
Division of Environmental Remediation

Record of Decision
Tonawanda Coke Corporation Site
Operable Unit Nos. 1 and 2
Tonawanda, Erie County, New York
Site Number 9-15-055

March 2008

DECLARATION STATEMENT - RECORD OF DECISION

Tonawanda Coke Corporation Inactive Hazardous Waste Disposal Site Operable Unit Nos. 1 and 2 Tonawanda, Erie County, New York Site No. 915055

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for Operable Units 1 and 2 of the Tonawanda Coke Corporation 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 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 Operable Units 1 and 2 of the Tonawanda Coke Corporation inactive hazardous waste disposal site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Assessment of the Site

This site does not present a current or potential threat to public health or the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Tonawanda Coke Corporation site and the criteria identified for evaluation of alternatives, the Department has selected no action with the provision of Institutional/Engineering Controls. An environmental easement will be placed on the site. The following items will be part of the requirements:

1. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the property to industrial uses; (b) evaluate the need for remediation of the site if the future use of the site is industrial but the manufacturing activities are different from the current coke production activities; (C) compliance with the approved site management plan; (d) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (e) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.

2. Development of a site management plan which will include the following institutional and engineering controls: a) during any future development of the site, if soil was excavated at the site, the excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (b) monitoring of groundwater on a periodic basis; (c) identification of any use restrictions on the site; and (d) fencing to control site access.

3. The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

New York State Department of Health Acceptance

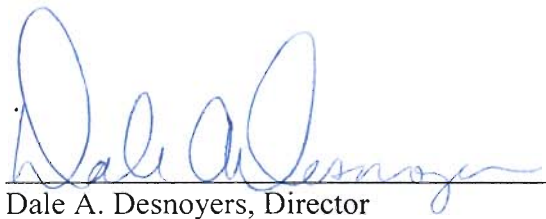
The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective.

MAR 31 2008

Date



Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

**Tonawanda Coke Corporation Site
Operable Unit Nos. 1 and 2
Tonawanda, Erie County, New York
Site No. 915055
March 2008**

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the Tonawanda Coke Operable Units 1 (OU1), and OU2. As more fully described in Sections 3 and 5 of this document, the disposal and handling of industrial waste from the coke production activities at the site has contaminated soil, groundwater and sediment with semi-volatile organic compounds and metals that are related to coke production.

Based on the findings of the investigation the site does not pose a significant threat to the public health and the environment because site security and fencing make the site inaccessible to the public. The groundwater contamination at the site is insignificant and the surface water discharge from the site to the river is managed under an SPDES permit. Therefore, Institutional/Engineering Controls is selected as the remedy for the OU1 and OU2 of this site. An environmental easement will restrict the use of groundwater at the site as a potable water source, monitor the groundwater periodically to ensure that the contamination is not migrating away from the site and will include a soil management plan to address contaminated soil appropriately if there is a change in the use or current practices of the site in the future.

The selected remedy, discussed in detail in Section 6, is intended to attain the remediation goals identified for this site in Section 6. The remedy must conform to officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called as SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The site is located along and to the east of the eastern bank of the Niagara River within the Town of Tonawanda, Erie County, New York. The New York State Registry of Inactive Hazardous Waste Disposal Sites lists the three operable units and not the entire property of the Tonawanda Coke, as the site. The site is located about 0.25 miles west of I-190 on both sides of River road. The surrounding area is primarily industrial although a small residential cluster exists approximately 0.25 mile south of the plant. Refer to Figure 1 for the location of the site. Several listed hazardous waste disposal sites are located around this site. The Allied Chemical site is located to the south, Roblin Steel site is located across from the site to the west on River Road and the River Road site is located to the north of the site.

Operable Unit (OU) Nos. 1, and 2, which are the subject of this document, are referred to as Site 110 and 109 respectively. Please refer to Figure 2 that identifies all the OUs at the plant site. An operable unit represents a portion of the site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination.

Materials such as coal tar sludge, fly ash and cinders were reportedly disposed at OU1 which is referred as Site 110. OU1 is located at the rear of the plant in the northeast corner of the area east of River Road. The disposal activities occurred prior to 1978.

In 1977, an unknown quantity of brick, rubble and related demolition waste was disposed in OU2, located adjacent to River Road. OU2 is located inside the fenced production facility and referred as Site 109.

Another operable unit OU3 at the site which is referred as Site 108 is located adjacent to the Niagara River. In 1973, the County Health Department granted permission to establish a disposal area west of River Road identified as OU3. This area was filled with refuse, wood, scrap polyethylene and ceramic saddle packing from refining equipment. The area covered by OU3 is currently a vacant parcel and no industrial activity is performed. The OU3 was used for transferring coal from the river to the production facility via conveyor belts. The OU3 along with the contaminated sediment in the river needs to be investigated to determine the extent of contamination and evaluated for remedial alternatives to address the contamination. This PRAP does not include OU3 and the contaminated river sediments which will be deferred for further evaluation and implementation of appropriate remedial action.

