Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

NYSEG Ithaca-Cayuga Inlet Coal Tar Site

Ithaca (C), Tompkins County New York
Site Number 7-55-007

March 2003

New York State Department of Environmental Conservation

GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG Ithaca-Cayuga Inlet Coal Tar Site
Ithaca (C), Tompkins County New York
Site No. 7-55-007

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the NYSEG Ithaca-Cayuga Inlet Coal Tar 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 (NYSDEC) for the NYSEG Ithaca-Cayuga Inlet Coal Tar inactive site, and the public's input to the Proposed Remedial Action Plan (PRAP) presented by the NYSDEC. 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

Actual or threatened release of hazardous waste constituents from this site have been addressed by implementing the interim remedial measure identified in this ROD. The removal of contaminated soil and waste from the site has significantly reduced the threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation (RI) and the successful completion of the Interim Remedial Measure (IRM) for the NYSEG Ithaca-Cayuga Inlet Coal Tar site and the criteria identified for evaluation of alternatives, the NYSDEC has selected No Further Action.

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. 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.

_____ _____

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

TABLE OF CONTENTS

SECTION **PAGE**

RECORD OF DECISION

NYSEG Ithaca-Cayuga Inlet Coal Tar Site
Ithaca (C), Tompkins County, New York
Site No.7-55-007
March 2003

SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected this remedy for the Ithaca Cayuga Inlet Coal Tar Site. As more fully described in Sections 3 and 5 of this document, The transport and storage of coal tar and manufactured gas plant related materials resulted in the disposal of hazardous wastes, including polycyclic aromatic hydrocarbons (PAHs) and volatile organic carbons (VOCs) at this site. These wastes contaminated the soil at the site, and resulted in:

- a threat to human health associated with potential exposure to PAHs.
- an environmental threat associated with the potential impacts of contaminants in soils to the groundwater and sediments.

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken by New York State Electric and Gas Corporation (NYSEG) at the Ithaca-Cayuga Inlet Site in response to the threats identified above. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI). The IRM undertaken at this site included the removal of contaminated soils and coal tar storage structures.

Based on the implementation of the above IRM, the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment, therefore No Further Action was selected as the remedy for this site.

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 with officially promulgated standards and criteria that are directly applicable, or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, criteria and guidance are hereafter called SCGs.

SECTION 2: SITE LOCATION AND DESCRIPTION

The site is located in the City of Ithaca in Tompkins County. It is one-quarter of an acre in size and is bounded on the west by the Cayuga Canal. The canal was originally known as the Cayuga Inlet, but an improvement project led to the construction of a new inlet further to the west. For the purposes of this document, the body of water adjacent to the site will be referred to as the Cayuga Canal. To the east are the southbound lanes of State Routes 13 and 34. The setting is an urban waterfront. The site is approximately one-half (½) mile west of the Ithaca Court Street MGP site, a class 2 site. The location of the site is depicted on Figure 1.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

From 1909 to 1927, the site was operated by predecessor companies of NYSEG as a receiving point for coal and a distribution terminal for tar by-products produced at the Ithaca Court Street MGP Plant. During this time, the use of tar tanks, and other coal tar handling activities contaminated the soils with PAHs and VOCs. After that, for an indeterminate period of time, until the early 1990's, two underground fuel storage tanks were located on site for the purpose of fueling recreational watercraft. These tanks contributed to additional VOC contamination in the soil. The tanks were removed in the early 1990's.

3.2: Remedial History

Starting in 1985, a remedial investigation was conducted to determine the nature and extent of the contamination onsite. This investigation concluded in 1989. In early 1994, NYSDEC signed a consent order with the NYSEG for the performance of a full remediation program at the site. In 1999, NYSEG performed an Interim Remedial Measure (IRM) at the site, which consisted of the removal of contaminated surface and subsurface soils as well as tar storage and handling structures. Confirmatory sampling verified that the remedial goals had been met and the contaminated materials were replaced with clean fill. In 2001, a supplemental investigation was performed to determine the extent of impacts, if any, to the Cayuga Canal from the MGP materials handled at the site. This investigation consisted of a bathymetric survey of the Cayuga Canal (a survey of the bottom of the canal) and the collection of sediment samples for visual and chemical analysis.

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 NYSDEC and NYSEG entered into a Consent Order on March 30, 1994. The Order obligates NYSEG to investigate and, if necessary, remediate 33 former MGP sites in their

service area. The Ithaca Cayuga Inlet Coal Tar site is one of the sites included in the multi-site order,

SECTION 5: SITE CONTAMINATION

A remedial investigation (RI) 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 October 1985 and September, 2001. The field activities and findings of the investigation are described in the RI report.

The following activities were conducted during the RI:

- Research of historical information;
- Geophysical survey;
- Excavation of 6 test pits to locate underground drainage structures;
- Installation of 7 soil borings and 5 monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Groundwater sampling of 5 new and existing monitoring wells;
- A survey of public and private water supply wells in the area around the site;
- Collection of 9 surface water samples;
- Collection of 23 aquatic sediment samples;

To determine whether the soil, groundwater, and sediment 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 NYSDEC “Ambient Water Quality Standards and Guidance Values” and Part 5 of the New York State Sanitary Code.
- Soil SCGs are based on the NYSDEC “Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels".
- Sediment SCGs are based on the NYSDEC “Technical Guidance for Screening Contaminated Sediments.”

