focused on SWMU 1 which is the subject of this Statement of Basis. HCC believes that the environmental covenant that will be put in place for this unit will prohibit construction of permanent, occupied structures at SWMU 1. Therefore, HCC believes there is no potential for vapor intrusion and this statement should be removed.

RESPONSE 7: See Response 6.

APPENDIX B

Administrative Record

Former Hampshire Chemical Corp. Facility
Waterloo, Seneca County
EPA No. NYD002234763 / Site No. 850001A

March 2015

Documents

CH2M HILL 2004. *RCRA Facility Investigation Report, Evans Chemetics Facility, Waterloo, New York.* **October.**

CH2M HILL 2006. *RCRA Facility Investigation Report, Evans Chemetics Facility, Waterloo, New York.* **May.**

CH2M Hill 2008. *RFI Addendum Report, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **November, Revised February 2010**.

CH2M HILL 2011. *RCRA Facility Investigation, SWMU 1 Soil Vapor Investigation Report, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **April 7.**

CH2M HILL 2012. *2011 SWMU 1 Investigation Report, Former Hampshire Corp. Facility, Waterloo, New York.* **April 20.**

CH2M HILL 2012. *Groundwater Monitoring Results Report April 2011 and October 2011 Monitoring Events, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **October.**

CH2M HILL 2013. *Groundwater Monitoring Results Report April and October 2012 Monitoring Events, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **July.**

CH2M HILL 2013. *SWMU 1 Methane Survey, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **July.**

CH2M Hill 2013. *January and March 2012 Soil Vapor Investigation Building 4 and Tank Storage Area, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **January.**

CH2M Hill 2013. *SWMU 1 Corrective Measures Study, Former Hampshire Chemical Corp. Facility, Waterloo, New York.* **December.**

Former Hampshire Chemical Corp. 2015. *Letter – Comments On Draft Statement of Basis for Selected Remedy – Operable Unit 03 – Former Village of Waterloo Landfill – SWMU 1.* **March 25, 2015.**

Second Amended Order on Consent, Index Number CO 8-20000218-3281, August 12, 2011