2.1: Site Geology and Hydrogeology

In general, the site slopes gently to the west towards the river. Surface water within the plant area is collected by a storm water collection system and directed to the SPDES permitted outfall west of the site. Fill material is present as the uppermost stratigraphic unit over the entire site and the thickness of this unit was found to vary from approximately 0.9 to 10 feet. The fill encountered during the investigation consisted mainly of silt, gravel, cinders, slag, coke and cinder. Underlying the fill material is a native glaciolacustrine deposit. This unit is composed primarily of red-brown clay with some silt and gravel lenses. The thickness of this unit is unknown as the wells and test pits were completed in the fill unit and the boreholes extended only a few feet into the clay unit. Data from other investigations conducted at adjacent sites indicate that the clay stratum averages more than 50 feet in thickness.

Beneath the site, the fill strata contain the uppermost water-bearing unit. This unit is not continuous in depth due to the varying thickness of the fill material across the site. This unit is not suitable for use as a source of drinking water or other potable uses because it is a perched water condition in the subsurface that can not produce adequate groundwater for pumping. The underlying clay strata act as a significant aquitard to both horizontal and vertical groundwater movement. The bedrock is expected to be at least 50 feet below grade. Although the upper bedrock water-bearing unit is more extensive than the overburden water-bearing unit, the primary regional source of drinking water is the Niagara River.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Manufacturing processes at the plant began in 1917 and included by-products coking; light oil distillation; ammonia recovery; and benzene, toluene, and xylene extraction. A few areas of the plant Site were used for the disposal of wastes. Materials such as tar sludge, fly ash and cinders may have been deposited at the rear of the plant (northeast corner of the area east of River Road, now referred to as Site 110) before 1978. An unknown quantity of brick, rubble, and related demolition wastes were also disposed in an area adjacent to and on the east side of River Road in 1977 (Site 109).

3.2: Remedial History

In 1990, the Department listed the site, comprising of three OUs, as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

In 1981, the Department collected sediment and surface water samples from the Tonawanda Coke drainage basin. In 1982 and 1983, the USGS collected soil, groundwater, and surface water samples from this site and a Phase II Investigation was completed by the responsible party.

Since 1982, five major investigations and several other sampling events have been conducted at the Site, focusing primarily on the three former on-Site disposal areas. In July 1982 and May 1983, the United States Geological Survey (USGS) undertook the sampling of a number of inactive hazardous waste disposal sites roughly within a 3-mile wide band along the Niagara River. This sampling program was part of an overall investigation of toxic contaminant entry into the Niagara River. The USGS program involved the collection of two groundwater samples, 10 soil samples and two surface water samples from the Site.

The results of the five subsequent major studies are presented in the following previously submitted reports:

1. "Tonawanda Coke Corporation, New York State Superfund Phase I Summary Report, Nov. 1983" prepared by Recra Research Inc. This study did not involve the collection of any samples for chemical analyses. The purpose of the study was to calculate a Hazard Ranking System Score for the Site based upon the previously obtained USGS sample results.
2. "Phase II Site Investigation, Tonawanda Coke Site, December 1986" prepared by Malcolm Pirnie Inc. The Phase II Site Investigation consisted of the following activities:
 - i) installation of seven overburden groundwater monitoring wells; ii) collection of 13 groundwater samples; iii) installation of 12 test pits; iv) collection of one composite soil sample from four of the 12 test pits; and v) collection of eight surface water samples.
3. "Supplemental Site Investigation, Tonawanda Coke Corporation, July 1990" prepared by Conestoga-Rovers & Associates. The Supplemental Site Investigation consisted of the following activities:
 - i) installation of 10 overburden groundwater monitoring wells; ii) collection of 32 groundwater samples;

iii) installation of eight test pits; iv) collection of four composite soil samples from the test pits; v) advancement of four boreholes; vi) collection of two composite samples from the boreholes; vii) collection of 21 surface water samples; and viii) collection of 10 sediment samples.

4. "Additional Site Investigation, Tonawanda Coke Corporation, November 1992" prepared by Conestoga-Rovers & Associates. The Additional Site Investigation consisted of the following activities: i) installation of three overburden groundwater monitoring wells; ii) collection of 10 groundwater samples; iii) installation of nine test pits; iv) collection of two samples from the test pits; v) advancement of one borehole; vi) collection of five surface water samples; and vii) collection of two sediment samples.

5. "Remedial Investigation, Summary Report, Tonawanda Coke Corporation, May 1997" Prepared by Conestoga-Rovers & Associates. The Summary Report assembled all of the available information from the previous investigations performed at the Site pertaining to groundwater, surface water, soils, and sediment and discussed their significance in regard to potential impact to human health and the environment.

Analytical results from these samplings and investigations indicated the presence of widespread contamination on the site and the necessity of an expanded Remedial Investigation/Feasibility Study.

SECTION 4: 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 and the Tonawanda Coke Corporation entered into a Consent Order on September 5, 1997. The Order obligates the responsible parties to implement a remedial program. After the remedy is selected, the Department will direct the PRPs to implement the selected remedy under the existing Order on Consent.

SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the significant threats to human health and the environment.