- Reference aquatic sediment samples were taken from 6 locations. These locations were upstream of the site, and were unaffected by historic or current site operations. The samples were analyzed for VOCs, SVOCs, and inorganics. The results of the analysis were compared to data from the RI (Table 1) to determine appropriate site remediation goals.

Based on the RI results, in comparison to the SCGs and potential public health and environmental exposure routes, certain media and areas of the site require remediation. These are summarized below. More complete information can be found in the RI report.

5.1.1: Site Geology and Hydrogeology

The site is overlain by several layers of overburden. The uppermost layer is a fill layer which ranges in depth from 2 to 8 feet and has a sandy-silt consistency. Under the fill layer is a clayey silt layer, which has low hydraulic conductivity. Beneath the clayey silt layer, in the 12 to 15 foot depth range, is a sand layer. Underneath this sand layer, at the bottom of the deep borings, is a silt layer. This silt layer appears to be contiguous and has low conductivity.

Groundwater at the site generally flows west towards the Cayuga Canal. The groundwater level is at the same elevation as the Cyauga Canal and is, therefore, quite high and saturates all but the uppermost layer of fill at the site.

5.1.2: Nature of Contamination

As described in the RI report, many soil, groundwater and sediment samples were collected to characterize the nature and extent of contamination. The main categories of contaminants which exceed their SCGs are volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs).

Specific volatile organic compounds of concern in soil and groundwater are benzene, toluene, ethylbenzene and xylenes.

The specific semivolatile organic compounds of concern in soil and groundwater are the following polycyclic aromatic hydrocarbons (PAHs):

acenaphthene	acenaphthylene
anthracene	*benzo(a)anthracene*
benzo(a)pyrene	*benzo(b)fluoranthene*
benzo(g,h,i)perylene	*benzo(k)fluoranthene*
dibenzo(a,h)anthracene	*chrysene*
fluoranthene	fluorene
indeno(1,2,3-cd) pyrene	2-methylnaphthalene
naphthalene	phenanthrene
pyrene	

PAH concentrations referred to in this plan are the summation of the individual PAHs listed above (i.e. total PAHs or TPAHs). The italicized PAHs are probable human carcinogens. The summation of the italicized PAHs is referred to in this document as cPAHs.

5.1.3: Extent of Contamination

This section describes the findings of the investigation for all environmental media that were investigated.

Chemical concentrations are reported in parts per billion (ppb) for water, parts per million (ppm) for waste, soil, and sediment. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for the MGP contaminants of concern in soil, groundwater and compares the data with the SCGs for the site. Table 2 summarizes the degree of contamination for the MGP contaminants of concern in sediments and compares the data with the SCGs for sediments The following are the media which were investigated and a summary of the findings of the investigation.

Waste Materials

Waste materials were confined to a few subsurface structures which were part of the historic MGP tar-handling process. These are depicted on Figure 2 and included a tar well, two pipes, a wooden duct, and a partial wooden structure on the shore of the Cayuga Canal. Dense Non-Aquaeous Phase Liquids (DNAPL) were found in those structures, but they were not found outside of them. The structures, their contents, and any soils above the remedial goals were removed as part of the 1999 IRM.

Surface Soil

Four composite surface soil samples (0-6 inches) were collected across the site. The results from these samples showed minimal VOC contamination. Benzene was found in two samples from the southern sections of the site (areas 2 and 3) in concentrations ranging from .058 ppm to .120 ppm. Toluene was found in those samples as well as area 1, ranging in concentrations from .098 ppm to .160 ppm. Area 2 had the highest concentration of both VOCs of concern that were detected.

PAHs were found in all the samples across the site. The highest concentration of total PAHs was in Area 2 (74.1 ppm), while the lowest concentration of total PAHs were found in Area 1 (20.7 ppm).

The locations of the surface soil samples, all taken prior to the IRM in 1999, are indicated on Figure 3. The samples were taken from the locations marked as Areas 1 through 4.

Subsurface Soil

Six subsurface soil sample were collected on the site. Of these samples, VOCs of concern were detected in three of those samples. The highest concentrations of total VOCs of concern were found in boring B-2 at 7 to 9 feet below the ground surface (bgs). Two of the three samples

where VOCs were detected were from this location and they exhibited total VOCs in the range of 936 ppm to 1,461 ppm.

PAHs were present in all but two samples collected. The range of total PAHs was from non-detect to 13,997 ppm. The highest concentration was found in boring B-2 at 7 to 9 feet bgs.

The location of the subsurface borings is indicated on Figure 3.

Sediments

Sediment samples were taken adjacent to the site as well as upstream and downstream of the site. VOCs of concern were not detected in any of these samples. Total PAHs were detected at a maximum level of 44.64 ppm adjacent to the site and at a maximum level of 29.95 ppm upstream. A comparative analysis of the individual PAHs shows that the sediments adjacent to the site are not linked to the waste materials found onsite. The location of the sediment samples is indicated on Figure 4.

Groundwater

Five monitoring wells were sampled onsite. In the first two rounds of sampling in July and September of 1987, no VOCs of concern were detected and only one PAH was detected. Pyrene was detected in MW-5, in July, 1987, at a concentration of .012 ppb. In later sampling in June of 2000, June of 2001, and December of 2001, all of the samples were non-detect for VOCs and PAHs. The locations of the monitoring wells are indicated on Figure 3.

5.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the RI.

