Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

NYSEG - Owego Coal Gas Site
Operable Unit No. 2
Susquehanna River
Owego, Tioga County
Site Number 7 - 54 - 008

March, 2002

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* ERIN M. CROTTY, *Commissioner*

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG-Owego Coal Gas Inactive Hazardous Waste Site
Operable Unit No. 2 - Susquehanna River
Owego, Tioga County, New York
Site No. 7-54-008

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the NYSEG-Owego Coal Gas, Operable Unit No.2 class 2 inactive hazardous waste disposal site which was chosen in accordance with the New York State Environmental Conservation Law. The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the NYSEG-Owego Coal Gas, Operable Unit No.2 inactive hazardous waste site and upon public 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, if not addressed by implementing the response action selected in this ROD, presents a current or potential significant threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation/Feasibility Study (RI/FS) for the NYSEG-Owego Coal Gas, Operable Unit No.2 and the criteria identified for evaluation of alternatives, the NYSDEC has selected removal and off-site disposal/treatment of river sediments. The components of the remedy are as follows:

- Sheet piles or another suitable barrier would be utilized to isolate the approximately 7500 square foot remediation area from the river to allow dewatering of the sediments prior to the start of excavation.

- Coal tar contaminated sediments would be excavated from the isolated area to a minimum depth of one foot with the excavation extending deeper to remove coal tar impacted sediments that are visually identifiable. Approximately 400 cubic yards of material are

estimated for removal. The excavated area would be backfilled with material comparable to the existing sediment material.

- Two small, isolated areas of coal tar impacted sediments identified outside of the main remediation area would be removed by hydraulic dredging.

- Approximately 400 linear feet of the former discharge pipeline, located between the river and Route 17C, and any associated soils contamination would be removed and disposed off-site. Any remaining pipe leading back to the former MGP site would be evaluated and appropriate remedial action taken.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the remedy selected for this site as being 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

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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Owego, Tioga County, New York
Site No. 7-54-008

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 has selected this remedy to address the significant threat to human health and/or the environment created by the presence of hazardous waste at the NYSEG - Owego Coal Gas site, Operable Unit No. 2 (OU2), a Class 2 inactive hazardous waste disposal site. As more fully described in Sections 3 and 4 of this document, waste material generated at the former manufactured gas plant (MGP) Operable Unit No. 1 (OU1) was piped to the Susquehanna River which has resulted in the disposal of hazardous waste and substances to the Susquehanna River sediments in the form of coal tar, consisting in part of benzene, toluene, ethylbenzene and xylenes (BTEX), and polycyclic aromatic hydrocarbon (PAHs). These disposal activities have resulted in the following significant threats to human health and/or the environment:

- A significant environmental threat associated with the impacts of contaminants to a localized area of Susquehanna River sediments.

- A significant threat to human health associated with the potential for exposure due to direct contact with contaminated river sediments or coal tar in the pipeline and surrounding soils.

In order to eliminate or mitigate the significant threat to the environment that the hazardous wastes disposed at the NYSEG - Owego Coal Gas site, OU2 have caused, the following remedy was selected:

- Sheet piles or another suitable barrier would be utilized to isolate the approximately 7500 square foot remediation area from the river to allow dewatering of the sediments prior to the start of excavation.

- Coal tar contaminated sediments would be excavated from the isolated area to a minimum depth of one foot with the excavation extending deeper to remove coal tar impacted sediments that are visually identifiable. Approximately 400 cubic yards of material are estimated for removal. The excavated area would be backfilled with material comparable to the existing sediment material.

- Two small, isolated areas of coal tar impacted sediments identified outside of the main remediation area would be removed by hydraulic dredging.

- Approximately 400 linear feet of the former discharge pipeline, located between the river and Route 17C, and any associated soils contamination would be removed and disposed off-site. Any remaining pipe leading back to the former MGP site would be evaluated and appropriate remedial action taken.

The selected remedy, discussed in detail in Section 8 of this document, will attain the remediation goals selected for this site in Section 6 of this Record of Decision (ROD), in conformity with applicable standards, criteria, and guidance (SCGs).