5.1: Summary of the Remedial Investigation

The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The RI was conducted between July and August 2005. The field activities and findings of the investigation are described in the January 2008 Final Supplemental report.

5.1.1: Standards, Criteria, and Guidance (SCGs)

To determine whether the soil, groundwater, sediment and surface water contain contamination at levels of concern, data from the investigation were compared to the following SCGs:

- Groundwater, drinking water, and surface water SCGs are based on the Department's "Ambient Water Quality Standards and Guidance Values" and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on Department's Regulation 6 NYCRR Subpart 375-6- Remedial Program Soil Cleanup Objectives.
- Sediment SCGs are based on the Department's "Technical Guidance for Screening Contaminated Sediments."

Based on the investigation results and based on the existing use of the site and potential public health and environmental exposure routes, the OUs 1 and 2 of the site do not require remediation. The results of the investigation are summarized in Section 5.1.2. More complete information can be found in the RI report.

5.1.2: Nature and Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated. As described in the RI report, many soil, groundwater, surface water, and sediment samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, the main categories of contaminants that exceed their SCGs are volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and inorganics (metals). For comparison purposes, where applicable, SCGs are provided for each medium.

Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil and sediment.

Table 1 summarizes the degree of contamination for the contaminants of concern in soil, groundwater, surface water and sediment and compares the data with the SCGs for the site. Figure 3 shows the location of all the samples collected at the site between the years 1982 and 2005. The following are the media which were investigated and a summary of the findings of the investigation.

Operable unit 2 (site 109) is located downgradient of operable unit 1 (site 110).

Operable Unit 1 (Site 110)

SVOCs such as benzo(a)anthracene and benzo(a)pyrene were detected above SCGs in the surface soil samples collected in 2005. Benzo(a)pyrene which is a by-product from coke production and was detected between 6 to 21 ppm. The SCG for this compound is 1 ppm. No other SVOCs above SCGs were detected in the samples. VOCs and metals were not detected above the SCGs in these samples.

During previous investigations, soils samples from several soil borings and test pits were obtained for chemical analyses. No SVOCs, VOCs or metals were detected above the SCGs in these samples.

Several monitoring wells were installed on and off site. Cyanide was consistently detected above the groundwater standards in wells MW-2, 3 and 3R. MW-13 detected the highest concentration at 2750 ppb and the SCG for cyanide is 200 ppb.

Historically, the groundwater data in the vicinity of well MW-3 (later replaced with well MW-3R) had exhibited elevated concentrations of some of the VOCs, SVOCs, metals, and cyanide. The VOC exceedances (1,1,1-trichloroethane and benzene) were detected at concentrations only marginally greater than the SCGs. The SVOC exceedances at MW-3 included naphthalene, fluorene, phenanthrene, dibenzofuran, benzo(b)fluoranthene, and benzo(k)fluoranthene. The naphthalene, fluorene, and phenanthrene concentrations were within the same order of magnitude as the most stringent criteria. The metals exceedances included cyanide, aluminum, iron, manganese, and sodium, all of which were about an order of magnitude greater than the SCG.

As a result of these exceedances, it was decided to perform an excavation in the area of MW-3R to assess the soil conditions in this area. In August 2005, a backhoe was used to excavate a trench approximately 90 feet long and 6 feet deep running parallel to the railway tracks in the vicinity of MW-3R. The excavated material was carefully observed and a small amount of coal tar was found to be present. The coal tar was separated from the excavated material for reprocessing through the coking operation.

In addition, the monitoring wells located downgradient of MW-3 did not detect any contamination above the SCGs. The contamination found at MW-3 and 3R, therefore, appeared to be localized.

The five surface water samples collected during the 1992 investigation had shown that none of the VOCs were detected except for acetone which was detected in one sample. No SVOCs were detected at concentrations greater than the SCGs. Iron, manganese, and cyanide were present in the surface water samples at concentrations that exceed the SCGs.

Operable Unit 2 (Site 109)

No SVOCs, VOCs or metals were detected above the SCGs in subsurface soil samples collected from soil borings during previous investigations. Several test pits were excavated during previous investigations but no soil samples were obtained from these pits because visual observation of the excavated areas did not reveal the presence of any coal tar materials or other visible indication of gross contamination.

SVOCs such as benzo(a)anthracene and benzo(a)pyrene were detected above SCGs in the surface soil samples collected in 2005. Benzo(a)pyrene which is a by-product from coke production and was detected in 4 of the five samples and the range was between 0.74 and 53 ppm. The SCG for this compound is 1 ppm. No other SVOCs above SCGs were detected in the samples. VOCs and metals were not detected above the SCGs in these samples.

Several monitoring wells were installed on and off site. Cyanide was detected below the groundwater standard of 200 ppb in the samples except MW-17, which exceeded the groundwater standard at 270 ppb of cyanide. No SVOCs were detected above SCGs except for chrysene which was detected at 88 ppb and the SCG is 0.002 ppb. Except for benzene no other VOCs were detected above SCGs. Benzene was detected at 3.76 ppb at MW-16 and the SCG is 1 ppb.

