

AMENDED RECORD OF DECISION

**Tonawanda Coke, Operable Unit 02
Tonawanda, Erie County, New York
Site Number 915055**

June 2024



Prepared by the:

Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT – AMENDED RECORD OF DECISION

Tonawanda Coke, Operable Unit 02
Tonawanda, Erie County
Site No. 915055
June 2024

Statement of Purpose and Basis

The Amended Record of Decision (AROD) presents the selected remedy for Operable Unit 02 of the Tonawanda Coke site, a Class 2 inactive hazardous waste disposal site. The selected 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, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the site and the public's input on the Proposed Amendment to the ROD presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the AROD.

Description of Selected Remedy

The elements of the amended remedy are as follows:

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

- development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library), or similar Department accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction, and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation

Excavation and off-site disposal of on-site soil from the drainage ditch corridor which exceed the protection of ecological resources SCOs, as defined by 6 NYCRR Part 375-6.8. Collection and analysis of confirmation samples at the remedial excavation extents will be used to verify that SCOs for the site have been achieved. Approximately 1,200 cubic yards of soil from the drainage ditch corridor will be removed from the ditch corridor. The exact extent of soil that needs to be removed will be determined during the remedial design.

Excavated soil that exceeds 500 ppm total PAHs will either be disposed of off-site at a permitted landfill or placed on Operable Unit 01 (Site 110) if the soil can be beneficially used and such placement is allowed by the remedy selected for Operable Unit 01. Excavated soil that does not exceed 500 ppm total PAHs may be regraded on-site below the site cover (outside of the ditch corridor) or disposed of off-site at a permitted landfill.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the design grades at the site. The site may be re-graded to accommodate installation of a cover system as described in remedial element 3.

3. Cover System

A site cover will be required in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future commercial use of the site, except for the drainage ditch corridor which will meet the protection of ecological resources SCOs. Where a soil cover is to be used, it will be a minimum of one foot of soil placed over a demarcation layer, with the upper soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the future redevelopment. Such components may include, but are not necessarily limited to pavement, concrete, paved surface parking areas, sidewalks, building foundations, and building slabs.

4. Environmental Easement

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 commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Erie County DOH; and
- require compliance with the Department approved Site Management Plan.

5. 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 Remedial Element 4.

Engineering Controls: The Site Cover discussed in Remedial Element 3.

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 occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Remedial Element 3 will be placed in any

areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs);

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

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department; and
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

New York State Department of Health Acceptance

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

Declaration

The selected remedy is protective of public 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.

June 4, 2024

Date

Andrew Guglielmi

Andrew Guglielmi, Director

Division of Environmental Remediation

AMENDED RECORD OF DECISION

TONAWANDA COKE SITE – OPERABLE UNIT 02



Town of Tonawanda / Erie County / Registry No. 915055

June 2024

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

SECTION 1: PURPOSE AND SUMMARY OF THE AMENDED RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is issuing an Amended Record of Decision (AROD) for the above referenced site. The disposal of hazardous wastes at this site, as more fully described in the original ROD document and Section 6 of this document, has caused the contamination of various environmental media. The amendment is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This amendment identifies the new information which has led to this amendment and discusses the reasons for the preferred remedy.

The Department has issued this document in accordance with the requirements of 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 Environmental Remediation Programs. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

On March 31, 2008, the New York State Department of Environmental Conservation (Department) signed a ROD which selected a remedy for Operable Units (OUs) 01 and 02 of the Tonawanda Coke Site. This AROD is only for OU02 (also known as Site 109). Since issuance of the ROD, the coking operations at the site have been discontinued and the anticipated future use of the site is now commercial or non-coking industrial uses. Additionally, a more comprehensive investigation of the OU has been completed that more accurately defines the nature and extent of contamination.

SECTION 2: CITIZEN PARTICIPATION

The Department sought input from the community on this AROD. The information here is a summary of what can be found in greater detail in reports that have been placed in the Administrative Record for the site. The public is encouraged to review the reports and documents, which are available at the following repositories:

Buffalo and Erie County Public Library – Kenmore Branch
160 Delaware Road
Kenmore, NY 14217
716-873-2842

And

New York State Department of Environmental Conservation (by appointment only)
Region 9 Office
700 Delaware Avenue
Buffalo, NY 14209
Attn: Benjamin McPherson
716-851-7220
benjamin.mcpherson@dec.ny.gov

A public comment period was conducted from February 28, 2024 to April 30, 2024 to provide an opportunity for comments on the proposed changes. A public meeting was held on March 21, 2024 at Buffalo and Erie County Public Library – Kenmore Branch, 160 Delaware Road, Kenmore, NY 14217.

At the meeting, a description of the original ROD and the circumstances that have led to the amendments to the ROD was presented. A question-and-answer period followed the Department's presentation.

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 approximately 41-acre Tonawanda Coke site is located at 3875 and 3800 River Road in the Town of Tonawanda, Erie County. Portions of the site are directly east of the Niagara River and about 0.5 miles south of the I-190 highway.

The site is divided into three operable units (OUs). An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate, or mitigate a release, threat of a release, or exposure pathway resulting from the site contamination.

Operable Unit 01 (OU01) corresponds with the Site 110 disposal area. It is located in the northeast corner of the 3875 River Road parcel and continues off the parcel to the east. Materials such as coal tar sludge, wood shavings impregnated with iron oxide, fly ash, and cinders were reportedly disposed in this area.

Operable Unit 02 (OU02) corresponds with the Site 109 disposal area. It is located adjacent to River Road on the western side of the 3875 River Road parcel. In 1977 an unknown quantity of brick, rubble, and demolition waste related to the demolition of Coke Battery #1 was placed on the operable unit to fill in low lying areas.

Operable Unit 03 (OU03) corresponds with the Site 108 disposal area. It comprises the majority of the 3800 River Road property. It was used for transferring coal and other materials between the Niagara River and the main plant via a conveyor system and pipes. In 1973, Allied Chemical was granted permission by the Erie County Health Department to establish a disposal area. The area was subsequently filled with

refuse, wood, scrap polyethylene, and ceramic saddle packing from refining equipment. The disposal of coke/coal, fly ash cinders, and coal tar sludge in this area has also been documented.

OU01 and OU02 are adjacent to the Riverview Innovation & Technology Campus (#C915353) Brownfield Cleanup Program (BCP) site that encompasses the remainder of the former Tonawanda Coke facility. OU02 is also adjacent to the 3821 River Road, Inc. (#C915003) BCP site.

Site Features: None of the operable units are significantly developed. OU01 is lightly wooded with areas of smaller vegetation and unimproved access roads. The easternmost portion of OU01 is owned by Niagara Mohawk Power Corp and contains multiple electrical transmission lines.

OU02 contains the paved access driveway for the entire property, a guard house, and the concrete settling ponds used to manage stormwater from the property. A drainage ditch is present on the southern portion of the OU that receives stormwater from portions of the BCP site and surface runoff from adjacent areas. The remainder of the OU is covered by grass, trees, or other vegetation.

OU03 is largely overgrown with significant vegetation and is transected by a storm water drainage ditch which discharges to the Niagara River. There are gravel access roads along the northern and eastern edge of the property. Remnants of historical infrastructure, such as a river water pump house and coal/coke conveyor system, are located on the operable unit but portions have been removed by the property owner since 2022.