SECTION 2: SITE LOCATION AND DESCRIPTION

The NYSEG Owego Coal Gas Site, Site No. 7-54-008, is located in the Village of Owego, in Tioga County. The former MGP operated at this one acre site on East Main Street in a rural residential setting in the eastern portion of the Village. See Figure 1. The MGP was operated by a predecessor company of New York State Electric & Gas (NYSEG)

Operable Unit No. 2, which is the subject of this PRAP, addresses site related contamination in an isolated portion of the Susquehanna River. The contamination is due to a discharge of coal tar waste from a former pipeline directly into the Susquehanna River. Coal tar has impacted sediments adjacent to the north shore of the River and adjoining private properties between Route 17C and the river through which the abandoned piping passes. This area is located approximately 1200 feet south of the former MGP site and approximately 600 feet south of the intersection of Route 17C and East Front Street. This area is also residential in nature.

An Operable Unit represents a portion of the site remedy which 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. The remaining operable unit for this site is described in Section 3.2 below.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

Coal gas was manufactured at the former Owego Manufactured Gas Plant (MGP) site, OU1, from 1865 to 1935.

Manufactured Gas Plants (MGPs) produced coal gas for industrial and commercial use; including lighting, heating, and cooking. Coal was heated to drive off its volatile constituents. The raw coal gas was sometimes cracked with petroleum, and then processed to remove impurities before being stored and distributed to the MGP's customers. Coal tar is a byproduct of the manufactured gas

process, and precipitated as the coal gas cooled. Coal tar is a contaminant of concern at MGPs, since it commonly escaped into the environment through leakage or disposal.

The focus of Operable Unit 2 is contaminated river sediment associated with a pipe outfall. It was common practice at MGP's to discharge coal tar waste into water bodies as a means of disposal. Although surviving plant records do not indicate any pipes used for that purpose, the site investigation identified a pipe outfall and associated coal tar contamination in Susquehanna River sediment. This pipe may have been used for coal tar disposal, or may have been unrelated to the MGP and served as a preferential pathway for contaminant migration.

3.2: Remedial History

The NYSEG - Owego Coal Gas site, OU1 was initially investigated in 1986, with subsequent investigations being conducted in 1988. A Record of Decision (ROD) for OU1 was issued by the NYSDEC on March 31, 1994 and the remedial program for the former MGP site was conducted from September 1994 to July 1995.

The investigation of the river was initially performed as part of the "Investigation of the Former Coal Gasification Site at Owego, New York, Task 3 Report, Supplemental Field Investigation Program" 1991. A sediment sampling program was initially conducted by NYSEG on November 20, 1992. Results can be found in "Remedial Investigation Summary and Feasibility Study Report" 1993. In 1996 NYSEG conducted a temperature gradient survey of the surface water in the river. During that survey, additional evidence of coal tar was observed in the river. In 1998 NYSEG conducted an investigation to determine if a preferential pathway could be found connecting the site(OU1) to the river, during which the pipe was discovered which now has been determined to be the pathway for the MGP waste from the site (OU1) to the river. The Focused RI conducted between 1998 and 2001 further evaluated the impact of coal tar on the Susquehanna River.

SECTION 4: SITE CONTAMINATION

To evaluate the contamination present at the site and to evaluate alternatives to address the significant threat to human health and the environment posed by the presence of hazardous waste, NYSEG has recently conducted a Remedial Investigation/Feasibility Study (RI/FS).

4.1: 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 in 2 phases. The first phase was conducted between August 1996 and December 1996 and the second phase between August 1998 and October 2001. A report entitled "Owego Former MGP Site (OU2), Focused Remedial Investigation", has been prepared which describes the field activities and findings of the RI in detail.

The RI included the following activities:

Delineation of the extent of possible coal tar impacts from the MGP site along a 3500-ft. stretch of the Susquehanna River.

Further evaluation of possible preferential pathways from the MGP site to the Susquehanna River.

Assessment of river water quality to determine whether there are any benzene, PAH or cyanide impacts caused by the coal tar.

To determine if river sediments are contaminated at levels of concern, the RI analytical data was compared to environmental standards, criteria, and guidance values (SCGs). Surface water SCGs identified for the NYSEG - Owego Coal Gas OU2 site are based on NYSDEC Ambient Water Quality Standards and Guidance Values. For soils, NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 4046 provides soil cleanup guidelines. In addition, for soils, site specific background concentration levels can be considered for certain classes of contaminants. Guidance values for evaluating contamination in sediments are provided by the NYSDEC "Technical Guidance for Screening Contaminated Sediments".