Surface Water and Sediment for all the OUs

Surface water samples were collected in areas where ponding of water existed and in areas observed during the field work as the potential surface water drainage pattern at the Tonawanda Coke site. No SVOCs were detected above SCGs. VOCs such as benzene, methylene chloride and toluene were detected above SCGs at three locations that are located adjacent to Allied Chemical site. The highest concentration of benzene detected was 6.9 ppb (SCG is 1 ppb), methylene chloride was 13 ppb (SCG is 5 ppb) and toluene was 52 ppb (SCG is 5 ppb).

Sediments samples were collected from selected surface water sampling locations. Since these locations are dry most of the year and surface water is present only during precipitation events, the sediment sample results are compared to soil clean up SCGs. NO SVOCs, VOCs or metals were detected above the SCGs.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Tonawanda Coke is an active Coke production facility. Industrial waste from their coke facility was disposed in two areas which have resulted in contamination of soil, groundwater and sediment with semi-volatile organic compounds and metals that are related to coke production. Under current use the site is not accessible to the public with fencing and 24 hour security. There could be potential for exposure to contaminated soils and sediments via incidental ingestion or dermal contact should trespassing occur. There could also be the potential exposure by incidental ingestion or dermal contact with residual contaminated soil and groundwater for workers who work in soils onsite and who work on utility lines.

Exposure to contaminated groundwater via drinking water ingestion is not expected because public water serves the area.

5.4: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands.

The following environmental exposure pathways and ecological risks have been identified:

As has been the case in each inspection, it is difficult to find surface water in the area. In this case, no standing surface water was present. In addition, the entire low lying area located along the eastern boundary of the Site is overgrown with phragmites. The extensive growth of phragmites is not a desirable habitat for either animals or birds. The wetlands to the south of Site 110 experience significant periods of intermittent dry cycles. The vegetative material in the wetland and the conditions make the wetlands of limited value. The wetland may be acting as a biofilter and removing some of the contaminants from surface water before it reaches the Niagara River. This may one of the wetland's most significant values.

The river sediments had significant concentration of SVOCs such as benzo(a)pyrene, benzo(a)anthracene, benzo(a)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene were detected above the SCGs. The contamination of the river sediments along with OU3 will be addressed in the future by conducting additional investigation to further define the area of contamination and evaluate appropriate remedial action to address the contamination.

The groundwater at the site is contaminated with site-related chemicals but the contamination marginally exceeds the SCGs and therefore does not warrant remediation. The uppermost water-bearing unit located beneath the site in the fill strata is neither extensive nor continuous in depth due to the varying thickness of the fill material across the site. This unit is not suitable for use as a source of drinking water or other potable uses. The underlying clay strata act as a significant aquitard to both horizontal and vertical groundwater movement.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND SELECTED REMEDY

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous wastes disposed at the site through the proper application of scientific and engineering principles.

Remediation goals are not applied to the use of materials currently handled in the active operations at the site. However, the groundwater sampling plan and the required permits would monitor whether the contamination from the site is migrating off-site. The investigations conducted at the site indicate contamination in surface soils, groundwater and river sediment. The primary contaminants found at the site are SVOCs such as benzo(a)pyrene, benzo(a)anthracene, benzo(a)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene and pyrene. These contaminants are common derivatives from coke production activities which are currently being conducted at the site.

The groundwater contamination at the site is found to be marginally exceeding the groundwater standards and therefore do not require any remedial efforts. The groundwater is not used for potable purposes in this area and the municipal water supply is readily available.

Several remedial alternatives such as No Action, Institutional Control, Capping with Institutional Control and Excavation with Off-Site Disposal and Institutional Control were evaluated for the remediation of contaminated soil in the Feasibility Study (FS) report. Since the site is an active industrial facility, the potential exposure issues associated with the chemicals found on the Site are minimal, the Site is zoned Industrial and is expected to remain as such and the site is secured with twenty four hour security and therefore, the Institutional Control is selected as the remedial alternative in the FS report.

As stated in the FS report remediation of contaminated soil is not warranted at the site because public access to the site is restricted with security and permanent fence around the site. Only authorized people can obtain access to the site. These measures eliminate the potential for the public to come in contact with the contaminated soil at the site.

The clean up goals for the contaminants found in soil are compared with clean up goals for the unrestricted future use of the site for consistency. Since the site is currently zoned as industrial and as indicated previously the site is currently an active manufacturing facility and will remain industrial for the foreseeable future, cleanup goals for restricted industrial will be used to compare the concentration of contaminants found in soil at the site.

Based on the above information, the Department selected no action with the provision of Institutional/Engineering Controls as the remedy for the OU1 and OU2. An environmental easement will be placed on the site. The total estimated present worth cost of the remedy is \$227,100 which includes capital cost \$14,500 and operation and maintenance cost \$212,600. The following items will be part of the requirements:

1. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the property to industrial uses; (b) evaluate the need for remediation of the site if the future use of the site is industrial but the manufacturing activities are different from the current coke production activities; (C) compliance with the approved site management plan; (d) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (e) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.
2. Development of a site management plan which will include the following institutional and engineering controls: a) during any future development of the site, if soil was excavated at the site, the excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be properly managed in a manner acceptable to the Department; (b) monitoring of groundwater on a periodic basis; (c) identification of any use restrictions on the site; and (d) fencing to control site access.