The IRM for this site took place in 1999 and involved the removal of 45.6 tons of coal-tar impacted soils and structures, and the removal of 1,480 tons of SVOC and VOC impacted soils. The soil was removed to a minimum depth of 5 feet across the entire site. (See Figure 2) In the area of the tar well (also on Figure 2), the soil was removed to an approximate depth of 14 feet bgs. The pipe that entered the tar well from the east side of the site was capped. The two pipes that exited the west side of the tar well were removed along with the wooden structure where the pipes terminated at near the edge of the canal. The soil around the partial wooden structure which the pipes terminated at was removed to a depth of approximately 8 feet bgs. The wooden duct to the south of the existing manhole was also removed from its apparent termination point at the inlet to the eastern edge of the property. The duct was plugged with grout at the eastern property boundary. After the excavation was completed, confirmation samples were collected to confirm that all contaminated soils above the remediation goals were removed. Then clean, imported fill, which met the TAGM 4046 guidelines, was used to replace the excavated materials. In addition to the confirmation samples in the excavation, two surface soil samples were taken near the site to establish background levels. These samples were non-detect for total VOCs and exhibited a range of total PAHs from 0.9 to 6.09 ppm.

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. A more detailed discussion of the human exposure pathways can be found in Section 4.3 of the Task 2 Initial Field Investigation Program which can be found in the document repository.

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.

The removal of coal-tar impacted soils and structures has removed the contaminant source on the site. The contamination that has been removed is no longer available to potential contaminant release and transport mechanisms, on the site, that could transfer it to a point of exposure, and via a route of exposure, to a human receptor population.

5.4: Summary of Environmental Impacts

This section summarizes the 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.

In close proximity to the site are several environmental resources. These include water bodies such as the Cayuga Canal, Cayuga Lake, and Six Mile Creek. Coy Glen is a critical environmental area located within 1.5 miles of the site. There are also two state regulated wetlands within 1.5 miles of the site as well as a recreational river (Fall Creek). The Fish and Wildlife Impact Analysis, which is included in the Final Cayuga Inlet Coal Tar Remedial Investigation report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors. As the Fish and Wildlife Impact Analysis was completed after the IRM, and the IRM removed all traces of contamination, no viable exposure pathways are noted from onsite media (surface soils, subsurface soils, and groundwater).

The Fish and Wildlife Impact Analysis noted that sediments adjacent to the site exceed the screening criteria for effects to fish and wildlife. No site specific data were collected to assess

actual impacts of the elevated PAHs to the wildlife. The exceedances in samples adjacent to the site were comparable to upstream results. Also, a comparative analysis of the individual PAHs from the site, upstream sediment samples, and sediment samples adjacent to the site shows that the PAHs in the sediments adjacent to the site more closely match upstream sediments than they do the waste materials at the site. This indicates that the cause of the exceedances may be the result of storm water discharge upstream or several non-point and point sources located along the waterway, such as boat traffic and historic petroleum storage and handling operations. The upstream findings indicate that the elevated PAHs levels are not unique to historic site-related coal tar handling activities. Because the exceedances are not a result of site related contamination, no additional work is proposed.

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 375-1.10. At a minimum, the remedy selected must eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

Prior to the completion of the IRM described in Section 5.2, the remediation goals for this site were to eliminate or reduce to the extent practicable:

- potential exposures of persons at or around the site to VOCs and PAHs in surface soils, subsurface soils, and groundwater
- environmental exposures of flora or fauna to VOCs and PAHs in surface soils, subsurface soils, and groundwater
- the release of contaminants from soil into groundwater that may create exceedances of groundwater quality standards; and
- the potential release of contaminants from surface soils, subsurface soils, and groundwater into surface water and sediments through storm water erosion and groundwater discharge.

Further, the remediation goals for the site include attaining to the extent practicable:

- ambient groundwater quality standards and
- soil cleanup guidelines for unrestricted use and
- sediment screening criteria.

The NYSDEC believes that the IRM has accomplished these remediation goals

Based on the results of the investigations at the site, the IRM that has been performed, and the evaluation discussed below, the NYSDEC has selected No Further Action as the preferred alternative for the site.

The basis for this selection is the NYSDEC's conclusion that No Further Action will be protective of human health and the environment and will meet all SCGs. Overall protectiveness is achieved through meeting the remediation goals listed above. By removing the structures, waste and contaminants in the soils onsite, the IRM has eliminated the potential for future release and transport mechanisms on the site facilitating exposures of humans, fish, and wildlife Furthermore, with no significant contamination remaining on the site, the potential for the release of MGP contaminants into the groundwater or other media is no longer a concern. Groundwater quality standards and soil cleanup guidelines have been attained.

While some contaminants found in the sediments exceed the screening criteria set forth by NYSDEC, these contaminants were similar in their composition to contaminants found upstream and do not appear to be site-related contaminants. This indicates that the cause of the exceedances may be the result of storm water discharge upstream, and related to several non-point sources located along the waterway, such as boat traffic and historic petroleum storage and handling activities.

The main SCGs applicable to this project are as follows:

1. Ambient groundwater quality standards: these are met currently now that the source of groundwater contamination has been removed. The last round of groundwater sampling showed all contaminants of concern were non-detect in all the wells.

2. Technical Administrative Guidance Memorandum 4046: establishes total PAH cleanup guidelines for soil at 500 ppm. This SCG has been met by the IRM by removing all soil with total PAHs greater than 100 ppm and replacing it with soil which met the criteria.

3. NYSDEC sediment criteria: while some contaminants found in the sediments exceed the screening criteria set forth by NYSDEC, these contaminants were similar in their composition to contaminants found upstream and do not appear to be site-related contaminants. This indicates that the cause of the exceedances may be the result of storm water discharge upstream, and related to several non-point sources located along the waterway, such as boat traffic and historic petroleum storage and handling activities.