Current Zoning and Land Use: The site is currently zoned for industrial use. The surrounding parcels are currently used for a combination of commercial/industrial operations, utility corridors, and public water utilities. The portion of the 3875 River Road parcel that is not part of this site is being investigated and remediated under the Brownfield Cleanup Program (BCP) as the Riverview Innovation & Technology Campus (#C915353) site. The nearest residential area is located approximately 0.25 miles southeast of the site.

There are several other remediation sites near this site: Allied Chemical – Tonawanda (#915003)/3821 River Road Inc. Site (#C915003) are located to the south, Roblin Steel (#915056) is located to the west and north, and the River Road Site (#915031) and Niagara Mohawk - Cherry Farm (#915063) sites are located to the north and northwest. The Erie County Water Authority (ECWA) Van de Water Treatment Plant is immediately south of the 3800 River Road portion of the site and the Huntley Generation Station fly ash landfill is north of the 3875 River Road parcel.

Past Use of the Site: The Semet-Solvay Company, a subsidiary of Allied Chemical and Dye Corporation, began coke manufacturing operations at the facility in 1917. In addition to producing coke, processes related to light oil distillation; ammonia recovery; and benzene, toluene, and xylene extraction were also conducted at the facility. The Tonawanda Coke Corporation purchased the facility in 1978 and continued to operate the facility until October 2018.

The first investigation at the site was completed by the NYSDEC in 1981. Additional investigations were completed by the United States Geological Survey (USGS) in 1982 and 1983. These investigations focused on three historical disposal areas identified by historical documents and are referred to as Site 108 (OU03), Site 109 (OU02), and Site 110 (OU01). Following these investigations, several more investigations were conducted by the Tonawanda Coke Corporation under NYSDEC oversight. These investigations identified contamination resulting from the past disposal of industrial and hazardous wastes.

The types of waste vary by location, but in general include coke/cinders, building debris, coal tar sludge, scrap metal, wood, and saddle packing.

Site Geology and Hydrology: The site generally slopes gently to the west towards the Niagara River. Fill material is present as the uppermost stratigraphic unit over most of the site, with fill thickness varying from approximately 1 to 14 feet. The fill encountered during the investigations consisted mainly of silt, gravel, coal/ coke fines, and demolition debris. Underlying the fill material are native glaciolacustrine deposits of clay and sand. This unit is composed primarily of red-brown to gray clay, with some silt and gravel lenses. The thickness of this unit has been documented to be at least 45 feet thick on the 3875 River Road parcel. Thickness of this unit is expected to decrease closer to the Niagara River, and on OU03 the native glaciolacustrine deposits of clay and sand transitions to native fluvial deposit of silty sand as you move west towards the Niagara River.

The fill unit is the uppermost water-bearing unit on all operable units. While groundwater contours indicate that groundwater flow in the fill unit is to the west, this unit is not continuous across the site due to the varying thickness and types of the fill material placed on the site. Groundwater is present in the underlying clay unit, but due to very low hydraulic conductivities is a significant barrier to both horizontal and vertical groundwater movement. On the western portion of OU03 the fill unit is directly underlain by the native silty sand and sand units, with groundwater being present in all of these units. Bedrock is expected to be at least 40 to 50 feet below grade. Based on regional hydrogeology the upper bedrock is expected to be water bearing.

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. The Tonawanda Coke site is currently zoned for industrial use and is located in an area of mixed commercial and industrial use.

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.

The Department signed an Order on Consent with Honeywell International, Inc. on February 14, 2020. Honeywell is a successor to Allied Chemical and Dye Corporation. The Consent Order includes the implementation of a focused remedial investigation and feasibility study at all operable units.

SECTION 6: SITE CONTAMINATION

6.1: Summary of Environmental Assessment

During the focused remedial investigation, soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, cyanide, polychlorinated biphenyls (PCBs), per- and polyfluoroalkyl substances (PFAS), and pesticides to varying degrees. Based upon investigations conducted to date, the primary contaminants of concern for the site are polycyclic aromatic hydrocarbons (PAHs) and arsenic.

Surface Soil: given the known presence of fill across the site, surface soil and shallow subsurface soil

samples were collected from the 0-2 inch and 2-12 inch depth intervals, respectively. A total of nineteen samples were collected. Several PAHs were detected exceeding their respective unrestricted soil cleanup objectives (USCOs) across the entire operable unit. The same PAHs were also detected exceeding their respective commercial soil cleanup objectives (CSCOs), but to a lesser extent. Several metals were detected exceeding unrestricted SCOs, but only arsenic was detected exceeding its CSCO at one location. Several VOCs, metals, and pesticides were also detected exceeding their respective USCOs, and below their CSCO, but are not considered related to the past disposal at the site nor a significant source of soil contamination. Surface soil in the drainage ditch corridor also exceeds the protection of ecological resources (PERSCOs) for arsenic and benzo(a)pyrene in one and two locations, respectively. The exceedances of the relevant SCOs are summarized below:

- Benzo(a)anthracene: up to 96 parts per million (ppm), CSCO 5.6 ppm;
- Benzo(a)pyrene: up to 86 ppm, CSCO 1 ppm, PERSCO 2.6 ppm;
- Benzo(b)fluoranthene: up to 83 ppm, CSCO 5.6 ppm;
- Chrysene: up to 70 ppm, CSCO 56 ppm;
- Dibenzo(a,h)anthracene: up to 9 ppm, CSCO 0.56 ppm;
- Indeno(1,2,3-cd)pyrene: up to 40 ppm, CSCO 5.6 ppm; and
- Arsenic: up to 25.7 ppm, CSCO 16 ppm, PERSCO 13 ppm.

Based on the investigation completed to date, on-site surface soil contamination is due to the fill placed at the site and previous industrial operations. Off-site transport of contamination in surface soils is possible if significant erosion occurs in the drainage ditch corridor. Off-site migration from surface soil is not likely in areas outside of the ditch corridor due to impervious cover or established vegetation.

Subsurface Soil: a total of ten subsurface soil samples were collected from a combination of test pits and soil borings. Several PAHs were detected exceeding their respective USCOs across the entire operable unit, but to a lesser degree than the surface soils. Some of the PAHs were also detected exceeding their respective CSCOs, but to a lesser extent. The VOCs trichloroethene, cis-1,2-dichloroethene, trans-1,2,-dichloroethene, and 2-butanone (a.k.a methyl ethyl ketone) were detected exceeding their respective USCOs at one location. A few metals were also detected exceeding their respective USCOs, but are not considered related to the past disposal at the site nor a significant source of soil contamination. There were no detections exceeding PERSCOs in the drainage ditch corridor in subsurface soil. The exceedances of CSCOs are summarized below:

- Benzo(a)anthracene: up to 7.5 ppm, CSCO 5.6 ppm;
- Benzo(a)pyrene: up to 9.3 ppm, CSCO 1 ppm;
- Benzo(b)fluoranthene: up to 9.4 ppm, CSCO 5.6 ppm;
- Dibenzo(a,h)anthracene: up to 1.3 ppm, CSCO 0.56 ppm; and
- Indeno(1,2,3-cd)pyrene: up to 7.5 ppm, CSCO 5.6 ppm.