3. The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will: (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; (b) allow the Department access to the site; and (c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

SECTION 7: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken to inform and educate the public about conditions at the site and the potential remedial alternative. The following public participation activities were conducted for the site:

- Repositories for documents pertaining to the site were established.
- A public contact list, which included nearby property owners, elected officials, local media and other interested parties, was established.
- A public meeting was held on March 18, 2008 to present and receive comment on the PRAP.
- A responsiveness summary (Appendix A) was prepared to address the comments received during the public comment period for the PRAP.

TABLE 1
Nature and Extent of Contamination
 Operable Unit #1 (Site 110)

Surface Soil Sampling Dates: August 2005

SURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
Semivolatile Organic Compunds (SVOCs)	Benzo(a)Pyrene	6 - 21	1	5 of 5
	Benzo(a)anthracene	6.4 - 20	1	3 of 5

Subsurface Soil Sampling Dates: July 1982 thru June 1991

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
VOCs, SVOCs or Inorganic compounds	Out of the five (5) samples obtained, none of the samples detected contaminants above SCGs			

Groundwater Sampling Dates: November 1985 thru August 2005

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)^a	SCG^b (ppb)^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	2.08 - 84	1	5 of 15
	Toluene	ND - 59	5	2 of 15
	1,1,1-Trichloroethane	ND - 12.2	5	4 of 15
Semivolatile Organic Compounds (SVOCs)	Benzo(a)Pyrene	ND - 95	ND	2 of 15
	Chrysene	ND - 9.0	ND	1 of 15
	Pyrene	ND - 302	50	3 of 15
	Fluoranthene	ND - 400	50	2 of 15
	Acenaphthylene	ND - 450	20	2 of 15
Inorganic Compounds	Cyanide	ND - 2750	200	11 of 15

TABLE 1
Nature and Extent of Contamination (continued)
 Operable Unit #2 (Site 109)

Surface Soil Sampling Dates: August 2005

SURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
Semivolatile Organic Compounds (SVOCs)	Benzo(a)Pyrene	0.74 - 53	1	4 of 5
	Benzo(a)anthracene	6 - 490	1	1 of 5

Subsurface Soil Sampling Dates: July 1982 – June 1991

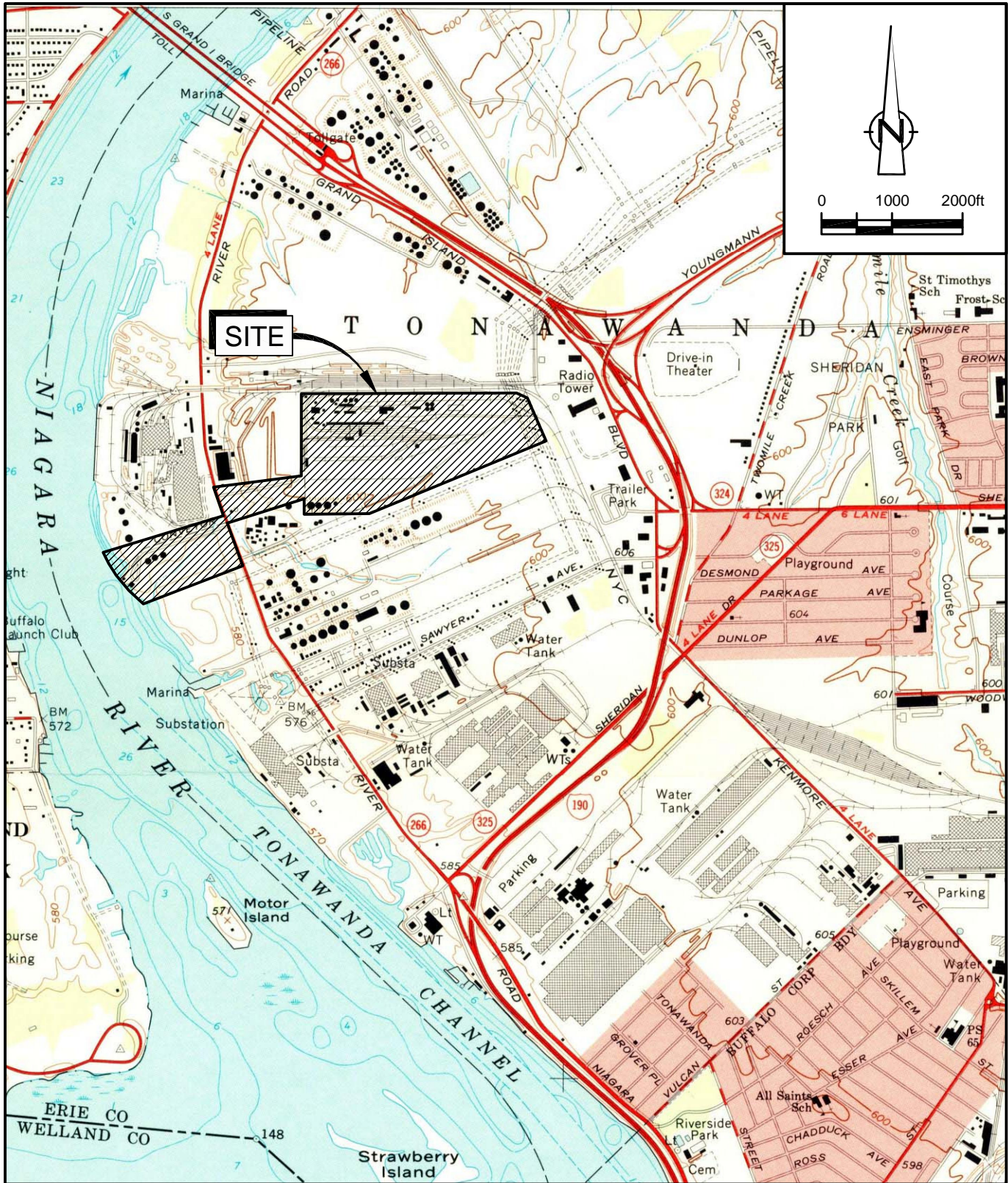
SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
VOCs, SVOCs or Inorganic compounds	Out of the three (3) samples obtained, none of the samples detected contaminants above SCGs			