Therefore, the NYSDEC concludes that the removal of contaminated surface and subsurface soils and historic structures by the IRM already completed have achieved the remediation goals for the site and that No Further Action is needed.

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 alternatives. 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 fact sheet describing the PRAP was sent to the members of the public contact list
- A public meeting was held on February 27, 2003 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

In general, the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to the PAHs found in the sediment of the Cayuga Canal, the extent of the waste at the site, the connection of this site to the Ithaca Court Street site, and the future use of the site and the Canal. All of these concerns were addressed in the Responsiveness Summary, but did not result in any modifications to the PRAP and the resulting Record of Decision

TABLE 1A
Nature and Extent of Contamination prior to the IRM
May 1987 - September, 1987

SURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND[c]-0.120	0.06	1 of 4
	Toluene	ND-0.160	1.5	0 of 4
	Ethylbenzene	ND	5.5	0 of 4
	Xylene	ND	1.2	0 of 4
	Total VOCs	ND-0.280	10	0 of 4
Semivolatile Organic Compounds (SVOCs)	Total PAHs	20.7-74.1	10	0 of 4
	Total CPAHs	12.5-40.9	1	4 of 4

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND-11	0.06	2 of 7
	Toluene	0.041-150	1.5	2 of 7
	Ethylbenzene	ND-230	5.5	2 of 7
	Xylene	ND-920	1.2	1 of 7
	Total VOCs	ND-1461	10	2 of 7
Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND-13,997	100	3 of 7
	Total CPAHs	0-2,237	10	3 of 7

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND	1	0 of 5
	Toluene	ND	5	0 of 5
	Ethylbenzene	ND	5	0 of 5
	Xylene	ND	5	0 of 5
	Total VOCs	ND	--	
Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND-0.012	--	
	Total CPAHs	ND	–	

TABLE 1B

IRM Subsurface Confirmatory Samples[d]
February 1999 -March, 1999

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND-0.037	0.06	0 of 13
	Toluene	ND-0.02	1.5	0 of 13
	Ethylbenzene	ND-0.14	5.5	0 of 13
	Xylene	ND-0.13	1.2	0 of 13
	Total VOCs	ND-0.29	10	0 of 13
Semivolatile Organic Compounds (SVOCs)	Total PAHs	0.125-42.17	100	0 of 13
	Total CPAHs	ND-8.06	10	0 of 13

TABLE 2
Sediment samples from Cayuga Canal
September, 2001

SEDIMENTS	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[be] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND	0.81	0 of 6
	Toluene	ND	1.4	0 of 6
	Ethylbenzene	ND	0.70	0 of 6
	Xylene	ND	2.67	0 of 6
	Total VOCs	ND	--	
Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND-44.64	4[f]	5 of 6
	Total CPAHs	ND-22.54	–	
Upstream Volatile Organic Compounds (VOCs)	Benzene	ND	0.81	0 of 2
	Toluene	ND	1.4	0 of 2
	Ethylbenzene	ND	0.70	0 of 2
	Xylene	ND	2.67	0 of 2
	Total VOCs	ND	–	
Upstream Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND-29.52	4[f]	5 of 6
	Total CPAHs	ND-12.53	–	

[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/m^3 = micrograms per cubic meter

[b] SCG = standards, criteria, and guidance values; TAGM 4046, TOGS 1.1.1, Technical Guidance for Screening Contaminated Sediments

[c]ND= not detected

[d] No Surface soil confirmatory samples were taken because the top five feet of soil was removed over the entire site and was replaced with soil which met the TAGM 4046 criteria.