Based on the investigation completed to date, on-site subsurface soil contamination is due to the fill placed at the site and previous industrial operations. Off-site transport of contamination in subsurface soils is not expected to occur. Given the low detections of VOCs in one area of the site there may be potential for future soil vapor intrusion, but this cannot be determined at this time as most of the site is not developed with buildings.

Groundwater: samples were collected from four monitoring wells installed across the operable unit. Two

rounds of sampling were completed, with the second round collecting both filtered and unfiltered samples to assess the effects of slow groundwater recharge/turbidity on the analytical results. Based on the results from both rounds, the metals antimony and thallium were the only contaminants of concern detected exceeding their respective groundwater quality standards (GWQS) at one well each. The VOCs trichloroethene, cis-1,2-dichloroethene, and trans-1,2-dichloroethene were also detected in one well, but were below their respective GWQS. The exceedances of GWQS are summarized below:

- Antimony: up to 10.5 parts per billion (ppm), GWQS 3 ppb; and
- Thallium: up to 13.1 ppb, GWQS 0.5 ppb.

Based on the investigation completed to date, on-site groundwater may migrate off-site. However, the affected wells were frequently purged dry during sampling and the magnitude of the exceedances are very small. This indicates that there is a limited volume of groundwater present in the fill which reduces the potential for significant off-site transport. Additionally, the fill placed at the site is not continuous and connectivity between groundwater wells is expected to be limited. The presence of low-level VOCs in one of the monitoring wells may contribute to future soil vapor intrusion, but this cannot be determined at this time as most of the site is not developed with buildings.

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 ROD.

There were no IRMs performed at this site during the RI.

6.3: Summary of Human Exposure Pathways

The site is vacant and located in an industrialized area with no homes adjacent to or near the site. People will not come into contact with contaminated soil or groundwater unless they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into 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 the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. However, the potential for soil vapor intrusion to occur on-site will be evaluated for future redevelopment. Environmental sampling indicates soil vapor intrusion from site contaminants is not a concern for off-site buildings.

SECTION 7: SUMMARY OF ORIGINAL REMEDY AND AMENDED REMEDY

7.1 Original Remedy

The major components of the original remedy were as follows:

1. Imposition of an institutional control in the form of an environmental easement to limit the use and development of the property to industrial uses, restrict the use of on-site groundwater, and require compliance with the site management plan;

2. Development of a site management plan that summarizes the institutional and engineering controls, requires proper management of any excavated soils, periodic groundwater monitoring, and maintenance of fencing to restrict site access.
3. Submission of periodic certifications that the institutional controls and engineering controls are still in place and effective.

The ROD also required, as part of the environmental easement, that the need for further remediation be evaluated if the industrial use of the site changed from coke production.

7.2 Elements of the Remedy Already Performed

The above remedial elements have been implemented to a limited extent. A draft site management plan and environmental easement were prepared by the Tonawanda Coke Corporation, but these documents were not finalized prior to Tonawanda Coke Corporation declaring bankruptcy in 2018.

A site fence is present around portions of the operable unit but is not continuous along the operable unit boundary.

7.3 New Information

The most significant change at the site that warrants this AROD is the shutdown of active coke manufacturing at the facility and the subsequent plans for the larger Tonawanda Coke facility to be redeveloped to include commercial and/or industrial uses as part of the Riverview Innovation & Technology Campus.

The March 2008 ROD required that the site be further evaluated if future use of the site is different from the coking operations. Honeywell completed a focused remedial investigation of OU02 in 2020 through 2021. The data collected during this investigation is the basis for this AROD.

7.4 Proposed Changes to the Original Remedy

A summary of the changes to the original ROD in the AROD are shown in the following table:

SUMMARY OF REMEDY CHANGES Tonawanda Coke, OU02 (No. 915055) Amended Record of Decision

Media:	2008 ROD	Amended ROD
Groundwater	<ul style="list-style-type: none"> (1) Periodic monitoring of groundwater; (2) Environmental easement prohibiting the use of ground water without prior treatment and approval. 	There are no changes to the groundwater remedy via this amendment.
Soil	<ul style="list-style-type: none"> (1) Environmental easement to limit use of property to industrial use to restrict exposure unless otherwise approved by the Department; (2) Use of a Site Management Plan (SMP) to maintain IC/ECs at the site. 	<ul style="list-style-type: none"> (1) Excavation of soil exceeding the protection of ecological resources soil cleanup objectives (SCOs) in the on-site drainage ditch corridor; (2) Use of a cover system over exposed soils that exceed the commercial use SCOs; (3) Environmental easement to limit use of property to commercial or industrial uses and requiring compliance with the Department approved SMP; (4) Use of a SMP to maintain IC/ECs at the site.
Soil Vapor/Indoor Air	This media was not addressed by the 2008 ROD.	<ul style="list-style-type: none"> (1) Provisions in the SMP for the evaluation of soil vapor intrusion in any buildings constructed at the site and implementing actions to address potential exposures, if necessary.

SECTION 8: EVALUATION OF REMEDY CHANGES

8.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site were to eliminate or mitigate all significant threats to public health and the environment presented by the hazardous wastes disposed at the operable unit.

Since the issuance of the original ROD, the Department has developed remedial action objectives (RAOs) to more clearly state how the overall goal of protecting public health and the environments will be achieved at a site/operable unit. The RAOs applicable to this operable unit are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.

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 Intrusion

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.

8.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the original Feasibility Study.

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

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

The amended remedy will provide greater protection of public health and the environment. The removal of the impacted soils from the ditch corridor will remove contamination that could be transported off-site during high flow periods. The placement of a cover system substantially decreases the potential exposure

to contaminated soil present across the site, which was otherwise only limited by partial site fencing, and will allow for commercial uses at the site.

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

The most important SCGs for the site are the 6 NYCRR Part 375-6 soil cleanup objectives (SCOs) and the ambient water quality standards and guidance standards compiled in Division of Water Technical and Guidance Series 1.1.1 (TOGS 1.1.1). For soil, the proposed remedy meets the SCGs by removing soil that exceeds the protection of ecological resources SCOs in the ditch corridor where there is a greater risk for erosion and off-site transport towards the Niagara River. The SCGs are complied with for the remaining site soil with the placement of a site cover that will prevent human exposure to soil exceeding the commercial SCOs.

The groundwater contamination at the site is fairly limited, and the original and amended remedy both comply with the SCGs by prohibiting the use of on-site groundwater and providing for ongoing groundwater monitoring to ensure this restriction remains protective.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Both the original and amended remedy are readily implemented in the short term. The amended remedy will have more potential short-term adverse impacts as it will result in some increased truck traffic and disturbance of contaminated on-site material. However, these potential impacts will be for a limited duration and are readily mitigated using a combination of administrative and engineering controls.

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

The amended remedy will result in less contaminated material remaining on-site than the original remedy. The amended remedy is also more effective at containing the remaining contamination on-site as it provides for the construction of a cover system. Cover systems are reliable engineering controls that are utilized at many remedial sites. The contaminants present in on-site soil do not readily migrate in the subsurface and there is little potential for exposure to them once the cover system is in place. Monitoring of the remaining contamination will be required by the environmental easement that will be placed on the property deed.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and

significantly reduce the toxicity, mobility or volume of the wastes at the site.