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.

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

4.1.1: Site Geology and Hydrogeology

The river bed along the 3500 ft. of the Susquehanna River shoreline investigated during the RI consists primarily of rocks and cobble with sediment composed of mostly sand and gravel. Significant depths of soft sediment, characteristic of sediment deposition areas on inside meanders of slow moving rivers, was not observed.

4.1.2: Nature of Contamination

As described in the RI report, 13 surface water samples were taken from the river at various depths of the water column. Only trace levels of benzene and naphthalene, below screening criteria, were detected upstream of the impacted area. No cyanide was detected in the water column. To characterize the nature and extent of sediment contamination, 72 samples were taken from 33 locations in the river. See Figure 2. The main category of contaminants in river sediments which exceed their SCGs was polycyclic aromatic hydrocarbons (PAHs).

The specific semivolatile organic compounds of concern in sediments and surface water 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 major waste material of concern at this site is coal tar, which is the source of the PAHs identified. Coal tars are reddish brown to black, oily liquids which do not readily dissolve in water. Materials such as this are commonly referred to as a non-aqueous phase liquid, or NAPL. Although most tars are slightly more dense than water (DNAPL), the difference in density is slight. Consequently, they typically sink when in contact with water. Tars, in this case, appear to have been discharged to the river by the pipeline from the MGP site.

4.1.3: Extent of Contamination

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

Sediments

The sediment screening investigation consisted of field observations and laboratory analysis of sediments for VOCs, PAHs, total cyanide and particle size. VOCs and cyanide were not detected above screening criteria and are not a concern for sediments.

Sediments in the two visibly coal tar impacted areas have PAH concentrations of up to 26,600 ppm, and contamination is present to a depth of three feet. Sediments peripheral to these visibly coal tar impacted areas have PAH concentrations ranging from ND to 216 ppm, and contamination is limited to the top six inches. The levels of PAHs in these areas could pose an environmental risk.

Surface Water

River water samples were analyzed for benzene, PAHs, and total cyanide. Traces of benzene and naphthalene were detected in water upstream of the pipe discharge point at concentrations below NYSDEC standards. All other water samples were below the analytical detection limits.

4.2: 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 is the manner by which an individual may come in contact with a contaminant. The five elements of an exposure pathway are 1) the source of contamination; 2) the environmental media and transport mechanisms; 3) the point of exposure; 4) the route of exposure; and 5) the receptor population. These elements of an exposure pathway may be based on past, present, or future events.

Exposure pathways which are known to or may exist at the site include:

Incidental dermal contact or ingestion, of coal tar associated with sediment, is a potential exposure pathway.

Incidental dermal contact, ingestion, and inhalation of coal tar associated with the pipe line is a potential exposure pathway for construction workers.

4.3: Summary of Environmental Exposure Pathways

This section summarizes the types of environmental exposures and ecological risks which may be presented by the site. The RI includes further discussion of the potential impacts from the site to fish and wildlife resources. The following pathways for environmental exposure and/or ecological risks have been identified:

- Direct contact with sediment by aquatic organisms and plants.

- Possible continued discharge of coal tar from the pipeline is a potential environmental exposure pathway to sediments in the river.

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 NYSDEC and NYSEG entered into a Consent Order on January 2, 1991 for the RI/FS. Upon issuance of the Record of Decision, NYSEG will implement the selected remedy under the existing Order on Consent.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS

Goals for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375-1.10. The overall remedial goal is to meet all standards, criteria and guidance (SCGs) and be protective of human health and the environment. 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.

The goals selected for this site are:

- Eliminate, to the extent practicable, exceedences of applicable environmental quality standards related to releases of contaminants to the waters of the state.

- Eliminate, to the extent practicable, the exposure of fish and wildlife to contamination in the sediments.

- Eliminate, to the extent practicable, the potential exposure of humans to the contamination in the sediments and pipeline.

- Eliminate the potential for release of coal tar waste from the abandoned pipeline.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost effective, comply with other statutory laws and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the NYSEG-Owego Coal Gas site were identified, screened and evaluated in the report entitled "Owego Former MGP Site (OU2), Feasibility Study" dated September 2001.