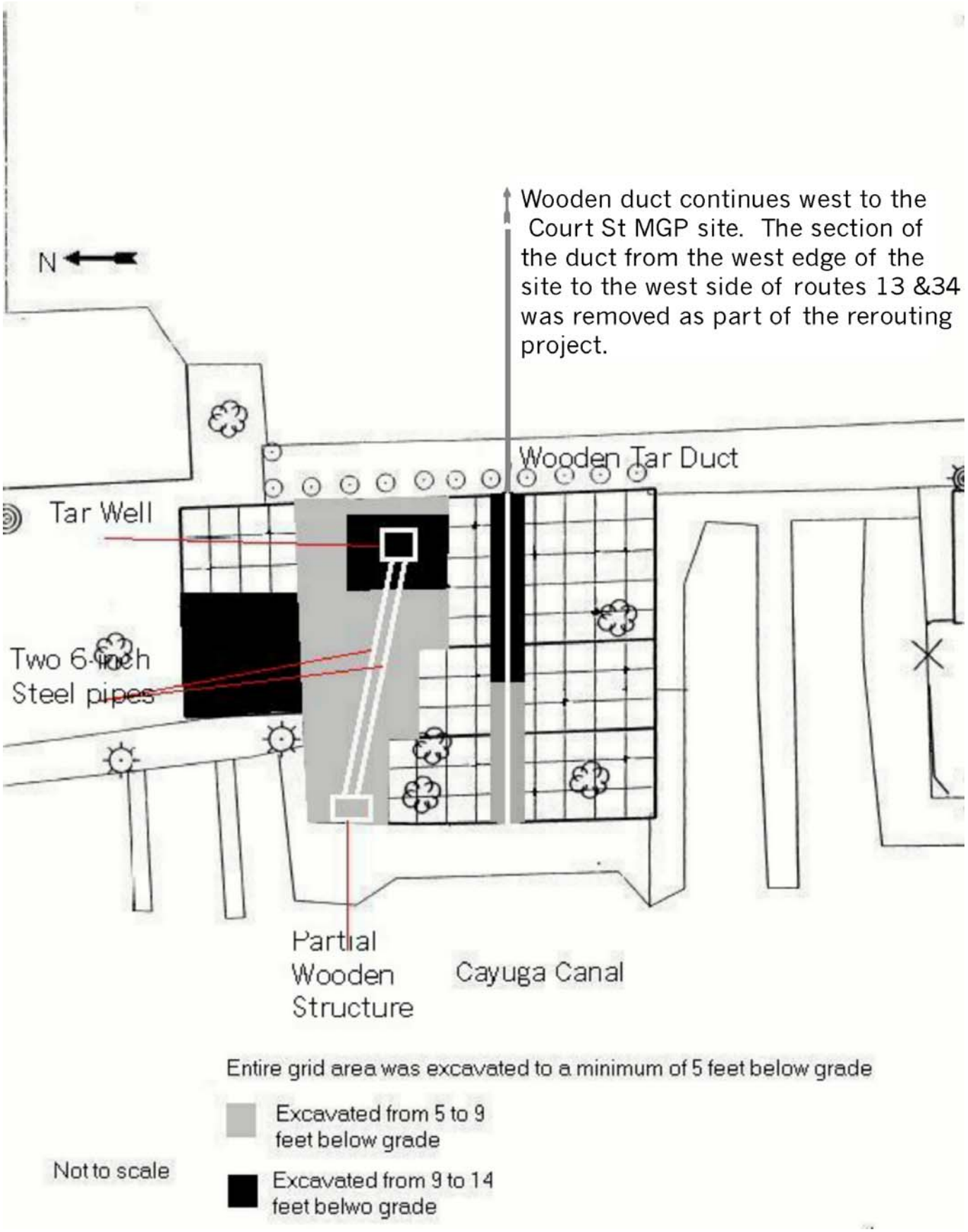
[e]SCG= sediment SCGs were based on a total organic carbon content of 29% for the samples and the results of the upstream data

[f]Total PAH criteria is effects-based, therefore total organic carbon is not used for calculation of the criteria.