The amended remedy will reduce the volume of contamination remaining at the site through the excavation and off-site management of the ditch corridor soils. The mobility of the remaining soil contamination is somewhat reduced by the cover system since potential exposure from dust or other erosion will be prevented. Neither remedy significantly reduces the toxicity of the contaminants present at the site since they do not include treatment of the contaminated media, but rather rely on containment of the contaminated material on-site or at an off-site disposal facility.

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

Both remedies are technically and administratively feasible, with the amended remedy being more difficult because it includes additional active measures to address the contamination at the site. However, the amended remedial actions are commonly utilized in the field of environmental remediation and do not present significant technical or administrative difficulties.

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

The amended remedy costs significantly more than the original remedy. However, the amended remedy is still considered cost effective as it will result in a more protective cleanup that can also allow for future redevelopment of the site.

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the remedy changes were evaluated. A responsiveness summary (Appendix A) was prepared that describes public comments received and the manner in which the Department will address the concerns raised. While there were numerous comments received on the AROD, there were none that required a significant change to the proposed AROD.

SECTION 9: AMENDED REMEDY

The Department has amended the ROD for Operable Unit 02 of the Tonawanda Coke Site. The changes to the selected remedy are summarized in Section 7.3 above. The estimated present worth cost to carry out the amended remedy is \$ 4,936,000. The estimated present worth to complete the original remedy was approximately \$227,000 (\$322,000 in 2023 dollars). The cost to construct the amended remedy is estimated to be \$4,308,000 and the estimated average annual cost for 30 years is \$628,000.

The elements of the amended remedy listed below are identified as *unchanged, modified, or new* when compared to the March 2008 remedy:

1. Remedial Design (*new*)

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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings shall be constructed, at a minimum, to meet the 2020 Energy Conservation Construction Code of New York (or most recent edition) to improve energy efficiency as an element of construction.

As part of the remedial design program, to evaluate the remedy with respect to green and sustainable remediation principles, an environmental footprint analysis will be completed. The environmental footprint analysis will be completed using an accepted environmental footprint analysis calculator such as SEFA (Spreadsheets for Environmental Footprint Analysis, USEPA), SiteWise™ (available in the Sustainable Remediation Forum [SURF] library), or similar Department accepted tool. Water consumption, greenhouse gas emissions, renewable and non-renewable energy use, waste reduction, and material use will be estimated, and goals for the project related to these green and sustainable remediation metrics, as well as for minimizing community impacts, protecting habitats and natural and cultural resources, and promoting environmental justice, will be incorporated into the remedial design program, as appropriate. The project design specifications will include detailed requirements to achieve the green and sustainable remediation goals. Further, progress with respect to green and sustainable remediation metrics will be tracked during implementation of the remedial action and reported in the Final Engineering Report (FER), including a comparison to the goals established during the remedial design program.

Additionally, the remedial design program will include a climate change vulnerability assessment, to evaluate the impact of climate change on the project site and the proposed remedy. Potential vulnerabilities associated with extreme weather events (e.g., hurricanes, lightning, heat stress and drought), flooding, and sea level rise will be identified, and the remedial design program will incorporate measures to minimize the impact of climate change on potential identified vulnerabilities.

2. Excavation (*new*)

Excavation and off-site disposal of on-site soil from the drainage ditch corridor which exceed the protection of ecological resources SCOs, as defined by 6 NYCRR Part 375-6.8. Collection and analysis of confirmation samples at the remedial excavation extents will be used to verify that SCOs for the site

have been achieved. Approximately 1,200 cubic yards of soil from the drainage ditch corridor will be removed from the ditch corridor. The exact extent of soil that needs to be removed will be determined during the remedial design.

Excavated soil that exceeds 500 ppm total PAHs will either be disposed of off-site at a permitted landfill or placed on Operable Unit 01 (Site 110) if the soil can be beneficially used and such placement is allowed by the remedy selected for Operable Unit 01. Excavated soil that does not exceed 500 ppm total PAHs may be regraded on-site below the site cover (outside of the ditch corridor) or disposed of off-site at a permitted landfill.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the design grades at the site. The site may be re-graded to accommodate installation of a cover system as described in remedial element 3.

3. Cover System (*new*)

A site cover will be required in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs), to allow for future commercial use of the site, except for the drainage ditch corridor which will meet the protection of ecological resources SCOs. Where a soil cover is to be used, it will be a minimum of one foot of soil placed over a demarcation layer, with the upper soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the future redevelopment. Such components may include, but are not necessarily limited to pavement, concrete, paved surface parking areas, sidewalks, building foundations, and building slabs.

4. Environmental Easement (*modified*)

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 commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or Erie County DOH; and
- require compliance with the Department approved Site Management Plan.

5. Site Management Plan (*modified*)

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

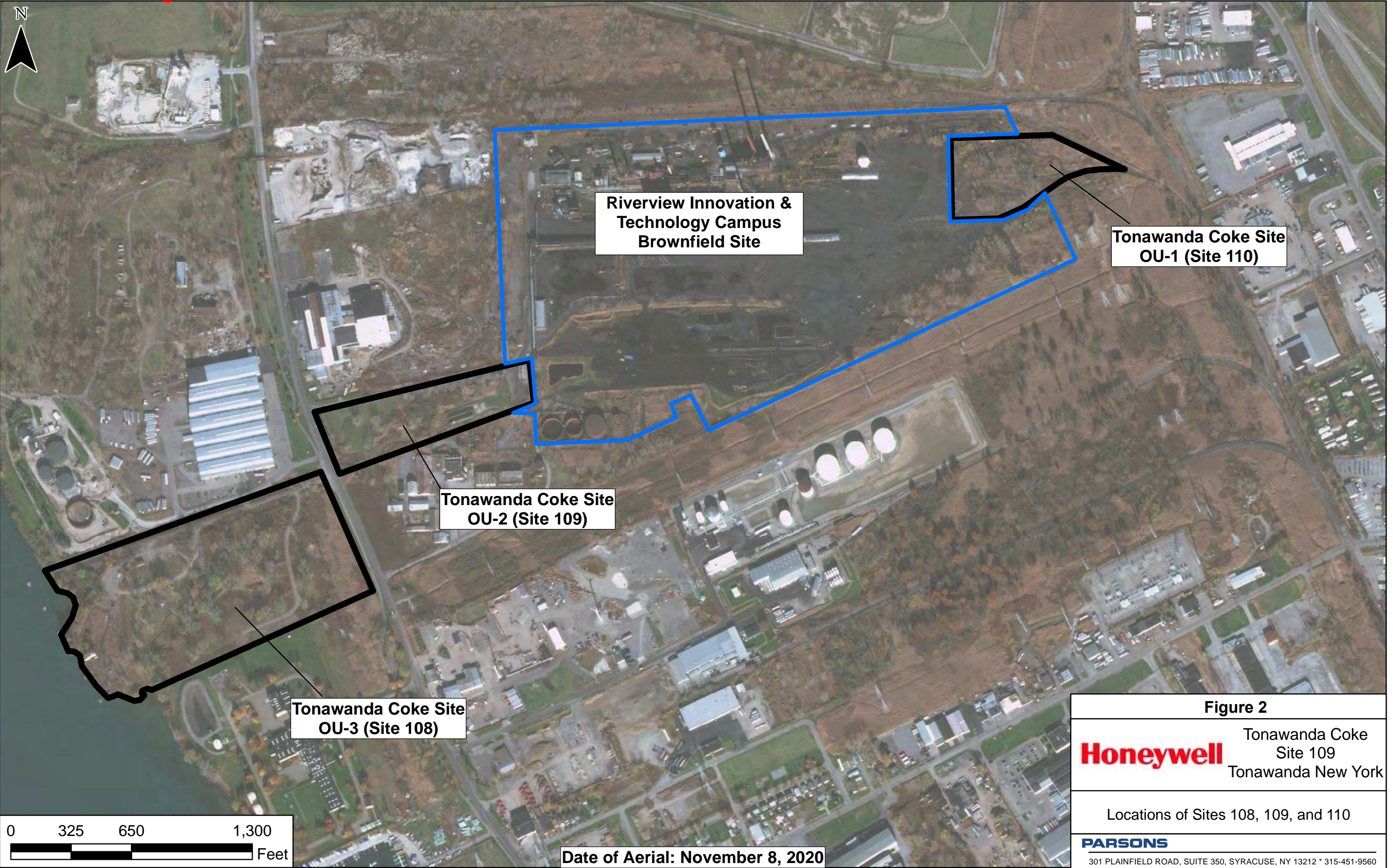
- a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in Remedial Element 4.