A summary of the detailed analysis follows. As presented below, the time to implement reflects only the time required to implement the remedy, and does not include the time required to design the remedy, procure contracts for design and construction or to negotiate with responsible parties for implementation of the remedy.

7.1: Description of Remedial Alternatives

The potential remedies are intended to address the contaminated river sediments.

Alternative 1: No Action

Present Worth:	$123,700
Capital Cost:	$ 7,700
Annual O&M:	$116,000
Time to Implement	6 months - 1 year

The No Action alternative is evaluated as a procedural requirement and as a basis for comparison. It would require continued monitoring and posting of warning signs only, allowing the site to remain in an unremediated state. This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Alternative 2: Containment with Institutional Controls

Present Worth:	$1,227,600

Capital Cost:	$ 852,000
Annual O&M:	$ 375,600
Time to Implement	6 months - 1 year

Under this alternative, the areas of impacted sediment at the former discharge pipe would be contained by placement of a geotextile cap over the contaminated sediment area. Based upon the analytical results, the area that would be remediated is estimated to be approximately 7500 square feet in area and varies in depth from 1 to 3 feet.

In addition, approximately 400 linear feet of the discharge pipeline and any associated soil contamination, from Route 17C to the river, would be removed and disposed off site. The remaining pipe leading back to the plant, which is located beneath the railroad and Route 17C, would be evaluated and appropriate remedial action taken. Surface water and sediment monitoring would be required along with institutional controls and warning signs, to maintain the integrity of the cap.

Alternative 3: Removal and Off-site Disposal/Treatment of River Sediments

Present Worth:	$ 957,700
Capital Cost:	$ 957,700
Annual O&M:	$ 0
Time to Implement	6 months - 1 year

This alternative would consist of the pipe line removal described in Alternative 2 and the excavation and off-site landfill disposal of the contaminated sediments. In the vicinity of the pipeline discharge, the approximately 7500 square foot area of impacted sediments would be isolated with sheet piling or other suitable material. See Figure 2. The area to be isolated would encompass the two defined areas where the sediments have been heavily impacted by visible coal tar.

After dewatering, a minimum one foot depth of coal tar contaminated sediments from within the limits of the sheet piling would be excavated (The RI sampling indicated generally low levels of PAHs below one foot.) Greater depths will be removed where necessary to remove visible coal tar impacts. Two small isolated areas of coal tar impacted sediments identified outside of the main deposition area, where levels of PAH contamination are in excess of 300 ppm, would be removed by hydraulic dredging. The excavated sediment would be sent for disposal at an off-site landfill permitted to accept the coal tar waste.

No monitoring or institutional controls would be required for the River.

7.2 Evaluation of Remedial Alternatives

The criteria used to compare the potential 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 of the criteria, a brief description is provided, followed by an evaluation of the alternatives against that criterion. A detailed discussion of the evaluation criteria and comparative analysis is included in the Feasibility Study.

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

1. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

Alternative 1 would not comply with guidance regarding PAH levels in sediments. Alternatives 2 and 3 would be in compliance with this SCG. Work in the river under Alternative 2 and 3 would have to meet the substantive requirements of 6NYCRR Part 608 Protection of Waters. Alternative 2 would not meet these requirements because of the uncertainties associated with capping sediments in a dynamic waterway.

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

Alternative 1 would not be protective of human health and the environment. Protection of human health and the environment would be achieved by Alternatives 2 and 3.

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.

There would be no short term impacts under Alternative1 since no action is being taken. For Alternative 2 the placement of the cap would require engineering controls to prevent impacts to the river from suspended material. Alternative 3 would have short term impacts from construction of the cofferdams and work in the river similar to alternative 2 and would also require construction controls related to possible contact with excavated sediments. While short term impacts would potentially be greatest from this alternative, these impacts are typically encountered during remedial construction and are addressed routinely.

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 controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 1 would not provide any long-term effectiveness and permanence. It would be difficult to assure long term effectiveness and permanence adopting Alternative 2 since a cap would have to be maintained indefinitely. The permanence of the cap could be effected by storm events and erosion in the river. Alternatives 3, excavation with off site disposal or treatment would be a permanent remedy, effectively removing the coal tar from the sediments.