NYSEG ITHACA-CAYUGA INLET COAL TAR SITE
ITHACA (C), TOMPKINS COUNTY, NEW YORK

SITE LOCATION MAP

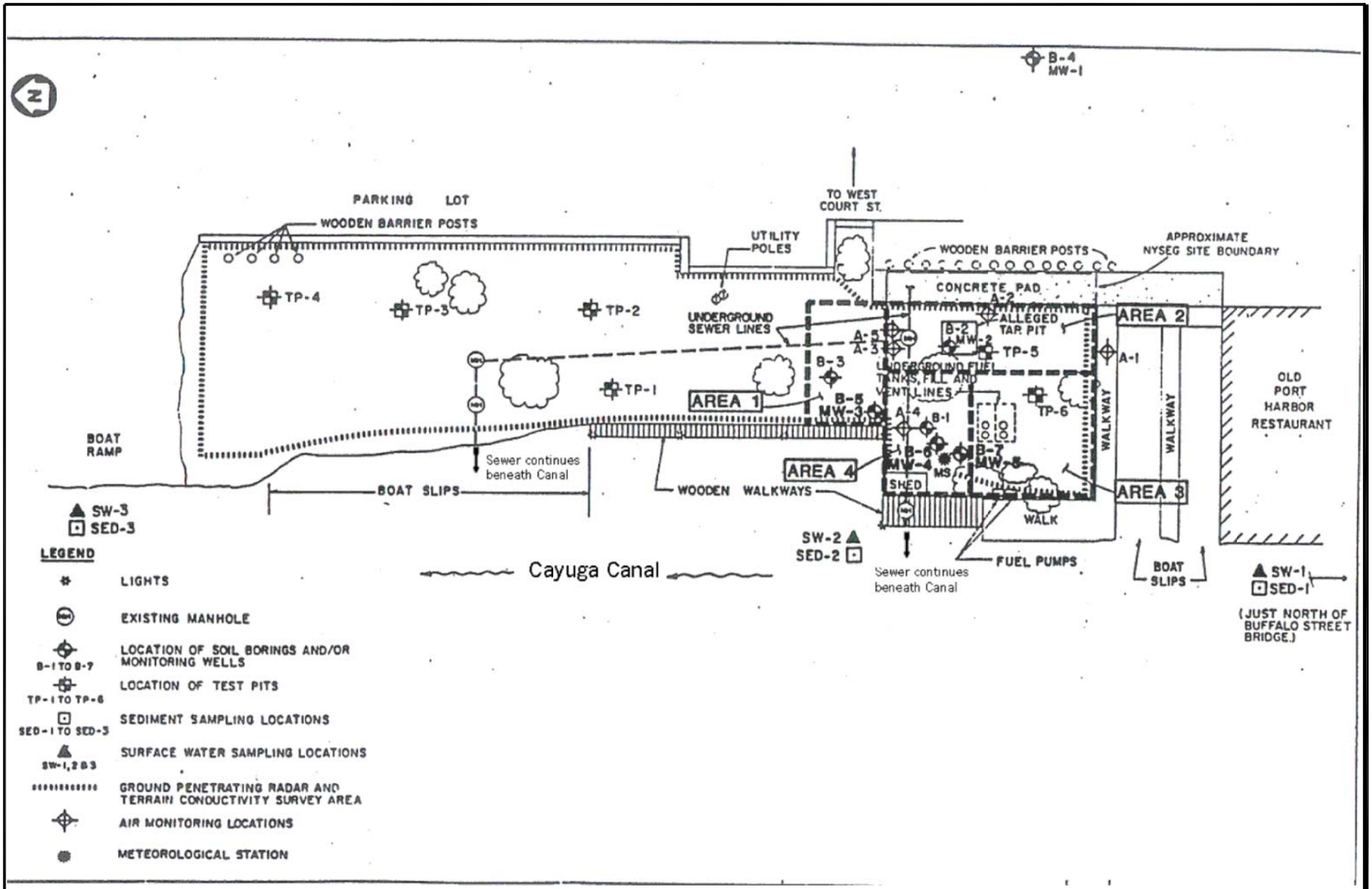
FIGURE 1



NYSEG ITHACA-CAYUGA INLET COAL TAR SITE
ITHACA (C), TOMPKINS COUNTY, NEW YORK

IRM EXCAVATION LIMITS AND HISTORIC STRUCTURES

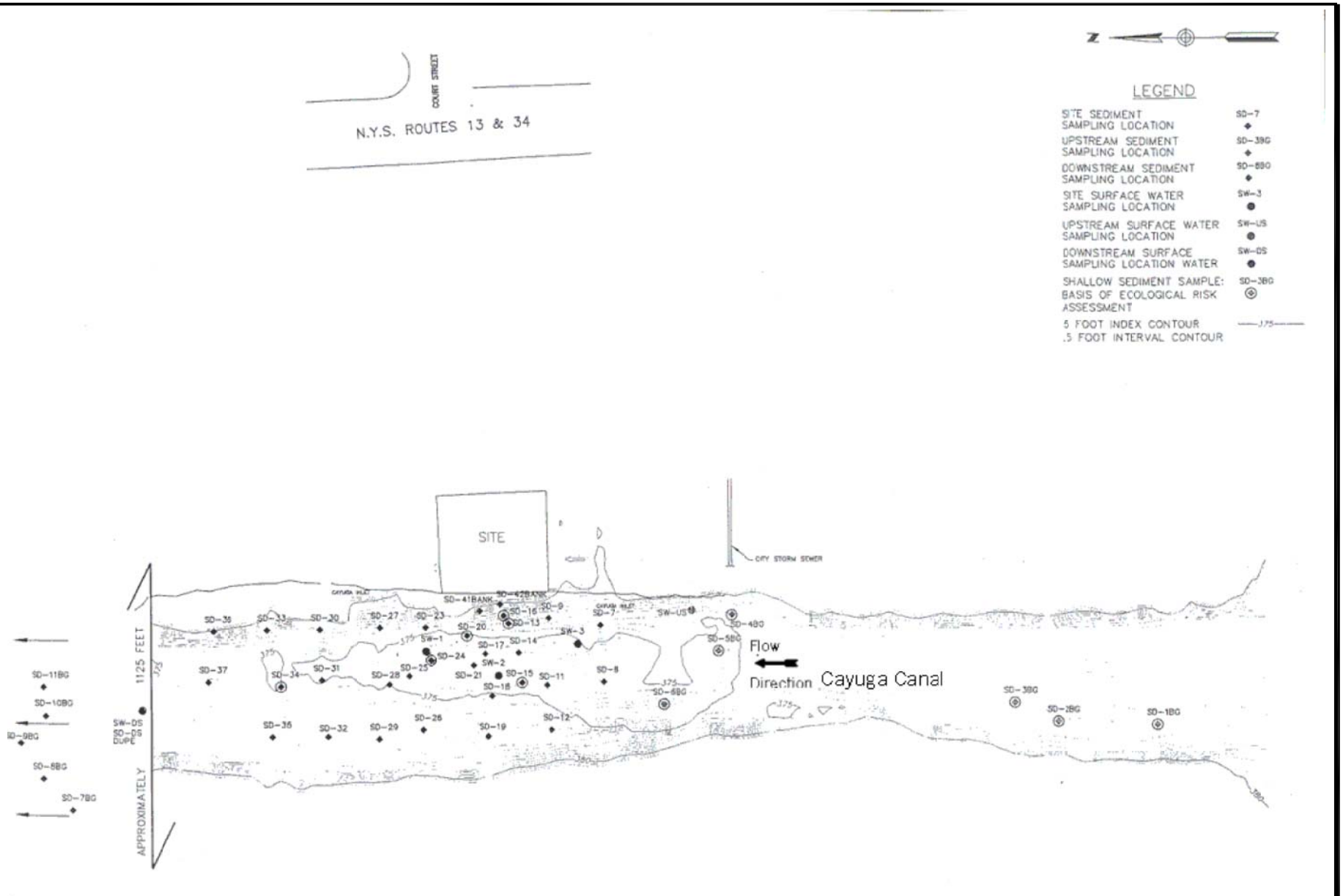
FIGURE 2



NYSEG Ithaca-Cayuga Inlet Coal Tar Site
Ithaca (C), Tompkins County, New York

SAMPLE LOCATIONS

FIGURE 3



NYSEG ITHACA-CAYUGA INLET COAL TAR SITE
ITHACA (C), TOMPKINS COUNTY, NEW YORK

SEDIMENT SAMPLE LOCATIONS

FIGURE 4

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

NYSEG Ithaca-Cayuga Inlet Coal Tar Site
Ithaca (C), Tompkins County, New York
Site No. 7-55-007

The Proposed Remedial Action Plan (PRAP) for the NYSEG Ithaca-Cayuga Inlet Coal Tar site, was prepared by the New York State Department of Environmental Conservation (NYSDEC) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on February 5, 2003. The PRAP outlined the remedial measure proposed for the contaminated subsurface soil at the NYSEG Ithaca-Cayuga Inlet Coal Tar 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 February 27, 2003, which included a presentation of the Remedial Investigation (RI) 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 7, 2003.

