

PROPOSED RECORD OF DECISION AMENDMENT

TONAWANDA COKE SITE – OPERABLE UNIT 2



Town of Tonawanda / Erie County / Registry No. 915055

February 2024

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

SECTION 1: PURPOSE AND SUMMARY OF THE PROPOSED RECORD OF DECISION AMENDMENT

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing an amendment to the Record of Decision (ROD) 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 proposed 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 proposed 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 Record of Decision (ROD) which selected a remedy for Operable Units (OUs) 1 and 2 of the Tonawanda Coke Site. This Proposed ROD Amendment is only for OU2 (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 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 seeks input from the community on this proposed ROD Amendment. This is an opportunity for public participation in the remedy selection process. 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

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 has been set for February 28, 2024 to March 29, 2024 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for March 21, 2024 at Buffalo and Erie County Public Library – Kenmore Branch, 160 Delaware Road, Kenmore, NY 14217 beginning at 6 PM.

At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

Benjamin McPherson, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation
700 Delaware Avenue
Buffalo, NY 14209
716-851-7220
benjamin.mcpherson@dec.ny.gov

The Department may modify or reject the proposed changes based on new information or public comments. Therefore, the public is encouraged to review and comment on this proposal. Comments will be summarized and addressed in the responsiveness summary section of the final version of the ROD Amendment. This ROD Amendment is the Department's final selection of the remedy for the site.

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 1 (OU1) 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 2 (OU2) 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 3 (OU3) 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.

OU1 and OU2 are adjacent to the Riverview Innovation & Technology Campus (#C915353) Brownfield Cleanup Program (BCP) site that encompasses the remainder of the former Tonawanda Coke facility. OU2 is also adjacent to the 3821 River Road, Inc. (#C915003) BCP site.

Site Features: None of the operable units are significantly developed. OU1 is lightly wooded with areas of smaller vegetation and unimproved access roads. The easternmost portion of OU1 is owned by Niagara Mohawk Power Corp and contains multiple electrical transmission lines.

OU2 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.

OU3 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 (OU3), Site 109 (OU2), and Site 110 (OU1). 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 OU3 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 OU3 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 Record of Decision.

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 PROPOSED AMENDMENT

7.1 Original Remedy

The major components of the original remedy are 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 ROD Amendment 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 OU2 in

2020 through 2021. The data collected during this investigation is the basis for this ROD Amendment.

7.4 Proposed Changes to the Original Remedy

A summary of the changes to the original ROD as proposed in this document are shown in the following table:

SUMMARY OF PROPOSED REMEDY CHANGES
Tonawanda Coke, OU2 (No. 915055) Record of Decision Amendment

Media:	2008 ROD	Amended ROD
Groundwater	(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	(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.	(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.	(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 PROPOSED 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 proposed changes to the 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 proposed 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 proposed remedy are readily implemented in the short term. The proposed 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 proposed remedy will result in less contaminated material remaining on-site than the original remedy. The proposed 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 proposed 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 proposed remedy being more difficult because it includes additional active measures to address the contamination at the site. However, the proposed 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 proposed remedy costs significantly more than the original remedy. However, the proposed 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 proposed changes are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 9: PROPOSED AMENDED REMEDY

The Department is proposing to amend the Record of Decision (ROD) for Operable Unit 2 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 proposed 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 soil 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.

6.0 NEXT STEPS

As described above, there will be a public meeting and comment period on the proposed changes to the selected remedy. At the close of the comment period, the Department will evaluate the comments received and prepare a responsiveness summary which will be made available to the public. A notice describing the Department's final decision will be sent to all persons on the site mailing list.