Engineering Controls: The Site Cover discussed in Remedial Element 3.

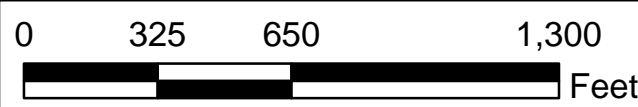
This plan includes, but may not be limited to:

- 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 occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
 - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Remedial Element 3 will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable soil cleanup objectives (SCOs);
 - provisions for the management and inspection of the identified engineering controls;
 - maintaining site access controls and Department notification; and
 - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.
- b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
- monitoring of groundwater to assess the performance and effectiveness of the remedy;
 - a schedule of monitoring and frequency of submittals to the Department; and
 - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



Plotted By: CS

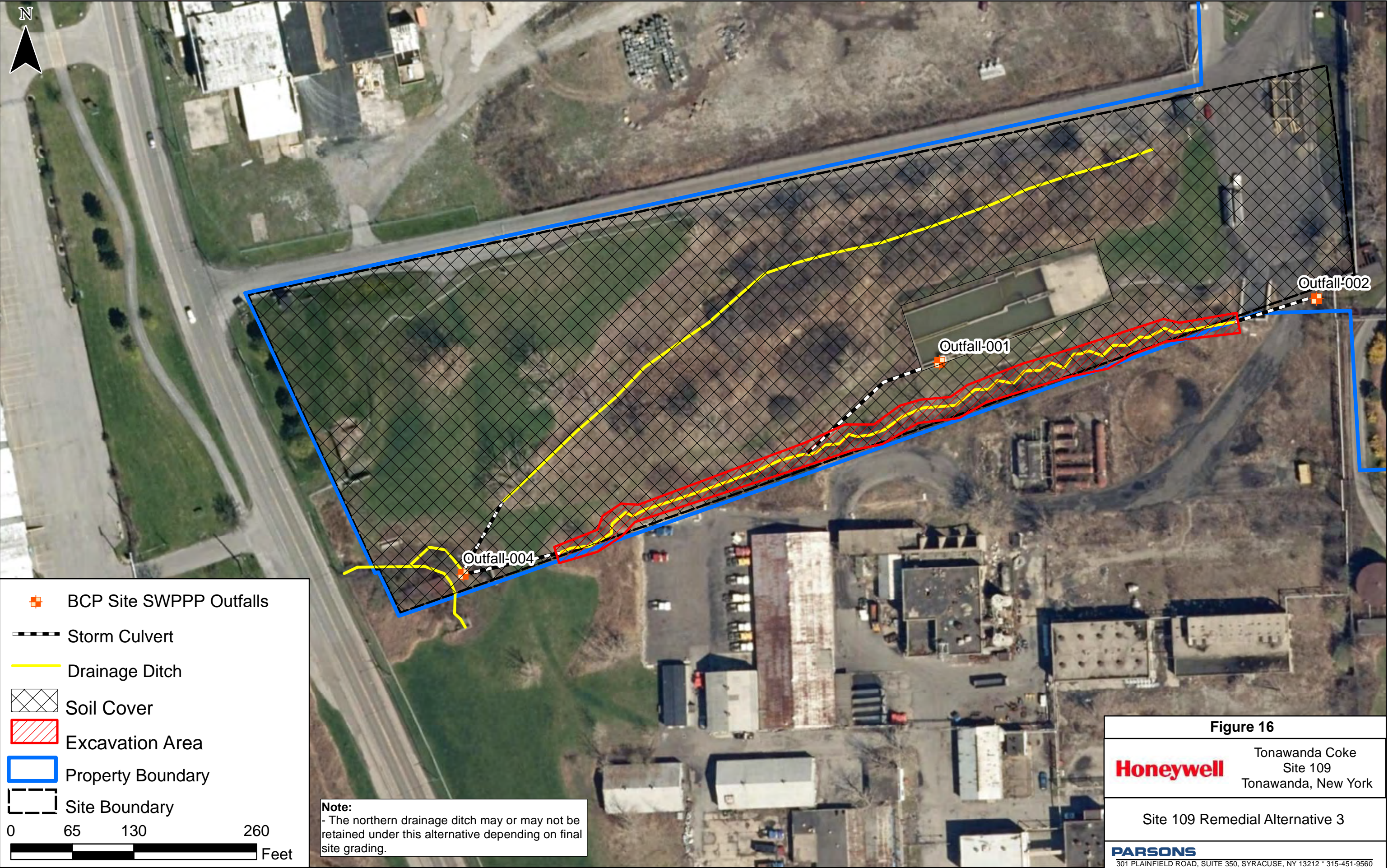
Plot Date: 2/4/2022



Date of Aerial: November 8, 2020

Figure 2	
Honeywell	Tonawanda Coke Site 109 Tonawanda New York
Locations of Sites 108, 109, and 110	
PARSONS	
<small>301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560</small>	

AROD Figure 2



Plotted By: J. Domanski
Plot Date: 7/11/2023

	BCP Site SWPPP Outfalls
	Storm Culvert
	Drainage Ditch
	Soil Cover
	Excavation Area
	Property Boundary
	Site Boundary

0 65 130 260
 Feet

Note:
 - The northern drainage ditch may or may not be retained under this alternative depending on final site grading.

Figure 16	
Honeywell	Tonawanda Coke Site 109 Tonawanda, New York
Site 109 Remedial Alternative 3	
PARSONS 301 PLAINFIELD ROAD, SUITE 350, SYRACUSE, NY 13212 * 315-451-9560	

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

**Tonawanda Coke
Operable Unit No. 02: Site 109
State Superfund Project
Tonawanda, Erie County, New York
Site No. 915055**

The proposed Amended Record of Decision (AROD) for the Tonawanda Coke site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 28, 2024. The AROD outlined the remedial measure proposed for the contaminated soil and groundwater at the Tonawanda Coke site.