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

The first six comments were received in writing from the Coal Tar Advisory Committee at the public meeting, read into the record and responded to by NYSDEC. A copy is included in the Administrative Record. The remaining comments were received from the attendees of the public meeting.

COMMENT 1: The connection between the manufactured gas plant and contaminated inlet sediment seems logically evident, they're clustered around the site. We understand that there are lots of sources for these PAHs from car exhaust to fire and that some of them could have come from run off from storm sewers, bridges. But your own data seems to show them concentrated around this particular site. MGP related contamination in the inlet is especially problematic because the inlet feeds in to Cayuga Lake which is a major source of drinking water for many residents in Tompkins County. Why is NYSEG the responsible party for the manufactured gas plant itself, and its related off-site contamination, not being made to clean up the inlet sediment? How is that being justified?

RESPONSE 1: As stated in the PRAP, the nature of the PAHs found in the Canal are not consistent with the coal tar that was found on the site and removed. There are some common constituents, such as benzo(a)pyrene, that will appear in many different PAH mixes. In evaluating the analytical results from the sediments, considering the ratios and types of PAH constituents found in the sediments by use of a histograph, there was not a correlation between the PAHs in the Canal and the PAHs found in the coal tar onsite. There were/are many other uses and possible impacts to this waterway including: two major storm sewer discharges immediately upstream of the area in question, oil terminals were located up and down the inlet, heavy boat usage, a boatyard across the canal, as well as other post -MGP uses of the site, such as a boat fueling station. Sediment samples were collected downstream and upstream of the site, and there was no one area that could be positively identified with the coal tar site. There were impacts throughout the area, which is typical of a heavily used stretch of inlet like this. But in this inlet, which is heavily utilized, this represents background conditions. If PAHs had been found immediately adjacent to the site that were clearly the same as the coal tar, this would have resulted in a removal, but there wasn't that correlation. There was not a relationship established to the coal tar, to require NYSEG to address the PAHs present.

COMMENT 2: The second question is, whether or not NYSEG is made to clean up the inlet sediment, is someone going to have to clean them up and pay the bill at some point? Given all that the city hopes to accomplish with waterfront redevelopment, that cleanup's likely going to need to take place sooner rather than later.

RESPONSE 2: The removal of PAHs from the sediment, unless related to the subject site, is not being considered by this Record of Decision. However, NYSDEC is aware of a proposal to dredge the Canal for navigational reasons.

COMMENT 3: Given the PAHs that you're finding in the canal, from whatever the source might be, what thresholds of acceptability will the DEC enforce for the clean up of the inlet sediments and will they be related to the soil thresholds that are going to be used for the plant site for things like benzene, benzo(a)pyrene?

RESPONSE 3: Remedial levels for sediments, such as the inlet, and soils are not related. Different guidance and considerations affect the decision making; however, one similarity is the consideration of existing conditions unrelated to a site, or background. As noted See Response 2, DEC will not be enforcing any further cleanup of the site related to coal tar; however, should navigational dredging occur DEC regulations and guidance covering handing and disposal of dredge spoils exist which should address this comment .

COMMENT 4: The interim remedial measure at the inlet site dealt only with a small portion of the Court Street duct, sort of the end of the Court Street duct. The portion from the plant site to Meadow Street will be addressed as part of the plant remediation. What's the status of the duct between Meadow Street and this inlet site and how and when will any remaining section of the duct between Meadow and the inlet be addressed?

RESPONSE 4: NYSEG has defined the break between these two projects as the property line at the inlet site. So the entire duct from the inlet site to the manufactured gas plant is part of the Ithaca Court Street manufactured gas plant site, and will be addressed in the OU2 portion of that project.

COMMENT 5: The MGP plant, as we all know, began operations in 1853. Your documentation says that this inlet site was used as a distribution terminal only after 1909. So where was the distribution done prior? Has the DEC asked for testing of sediment soils and ground water in other locations to find other potential distribution sites? A responsible party is identified, shouldn't the DEC ask NYSEG to look for all possible distribution sites while the corporation is under the terms of a consent order for the plant and all impacted properties related to the plant?

RESPONSE 5: NYSDEC does not believe there are any other distribution points based upon available information. This remote tar handling facility is unique to this site in our investigation of MGP sites state-wide.

COMMENT 6: Seven soil borings and five monitoring wells were installed at the inlet site. This is a much higher concentration of samples in quite a small area. It's a higher concentration than has been installed in the residential neighborhood in which the plant's located and in which the contamination originates. How is this justified?

RESPONSE 6: The number of soil borings and monitoring wells at the Cayuga Inlet site represent a complete investigation while Court Street site investigation in the neighborhoods is still ongoing. Also these samples were taken to define limits of excavation, which typically are of a greater number and density, than sampling done to determine the nature and extent in an RI.

COMMENT 7: How are cleanup criteria determined?