If you have questions or need additional information you may contact any of the following:

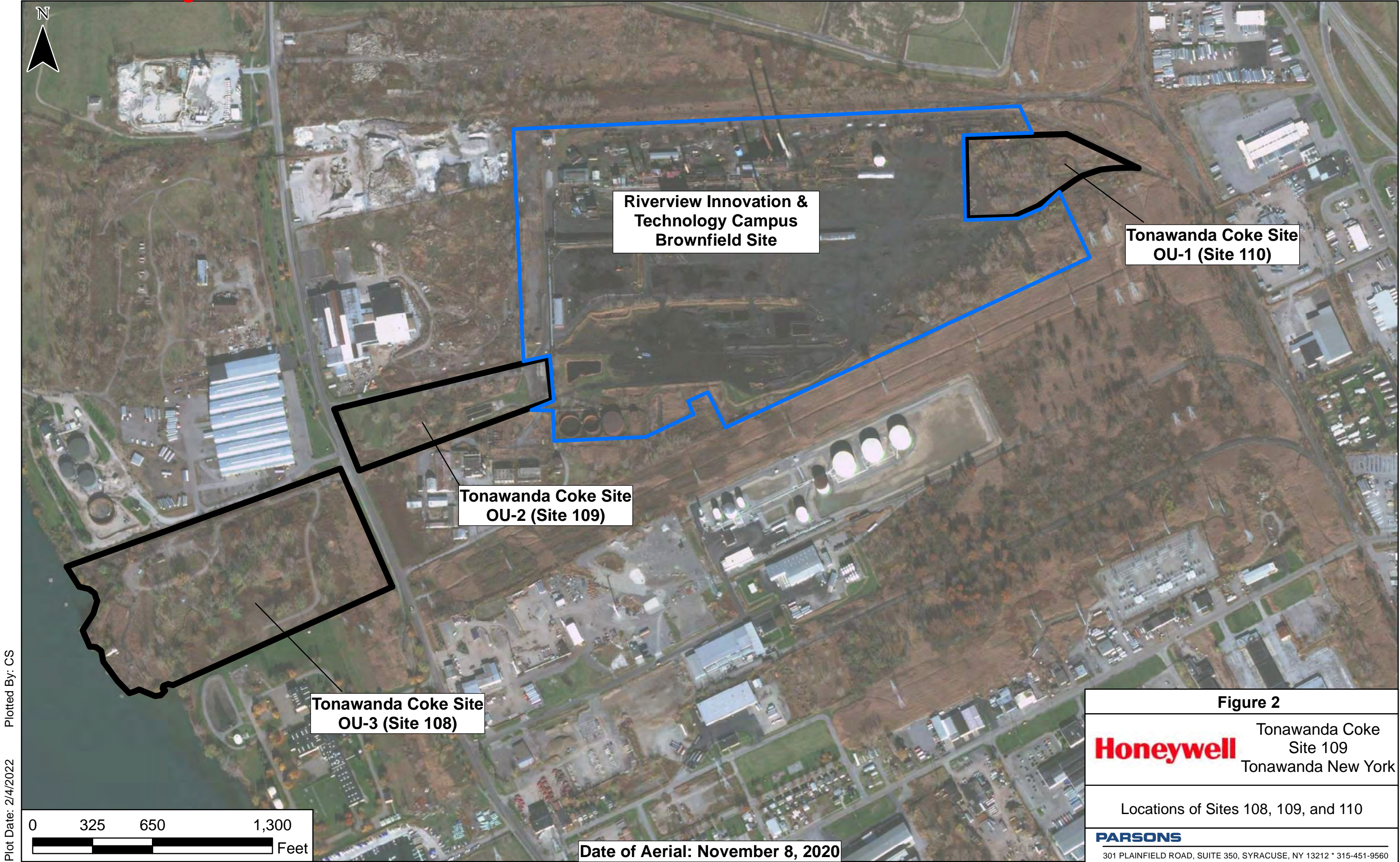
Project Related Questions

Benjamin McPherson, Project Manager
New York State Department of Environmental
Conservation
Division of Environmental Remediation
700 Delaware Avenue
Buffalo, NY 14209
716-851-7220
benjamin.mcpherson@dec.ny.gov

Site-Related Health Questions

Angela Martin
New York State Department of Health
Bureau of Environmental Exposure
Investigation Empire State Plaza,
Corning Tower, Room 1787
Albany, NY 12237
518-473-4671
bee@health.ny.gov

AROD Figure 1



Plot Date: 2/4/2022
Plotted By: CS

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

AROD Figure 2