The release of the AROD was announced by sending a notice to the Erie County Listserv and members of the Tonawanda Community Working Group (TCWG), informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 21, 2024, which included a presentation of the remedial investigation (RI) and focused feasibility study (FFS) for the Tonawanda Coke 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 was to have ended on March 29, 2024; however, it was extended to April 30, 2024 at the request of the public.

This responsiveness summary includes all questions and comments raised during the public comment period, with the Department's responses. The comments are split between those received at the public meeting and those received in writing.

Public Meeting Comments:

COMMENT 1: It was asked if the public comment period can be extended?

RESPONSE 1: Yes, however any request to extend the comment period must be in writing and should be submitted as early as possible.

COMMENT 2: Does the South Ditch on Site 109 connect to the River Road Ditch? Is there a culvert at the River Road ditch?

RESPONSE 2: The South Ditch on Site 109 comingles with other stormwater flows and is then conveyed under River Road onto Operable Unit 03 (aka Site 108).

COMMENT 3: Is NYSDOT aware of the contaminant migration going under River Road?

RESPONSE 3: The Department does not know if NYSDOT is aware.

COMMENT 4: Does Site 109 have a SPDES Permit?

RESPONSE 4: Not currently. There was a State Pollutant Discharge Elimination System (SPDES) Permit in place while Tonawanda Coke Corporation (TCC) was in operation, but that permit ended when TCC declared bankruptcy. A Stormwater Pollution Prevention Plan (SWPPP) is in place for the Brownfield Cleanup Program (BCP) site that is based on the former SPDES permit. There will be a SWPPP in place for Operable Unit 02 during remedial activities.

COMMENT 5: Are there top of clay contours available for Site 109?

RESPONSE 5: It was stated during the public meeting that there were top of clay contours available in the Remedial Investigation Report. This was an inaccurate statement, as only ground surface contours are presented in the Remedial Investigation Report (specifically Figure 4) for Site 109, whereas a topographic and top of clay contour figure is provided in the Brownfield Cleanup Program (BCP) site Remedial Investigation Report. The Department apologizes for this mix-up during the public meeting.

It should be noted that the top of clay at Site 109 can be discerned in the cross sections presented on Figure 8 of the Remedial Investigation Report. These figures were also shown during the public meeting.

COMMENT 6: The old Erie Canal bed should be looked at as a potential pathway for contaminant migration.

RESPONSE 6: The former Erie Canal bisects Operable Unit 03 (Site 108).

COMMENT 7: Are there pervious cover systems?

RESPONSE 7: Yes, a soil cover system can be pervious, it is only required to meet the applicable soil cleanup objectives (SCOs) and required thickness.

COMMENT 8: Will the ditch be re-established?

RESPONSE 8: Based on the information the Department has from the site owner the ditch will be re-established after remediation. After all the soil exceeding protection of ecological resources SCOs has been removed it is anticipated that the ditch will be armored with stone or rip-rap.

COMMENT 9: Will Site 109 activities be coordinated with activities on the neighboring BCP Site (3821 River Road Inc. Site (#C915003))?

RESPONSE 9: To the extent feasible. The two sites are at different stages of the remedial process.

COMMENT 10: What is the status of the Allied BCP site (aka 3821 River Road Inc. Site (#C915003))?

RESPONSE 10: The first phase of the remedial investigation has been completed. The Department anticipates having a meeting with the applicant's consultant to discuss potential data gaps prior to an additional investigation work plan being submitted.

COMMENT 11: Will Allied be discussed during TCWG meetings?

RESPONSE 11: Yes, Inventum Engineering, P.C. has provided updates on the former Allied site (#C915003) during recent TCWG meetings.

COMMENT 12: What Community Air Monitoring Program (CAMP) is in place for Site 109?

RESPONSE 12: Air monitors will be placed in locations determined by specific site conditions for the duration of any intrusive work performed on the site to monitor both particulates and volatile organic compounds upwind and downwind of the site, and determine if actions are needed to prevent off-site migration of contaminants. Monitoring reports will be provided at least weekly to both the Department and NYSDOH. Any exceedances recorded will be immediately addressed on-site and reported within 24 hours to the Department and NYSDOH.

COMMENT 13: Does CAMP go away after remedial activities?

RESPONSE 13: Yes, apart from subsequent ground intrusive activities deemed necessary by the Department. For example, if the cover system is breached, then CAMP will need to be implemented during its repair.

COMMENT 14: Is there a difference between the SCOs used for State Superfund (SSF) and BCP?

RESPONSE 14: No, the same SCOs are applied to both programs.

COMMENT 15: Is the driveway to the Riverview Innovation & Technology Campus (RITC) site part of Site 109?

RESPONSE 15: Portions of the driveway may fall within the Site 109 boundary.

COMMENT 16: There were concerns regarding pedestrians that use the driveway to the RITC site during remedial activities.

RESPONSE 16: Site access is currently restricted with 24/7 site security. Additionally, it is not expected that there will be significant pedestrian use of the driveway during remedial activities.

COMMENT 17: There is some concern regarding what may be found on the north side of the driveway (off the SSF site) should improvement such as sidewalks be added at a later date.

RESPONSE 17: Noted. If the Department becomes aware of potential off-site contamination it will investigate as appropriate.

COMMENT 18: Is there a SPDES Permit for the outfall from the retention pond located on Site 109?

RESPONSE 18: See Response 3. The water discharged from the concrete retention ponds is subject to the requirement of the SWPPP for the BCP site (https://extapps.dec.ny.gov/data/DecDocs/C915353/Work%20Plan.BCP.C915353.2020-05-29.Stormwater%20Pollution%20Prevention%20Plan_Final.pdf)

COMMENT 19: What are the depths of the wells on-site?

RESPONSE 19: The deepest well (MW-03) is approximately 14 feet deep. The shallowest well is approximately 6 feet deep.

COMMENT 20: Was EPA involved in Sites 108 and 109?

RESPONSE 20: Yes, EPA was involved in securing both sites following the shutdown of operations at the Tonawanda Coke facility starting in October 2018 and ending in spring 2020.

COMMENT 21: It was asked why the public comment period ends on March 29, 2024, only giving 7 days after the meeting for public comments to be submitted.

RESPONSE 21: The availability of the Amended Record of Decision was announced on February 28, 2024. The purpose of having the public meeting in the latter half of the public comment period is so the public has time to review the site documents and come prepared with questions outside of what can be presented by the Department during the limited time of the meeting.

While it was not stated during the meeting, the Remedial Investigation Report for Site 109 has been publicly available since November 1, 2023.

COMMENT 22: References to the 'Chernobyl' and 'Mohegan Sun' sites and how those sites were addressed were made by an attendee.

RESPONSE 22: The relevance of these sites to Operable Unit 02 is not clear as the Department is not involved with either site. Based on general knowledge, these sites were impacted by radioactive materials, which have not been identified in Operable Unit 02.

COMMENT 23: Concerns were raised about there only being four monitoring wells for the Tonawanda Coke Site.

RESPONSE 23: There are four monitoring wells installed in Operable Unit 02. There are many more wells installed in the other operable units and surrounding BCP sites. The RITC site has over 50 monitoring wells, including in the underlying bedrock.

COMMENT 24: During a general discussion of contamination at Operable Unit 02, DEC was asked to confirm that the concentration of benzene was 86 times its SCO.