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.

Alternative 1 would do nothing to reduce the toxicity, mobility or volume of contaminants. Alternative 2 would reduce the mobility of contaminants in the river, but have no effect on the volume or toxicity. Alternative 3 would reduce the toxicity, mobility and volume of the coal tar at the site.

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

Alternatives 1 would be readily implementable since no action is required. Alternatives 2 and 3 would also be readily implementable since both remedies would involve relatively routine construction techniques and landfill or treatment facility capacity are expected to be available for the limited volume of waste which would require off-site disposal.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision. The costs for each alternative are presented in Table 2.

This final criterion is considered a modifying criterion and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

8. Community Acceptance - Concerns of the community regarding the RI/FS reports and the Proposed Remedial Action Plan have been evaluated. The "Responsiveness Summary" included as Appendix A presents the public comments received and the manner in which the NYSDEC will address the concerns raised. In general the public comments received were supportive of the selected remedy.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based upon the results of the RI/FS, and the evaluation presented in Section 7, the NYSDEC is selecting Alternative 3: Removal and Off-site Disposal/Treatment of River Sediments, as the remedy for this operable unit of the site.

This selection is based on the detailed analysis of alternatives, which supports that Alternative 3 will best achieve the remedial action objectives and would provide the best balance of performance with respect to the evaluation criteria. Alternative 3 will comply with the SCG's and be protective of human health and the environment by removing the contaminated sediments. Alternative 3 will be

both short and long term effective. It will reduce the toxicity, mobility and volume of coal tar and is readily implementable. This alternative is cost effective.

The estimated present worth cost to implement the remedy is $957,700. The cost to construct the remedy is estimated to be $957,700 and there will be no annual operation and maintenance cost.

The elements of the selected remedy will be as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS will be resolved. The design will ensure that the work in the river meets the substantive requirements of 6NYCRR Part 608.

2. Sheet piles or another suitable barrier will be utilized to isolate the approximately 7500 square foot remediation area from the river to allow dewatering of the sediments prior to the start of excavation.

3. Coal tar contaminated sediments will be excavated from the sheet pile area to a minimum depth of one foot with the excavation extending deeper to remove coal tar impacted sediments that are visually identifiable. Approximately 400 cubic yards of material are estimated for removal from the area shown on Figure 2.

4. Two small, isolated areas of coal tar impacted sediments (see Figure 2) identified outside of the main remediation area will be removed by hydraulic dredging.

5. The excavated area within the sheet piles will be backfilled with material comparable to the existing sediment material.

6. Approximately 400 linear feet of the former discharge pipeline, located between the river and Route 17C, and any associated soils contamination will be removed and disposed off- site. Any remaining pipe leading back to the former MGP site will be evaluated and appropriate remedial action taken.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the remedial investigation process, a number of Citizen Participation activities were undertaken in an effort 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:

A repository for documents pertaining to the site was established.

A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.

A Fact Sheet was sent to all parties included on the site mailing list.

A public meeting was held on March 12, 2002, to present to the public the Proposed Remedial Action Plan.

In March 2002, a responsiveness Summary was prepared and made available to the public, to address the comments received during the public comment period for the PRAP.

Table 1
Nature and Extent of Contamination

MEDIUM	CATEGORY	CONTAMINANT OF CONCERN	CONCENTRATION RANGE ug/g $_{\text{organic carbon}}$	FREQUENCY of EXCEEDING SCGs	SCG
Sediments	Total Polycyclic Aromatic Hydrocarbons (PAHs)	Naphthalene	ND - 6,532	19/51	30*
		Acenaphtene	ND - 29,691	15/51	140*
		Fluorene	ND - 48,496	28/51	6*
		Phenanthrene	ND - 108,868	26/51	120*
		Anthracene	ND - 59,382	22/51	107*
		Fluoranthene	ND - 148,456	18/51	1020*
		Pyrene	ND - 158,353	19/51	961*
		Benzo(a)anthracene	ND - 93,238	43/51	12*
		Chrysene	ND - 62,352	40/51	22**
		Benzo(b)fluoranthene	ND - 69,279	31/51	65**
		Benzo(a)pyrene	ND - 52,454	46/51	1.3**
		Dibenzo(a,h)-anthracene	ND - 9,204	11/51	155[+]