Groundwater Sampling Dates: November 1985 – August 2005

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppb)^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND – 3.76	1	1 of 15
Semivolatile Organic Compounds (SVOCs)	Chrysene	ND – 88	ND	1 of 15
Inorganic Compounds	Cyanide	ND – 270	200	1 of 15

^a ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;
 ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
 ug/m³ = micrograms per cubic meter
 ND = non-detect

^b SCG = standards, criteria, and guidance values

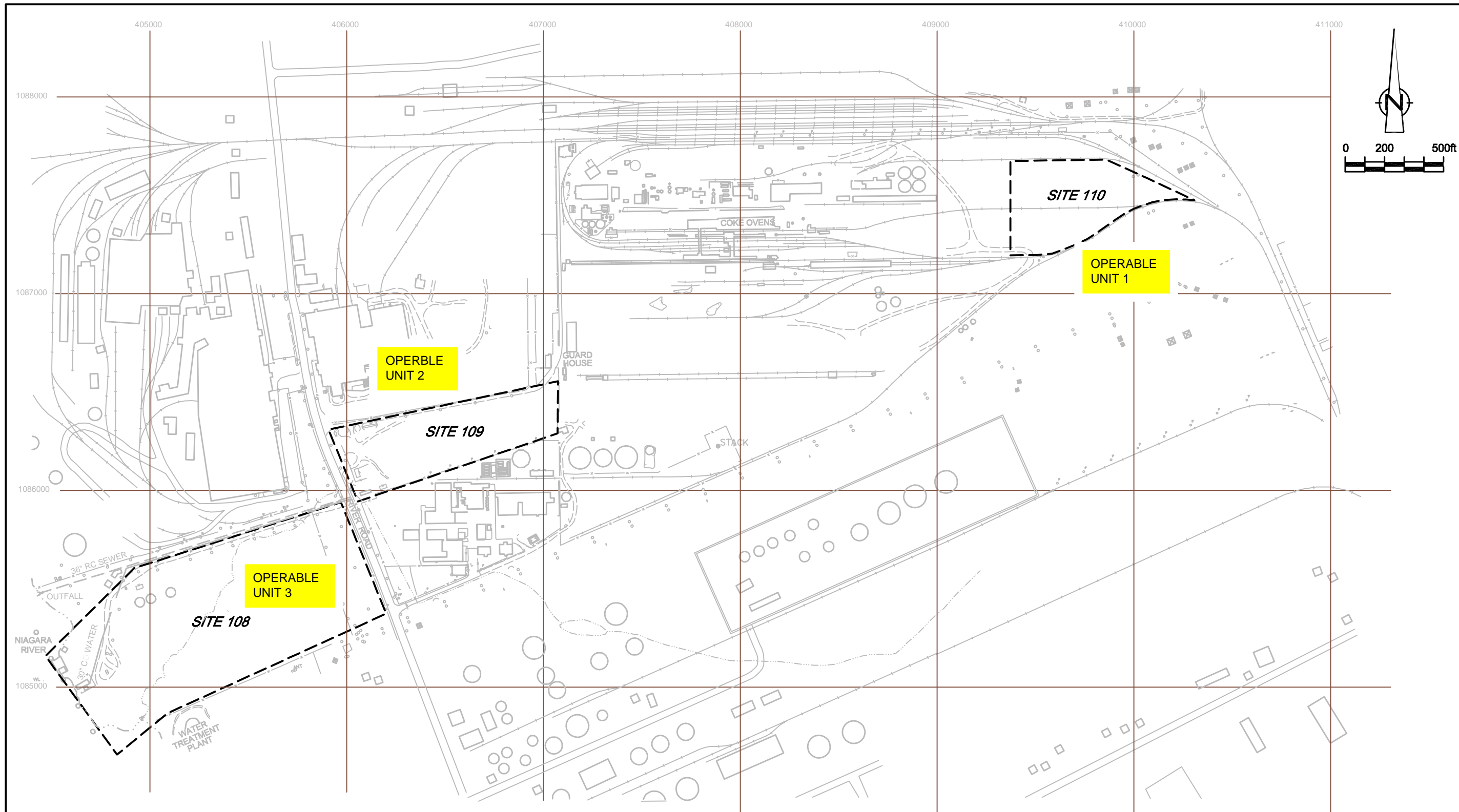


SOURCE: USGS QUADRANGLE MAP;
BUFFALO NW, NEW YORK

FIGURE 1

**SITE LOCATION
FINAL SUPPLEMENTAL REPORT
*Tonawanda Coke Corporation***



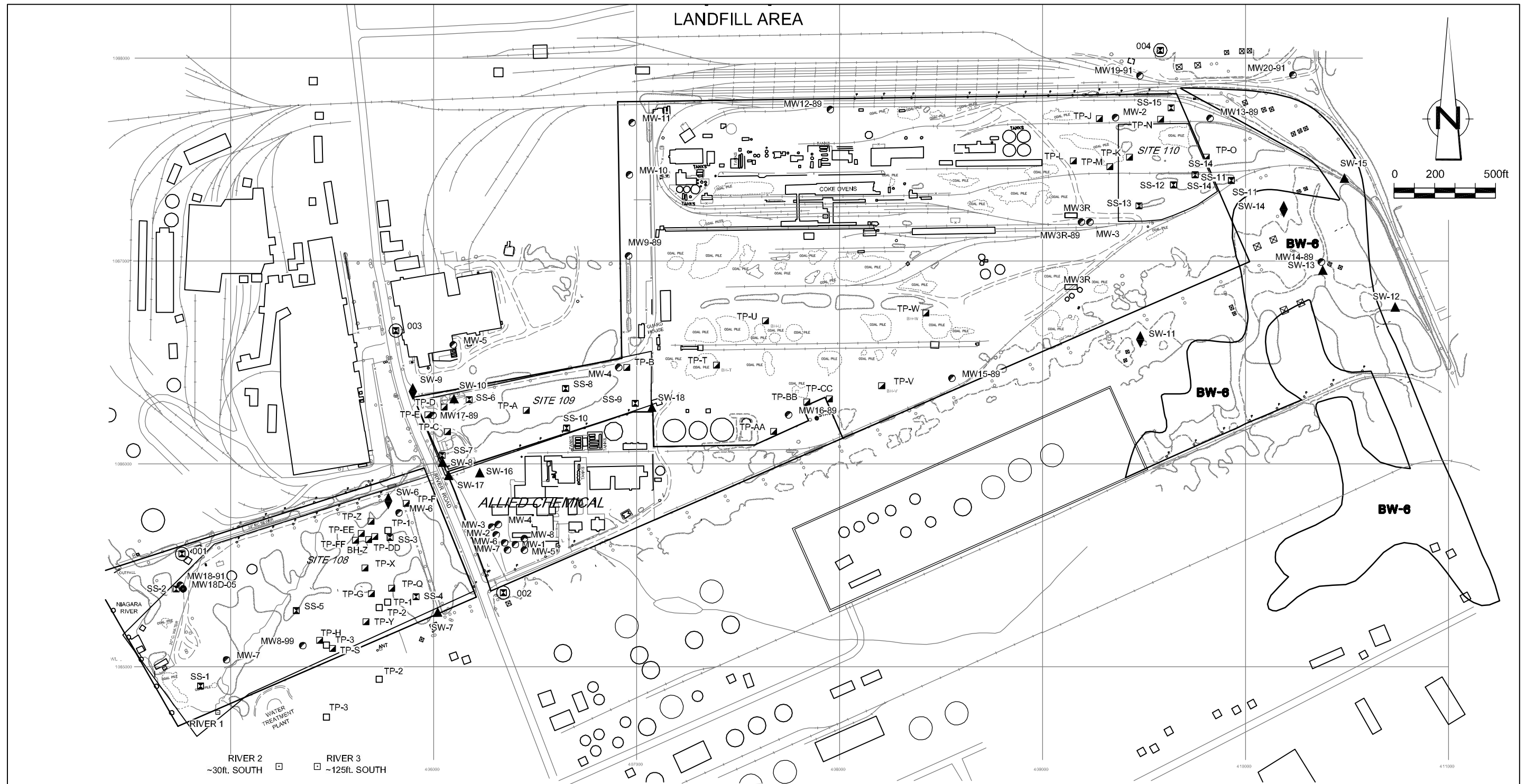


LEGEND
 [SITE 108] SITE LOCATION

FIGURE 2

SITE PLAN
FINAL SUPPLEMENTAL REPORT
Tonawanda Coke Corporation





LEGEND

- | | | | | |
|--|--------------------------|--|----------|---|
| | DISPOSAL AREA BOUNDARY | | MW18D-05 | 2005 MONITORING WELL LOCATION |
| | PROPERTY LINE | | SW-13 | SURFACE WATER SEDIMENT SAMPLE LOCATION |
| | LANDFILL IDENTIFICATION | | SW-5 | SURFACE WATER SAMPLE LOCATION |
| | WETLANDS AREA | | RIVER 1 | 2005 RIVER SEDIMENT SAMPLE |
| | TEST PIT LOCATION | | SS10 | 2005 SURFACE SOIL SAMPLING LOCATION |
| | MONITORING WELL LOCATION | | 001 | 2005 OFF-SITE BACKGROUND SURFACE SOIL SAMPLE LOCATION |
| | | | TP-1 | 2005 TEST PIT LOCATION |

SITE 109

- TP-S
- MW18-91



figure 3

SAMPLE POINT LOCATIONS
FINAL SUPPLEMENTAL REPORT
Tonawanda Coke Corporation

APPENDIX A

Responsiveness Summary

APPENDIX A

RESPONSIVENESS SUMMARY

**Tonawanda Coke Corporation
Operable Unit Nos. 1 and 2
Tonawanda, Erie County, New York
Site No. 915055**

The Proposed Remedial Action Plan (PRAP) for the Tonawanda Coke Corporation 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 29, 2008. The PRAP outlined the remedial measure proposed for the operable units 1 and 2 at the Tonawanda Coke Corporation site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on March 18, 2008, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 30, 2008.