RESPONSE 24: Benzene was not detected exceeding its commercial SCO in Operable Unit 02. It was clarified that the question was about benzo(a)pyrene, which does exceed its commercial SCO of 1 parts per million (ppm) at 19 locations, with it being detected at 86 ppm at one location.

COMMENT 25: There was discussion amongst attendees that EPA should be handling the cleanup of this site.

RESPONSE 25: The SSF is implemented in a manner that is consistent with the National Contingency Plan, which is incorporated by reference into the 6 NYCRR Part 375 regulations governing the SSF. If the Department does not have the resources to address a site it can be referred by the Department to the EPA for inclusion on the National Priority List, but that is not the situation for this site.

Written Comments:

Bridge Rauch of the Clean Air Coalition of Western New York submitted an email (dated March 29, 2024) which included the following comments:

COMMENT 26: The ROD is premature since the groundwater investigations at Tonawanda Coke and Allied are not yet complete, suggesting that contamination can enter the site from those sources and the proposed amendment does not consider this.

RESPONSE 26: The on-site groundwater data does not suggest that contaminated groundwater is migrating onto Operable Unit 02 from Tonawanda Coke (understood to mean the Riverview Innovation & Technology Campus Brownfield Cleanup (BCP) Site #C915353) or Allied (understood to mean the 3821 River Road, Inc. BCP Site #C915003). This is further supported by the groundwater data from C915353 proximate to Operable Unit 02.

The Department acknowledges that the groundwater investigation at C915003 is not complete, but all sites in the BCP are required to prevent off-site migration of contaminants. Therefore, if there is a potential groundwater migration pathway from C915003 to Operable Unit 02 identified in the future it will be addressed as part of the C915003 remedy.

COMMENT 27: While excavation is proposed for ecological SCOs, there is essentially no remedy proposed for soils to be left in place that exceed commercial SCOs except for covering them up. If that's the case, why does DEC even have commercial SCOs?

RESPONSE 27: The remedy to address soil that exceeds the commercial soil cleanup objectives (SCOs) is the site cover. Where soil is used as part of the site cover it is required meet the commercial SCOs. This ensures that people are not potentially exposed to contaminants in excess of the commercial SCOs on the site surface. By constructing a soil cover and implementing other use restrictions, such as only allowing for commercial/industrial uses of the site and requiring an excavation work plan, the potential exposure pathway is minimized or prevented.

COMMENT 28: Explain how the remedy can contemplate moving contaminated soil to site 110 when the investigation at that site is not complete and cannot anticipate receiving materials from

Site 109. Further, this suggests a violation of Laws regarding the operations of licensed disposal sites. In summary, the proposed remedy in the ROD Amendment is premature and should only be considered when other studies have been completed and remedies contemplated; remedies should be complementary at a point in time that makes sense.

RESPONSE 28: The reason for this is to provide for flexibility in management of soil between the operable units which were historically part of the same facility and Site 110 (formerly known as Operable Unit 01) exhibits similar or increased levels of contamination as compared to Operable Unit 02. Any movement of soil from Operable Unit 02 to Operable Unit 01 would only happen if it is a beneficial use of the soil (e.g. instead of using clean off-site soil to meet design grades) and it is part of the selected remedy for Operable Unit 01. The Department anticipates amending the remedy for Operable Unit 01 in the near future after it is able to complete an assessment of the Focused Feasibility Study submitted by Honeywell International, Inc.

The Department would not allow for Operable Unit 02 soil to be placed on Operable Unit 01 only to avoid the cost of disposing the soil at a permitted disposal facility.

COMMENT 29: We request an extension of the comment to further review the associated reference documents and prepare a more complete response.

RESPONSE 29: The requested extension was granted, extending the comment period to April 30, 2024.

Thomas Morahan of New York State Professional Geological Services PLLC submitted a technical memo (dated April 30, 2024) which included the following comments. Some of these comments are quite detailed and only the main points of the comments are presented below:

COMMENT 30: The Site 109 Amendment can be considered premature. Several adjacent sites have the potential to change conditions at Site 109 over time and could affect the remedies proposed in the Amendment. Such adjacent sites include: The Tonawanda Coke Brownfield Cleanup Parcel (Tonawanda Coke BCP Site) designated as C915353 by the Department, and the former Allied Chemical facility (Allied BCP Site) designated as C915003 by the Department.

RESPONSE 30: Specifics relating to both the C915353 and C915003 sites are discussed in A6 and A7, below. Similar to some of the above responses, the available groundwater data from Operable Unit 02, C915353, and C915003 does not indicate that there is contaminant migration onto Operable Unit 02 via groundwater. Additionally, BCP sites are required to prevent off-site migration of contaminants, so if any potential migration pathways are identified they would be addressed by the respective BCP site remedy.

The Department does acknowledge that there could be contaminant migration onto Operable Unit 02 from C915353 via impacted stormwater discharges. Multiple interim remedial measures have been implemented on C915353 to eliminate the conditions leading to these stormwater impacts and improve stormwater quality. While not available to the public yet, the remedy for C915353 will include for complete closure and removal of the impacted stormwater systems, which will eliminate this migration pathway.

COMMENT 31: *[Abbreviated]* This comment focuses on the potential for groundwater in the clay and bedrock units below the C915353 to flow onto Operable Unit 02, potentially transporting contaminants in the future. Particular concerns are raised pertaining to vertical migration of contaminants from the fill through the clay unit to the bedrock due to downward hydraulic gradients and through desiccation cracks in the clay. The comment concludes with a recommendation to install an additional monitoring well cluster upgradient of Operable Unit 02 in the clay and bedrock.

RESPONSE 31: Overall the comment is concerned about future migration of contamination from the C915353 site to Operable Unit 02 in the clay and bedrock water bearing zones. It has been the Department's experience that there is not significant transport of either groundwater or contaminants in the clay that is present below the sites. While hydraulic gradients may indicate that there could be horizontal or vertical flow in the clay, the low hydraulic conductivity and lack of overall permeability greatly inhibits any significant movement of groundwater and dissolved phase contaminants. This is directly observed in two upper clay well pairs on C915353, MW-BCP-13B/MW-BCP-24B and MW-BCP-19B/MW-BCP-25B (upgradient well is listed first in both pairs). The upgradient and downgradient wells in these pairs are approximately 150 to 200 feet apart, and the contamination observed in the upgradient wells has not been observed in the downgradient wells. This shows that while there is a potential for groundwater flow, the tight nature of the clay does not readily permit it to occur.

Concerns regarding potential downward contaminant migration via desiccation cracks in the native clay were also raised. While desiccation cracks were observed in the upper clay, there were none observed in the lower clay, meaning that there is not a complete migration pathway from the fill to the underlying bedrock. This is further supported by the lack of chemical impacts observed in the lower clay and bedrock wells.

While the comment is correct that there are not bedrock wells installed on C915353 proximate to Operable Unit 02, there have not been any contaminants of concern detected in the four bedrock wells that were installed in and down/side gradient to the production area, where the most significant groundwater contamination is present in the fill unit. MW-BCP-05A and MW-BCP-10A are the most heavily contaminated wells on C915353, and the contamination in the fill was not detected in the lower clay at both clusters, nor in the bedrock at MW-BCP-05D. Thallium is the only unusual parameter that was detected in the lower clay or bedrock, but this appears to be due to the nature of the clay and bedrock since thallium was determined to not be present in fill zone groundwater.