RESPONSE 7: The appropriate remedial level is determined at each site on a case by case basis, utilizing available guidance or regulatory levels as appropriate and available. Part of the determination involves a consideration of nature and extent of contamination, as well as human and environmental exposures. Also considered are existing conditions unrelated to a site, also termed background. All these factors are considered in the decision making process. NYSDEC and NYSDOH will target removals or treatment based upon the site specific conditions. The preference is always to remove material, where possible, followed by treatment in situ; and only after eliminating these other two scenarios would we consider some type of containment which breaks any exposure pathways.

COMMENT 8: What is the status of the wooden duct to the east of the site?

RESPONSE 8: Any areas impacted by the historic MGP operations east of the site will be addressed as part of the remedy for the Ithaca Court Street site. See also RESPONSE 4.

COMMENT 9: The summary statement in this proposed PRAP that accompanied this larger report, refers to the wooden duct appearing to terminate at the inlet. And from the overhead that you showed, there is not a diagram that connection between the wooden duct and the tar pit. Do we know where that connection would have been?

RESPONSE 9: No connection between the tar pit and the wooden duct was identified during the removal.

COMMENT 10: It says the pipe that entered the tar well from the east side of the site was capped in this summary. So it sounds like there is something there and it was left. It's described as just being capped, the pipe dumping in to the tar pit. Has that been removed or do we know where that goes?

RESPONSE 10: The pipe was removed to the site property line and was then capped. The remaining pipe to the east of the site will be addressed as part of the Ithaca Court Street site. Also see RESPONSES 4 and 8.

COMMENT 11: Will the proposed remedy mean the site will be open for unrestricted use?

RESPONSE 11: Yes, the remedy will allow unrestricted use of this site.

COMMENT 12: Did you do any sampling beyond the boundaries of this site and analyze those samples to determine whether MGP contamination exists beyond this area?

RESPONSE 12: Yes, test pits 1, 2, 3, and 4 were all excavated outside the area of the IRM. These pits were excavated to a depth of 10 feet and samples were collected from pits 1, 2 and 4 for analysis. All of these samples were non-detect for all PAHs. Visually the test pits showed no evidence of coal tar. Only one boring was advanced outside the IRM area, B-4. This boring was used to install an upgradient well. While no analytical soil samples were recovered from B-4, there were no visible signs of tar in the boring and the groundwater results from the monitoring well have always been non-detect for MGP related contamination. The area of the IRM was delineated based on the negative results from borings and test pits installed on the property comprising the site. Since contamination was found to be contained within these site boundaries only the limited off-site sampling noted above was necessary. In addition, at the completion of the removal, side wall confirmatory samples were collected to confirm that the IRM had removed all the contamination. The nature of MGP contaminants is that they radiate from a point source. The sources were removed as well as contamination moving from the point sources. NYSDEC has no reason to believe there is isolated waste or contaminants outside the investigation area.

COMMENT 13: The decision to separate this site from the Court Street site seems illogical.

RESPONSE 13: The decision to separate this site form the Court Street site was based on the timing of the two sites coming into NYSDECs remedial program. At the time this site was discovered, the connection between this site and the Court Street site had not been identified.

COMMENT 14: Will NYSDEC place any restrictions on the City of Ithaca while it constructs a walkway on the site?

RESPONSE 14: No restrictions are necessary. The No Further Action determination clears the site for unrestricted use. Also see RESPONSE 11.

COMMENT 15: This summary report in its introductory section, section one indicates that we, the public, are encouraged to review and comment on all of the alternatives to this PRAP identified here. And what's being proposed is no further action. What are our alternatives?

RESPONSE 15: In this case there are no other alternatives listed in the report, this was generic language mistakenly used. That reference has been removed from the Record of Decision.

COMMENT 16: What was the tar pit made of?

RESPONSE 16: The tar pit was a wooden structure.

APPENDIX B

Administrative Record

Administrative Record

NYSEG Ithaca-Cayuga Inlet Coal Tar Site
Site No. 7-55-007

1. Order on Consent, Index No. D0-0002-9309, between NYSDEC and New York State Electric and Gas Corporation, executed on March 30, 1994.

2. "Investigation of Former Coal Gasification Sites: Cayuga Inlet Ithaca, New York: Task 2 Report: Initial Field Investigation Program," June, 1987, Prepared by E.C. Jordan Co.

3. "Investigation of Former Coal Gasification Site: Cayuga Inlet Ithaca, New York: Task 2 Addendum Report: Field Investigation Program," May, 1989, Prepared by E.C. Jordan Co.

4. "Interim Remedial Measures: Final Engineering Report for Activities at Ithaca Cayuga Inlet Coal Tar Site: City of Ithaca, Tompkins County, New York," June 1999, Prepared by New York State Electric and Gas Corporation

5. "Final Cayuga Inlet Coal Tar Remedial Investigation: Ithaca, New York," January 10, 2003, Prepared by Woodard and Curran

6. "Fact Sheet: Notice of Availability of the Proposed Remedial Action Plan for the Ithaca Cayuga Inlet Coal Tar Site," February, 2003, Prepared by NYSDEC

7. Proposed Remedial Action Plan for the NYSEG Ithaca-Cayuga Inlet Coal Tar site, dated February 2003, prepared by the NYSDEC.

8. Coal Tar Advisory Committee Comment letter, submitted at the public meeting on February 27, 2003

9. Transcript for the public meeting held on February 27, 2003 regarding the Proposed Remedial Action Plan for the Ithaca Cayuga Inlet Coal Tar Site

10. Letter from NYSEG, dated March 13, 2003