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

COMMENT 1:

What media is contaminated? What is the nature and extent of contamination?

RESPONSE 1:

The soil and groundwater are contaminated at Operable Units (OU) 1 and 2.

Semi-volatile organic compounds (SVOCs) such as benzo(a)anthracene and benzo(a)pyrene were detected above standards, criteria and guidance (SCGs) in the surface soil. No other SVOCs above SCGs were detected in the samples. Volatile organic compounds (VOCs) and metals were not detected above the SCGs in these samples. The contamination in surface soils was not widespread but sporadic and is attributable to the current coke production activities at the site.

The contamination detected in groundwater sampled at the site was marginally exceeding the groundwater standards and does not require remediation.

No SVOCs, VOCs or metals were detected above the SCGs in subsurface soil samples.

The analytical results from the surface water samples show that no VOCs were detected. No SVOCs were detected at concentrations greater than the SCGs. Iron, manganese, and cyanide were present in the surface water samples at concentrations that exceed the SCGs.

COMMENT 2:

Was testing conducted off the property around the perimeters of the operable units?

RESPONSE 2:

The investigation was conducted both inside the area of the operable units and outside the operable units. Please refer to Figure 3 of the ROD for the location of soil, groundwater, surface water and sediment sampling locations.

COMMENT 3:

Is there a map showing the levels of contaminants?

RESPONSE 3:

Yes. Please refer to Table 1 of the ROD that lists all the contaminants that exceeded the SCGs. In addition, Figures (Plans) 1 thru 5 included in the January 2008 Final Supplemental Report include contaminant levels. This report is available for review at the following locations:

Town of Tonawanda Public Library - Kenmore Branch
160 Delaware Rd
Kenmore, NY 14217 Phone: (716) 873-2842

Glenn May, NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2915 Phone: (716) 851-7220 **BY APPOINTMENT ONLY******

Vivek Nattanmai, P.E., NYSDEC
625 Broadway
Albany, NY 12233-7013 Phone: Toll Free 1-888-459-8667
****BY APPOINTMENT ONLY****

COMMENT 4:

Is there anything the Town of Tonawanda should be concerned about?

RESPONSE 4:

Since the Operable Units 1 and 2 are located inside the current coke production facility and the access into the facility can be obtained for authorized people only, there are no environmental and health concerns from these OUs to the Town.

COMMENT 5:

Is there a fence around OU3?

RESPONSE 5:

Yes. There is a permanent metal fence around the OU3.

APPENDIX B

Administrative Record

Administrative Record

Tonawanda Coke Corporation Operable Unit Nos. 1 and 2 Site No. 915055

1. "Tonawanda Coke Corporation, New York State Superfund Phase I Summary Report, Nov. 1983" prepared by Recra Research Inc.
2. "Phase II Site Investigation, Tonawanda Coke Site, December 1986" prepared by Malcolm Pirnie Inc.
3. "Supplemental Site Investigation, Tonawanda Coke Corporation, July 1990" prepared by Conestoga-Rovers & Associates.
4. "Additional Site Investigation, Tonawanda Coke Corporation, November 1992" prepared by Conestoga-Rovers & Associates.
5. "Remedial Investigation, Summary Report, Tonawanda Coke Corporation, May 1997" Prepared by Conestoga-Rovers & Associates.
6. The Department and the Tonawanda Coke Corporation entered into a Consent Order on September 5, 1997.
7. "Final Supplemental Report (Revision 1) and Feasibility Study Report, January 2008" Prepared by Conestoga-Rovers & Associates.
8. Proposed Remedial Action Plan, February 2008, prepared by the Department.