While the C915353 site is not the subject of the current amended ROD, there will be long term monitoring required as part of that remedy. The details of the proposed remedy should be made available for public comments in the near future.

COMMENT 32: *[Abbreviated]* This comment raises concerns about the lack of previous investigation surrounding various historical operations on the C915003 site. It is stated that an ASTM-style environmental site assessment (ESA) should be conducted to identify potential sources of contamination on the C915003. The comment concludes with a recommendation to

install additional nested wells side-gradient relative to the C915003 site in the shallow and deeper units to monitor for the migration of groundwater contamination onto Operable Unit 02 from the C915003 site.

RESPONSE 32: To the Department's knowledge the comment is correct that a formal ASTM-style ESA has not been conducted for C915003. However, remedial investigation is typically more expansive in the scope of sampling than is typically completed during an ASTM-style ESA. Historical process figures were used to select the location of investigation locations, including the features identified in the comment.

The remedial investigation data has not been submitted to the Department at this time, but when it is, the groundwater data will be assessed to determine if further investigation is needed near the C915003 and Operable Unit 02 boundary.

COMMENT 33: In Section 7.4 Proposed Changes to the Original Remedy, a summary of the changes to the original ROD are shown. The remedy changes include (1) Excavation of soil exceeding the protection of ecological resources soil cleanup objectives (SCOs) in the on-site drainage ditch corridor; and (2) Use of a cover system over exposed soils that exceed the commercial use SCOs. It is likely that ecological SCOs were chosen to protect the river ecology. We agree with these proposed changes presented here in the summary, but it is unclear why the remedies are different until they are noted in Section 8.2 Evaluation Criteria.

RESPONSE 33: It is correct that the protection of ecological resources SCOs were selected due to the drainage ditch eventually discharging to the Niagara River. Otherwise, there are not significant ecological resources present on Operable Unit 02.

Regarding the difference between Sections 7.4 and 8.2 of the Amended ROD, the purpose of Section 7.4 is to provide an overview of the existing and amended remedies whereas Section 8.2 is intended to be a more detailed discussion.

COMMENT 34: Soil from the drainage ditch corridor will be removed. Soil that exceeds 500 ppm total PAHs will either be disposed of off-site at a permitted landfill or placed on Operable Unit 01 (Site 110) if the soil can be beneficially used and such placement is allowed by the remedy selected for Operable Unit 01. This seems premature but we recognize the benefit of concentrating the management of contaminants on site. While this Operable Unit remedy can be considered as part of the entire site, the Site Management Plan presented in subsection 5 seems to relate only to OU2; whereas waste from OU1 could be placed as part of an Operable Unit that has not yet been designed or presented.

RESPONSE 34: Soil from Operable Unit 02 will not be placed on Operable Unit 01 until the ROD for Operable Unit 01 is also amended and a remedial design is reviewed and approved. The purpose of including this option in this Amended ROD is to provide flexibility during future remedial actions and eliminate the need to amend this ROD again in the near future.

While the Department has not completed its assessment of the Focused Feasibility Study for Operable Unit 01 it is likely that a Site Management Plan (SMP) will also be required for that

operable unit. If contamination will remain on-site after the completion of remedial actions at any of the Tonawanda Coke operable units, such contamination will be subject to a SMP. Eventually there will be one SMP for the entire Tonawanda Coke site that includes the necessary management and monitoring activities for all operable units.

Bridge Rauch of the Clean Air Coalition of Western New York submitted an email (dated May 1, 2024) which included the following comment:

COMMENT 35: Regarding the following language in Section 1.2 of the MJW report developed for Inventum Engineering and the Riverview Innovation and Technology Campus:

"In addition to the work described herein, MJW has conducted work and is preparing work plans for three properties around the BCP Site" including "Site 108 – 3800 River Road, a portion of the Tonawanda Coke Corporation (TCC) State Superfund Site, NYSDEC #915055."

Note that the above work does not address Site 109 (OU-2) or Site 110 (OU-1.) Further, Section 1.4 (GPS-Enhanced Gamma Walkover Survey of the RITC Site) contains the following language:

"Attachment 2 is titled Gamma Walkover Survey Report for the Riverview Innovation & Technology Campus, Inc. 3875 River Road, Tonawanda, New York 14150 BCP SITE No. C915353. The results of the gamma walkover survey performed in June of 2023 show an elevated area of gamma activity in the central/western portion of the site approximately 20 meters (m) wide by 200 m long."

Note that the central/western part of the BCP site where the gamma hotspot was located is very close to Site 102 (OU-2) and runoff from this area, for at least the six decades prior to the emplacement of the new stormwater control system moved from the northwest portion of the property to its current location, would have drained to Site 109.

This should be considered during site remediation at Site 109 (OU-2.) It is likely that the proposed remedies will be sufficient for soil left on-site, however 1.) this should be confirmed before or during site remediation; and 2.) any material to be removed for disposal elsewhere should be confirmed to pass TENORM disposal criteria, especially if any of the waste is directed to Site 110 (OU-1).

RESPONSE 35: The material with the elevated gamma activity on the C915353 site is expected to be below the ground surface and would have largely been covered with coke piles during the active operations at the facility. It is unlikely that these materials have been in direct contact with stormwater that would eventually discharge to Operable Unit 02. The Department has also observed that radioactivity does not leach into surface or ground waters, so any potential radioactivity from the material would not be expected to be transported by stormwater.

Additionally, it has not yet been determined if the material with the elevated gamma activity on the C915353 site is technically enhanced naturally occurring radioactive material (TENORM) nor has slag or other materials that could be TENORM been identified in Operable Unit 02. Therefore, it is premature to conclude if material in Operable Unit 02 requires management as TENORM. If

materials that could be TENORM are observed in Operable Unit 02 during the course of future remedial actions, the appropriate testing will be completed following the Division of Material Management - 5 (DMM-5) guidance.

APPENDIX B

Administrative Record

Administrative Record

**Tonawanda Coke
Operable Unit No. 02: Site 109
State Superfund Project
Tonawanda, Erie County, New York
Site No. 915055**

1. Proposed Remedial Action Plan, February 2008, prepared by the Department.
2. Record of Decision, March 2008, prepared by the Department.
3. Proposed Amended Record of Decision, February 2024, prepared by the Department.
4. Order on Consent, Index No. B9-85-2-77D, between the Department and Honeywell International, Inc., executed on February 14, 2020.
5. “Final Work Plan Focused Remedial Investigation and Feasibility Study for Operable Units 1 (Site 110) and 2 (Site 109) Tonawanda Coke Site”, July 2020, prepared by Parsons.
6. “Final Remedial Investigation Report Operable Units 1 (Site 110) and 2 (Site 109) Tonawanda Coke Site”, October 2023, prepared by Parsons.
7. “Focused Feasibility Study Operable Unit 2 (Site 109) Tonawanda Coke Site”, February 2024, prepared by Parsons.
8. Email dated March 29, 2024 from Bridge Rauch of the Clean Air Coalition of Western New York.
9. Technical memo dated April 30, 2024 from Thomas Morahan of New York State Professional Geological Services PLLC.
10. Email dated May 1, 2024 from Bridge Rauch of the Clean Air Coalition of Western New York.