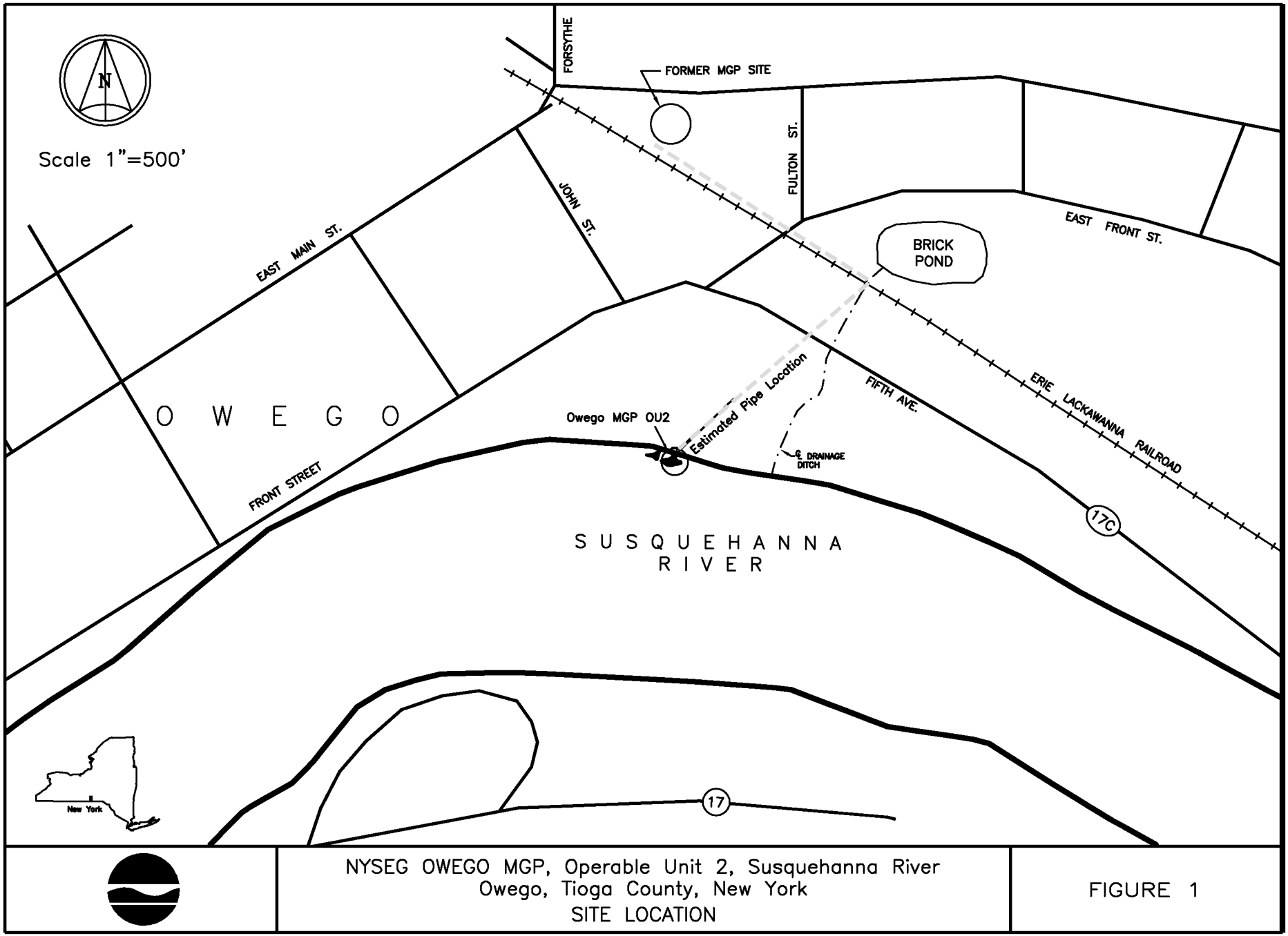
* Chronic toxicity criteria for protection of benthic aquatic organisms. Criteria expressed as ug/g $_{\text{organic carbon}}$, and was obtained from NYSDEC's " Technical Guidance for Screening Contaminated Sediments".

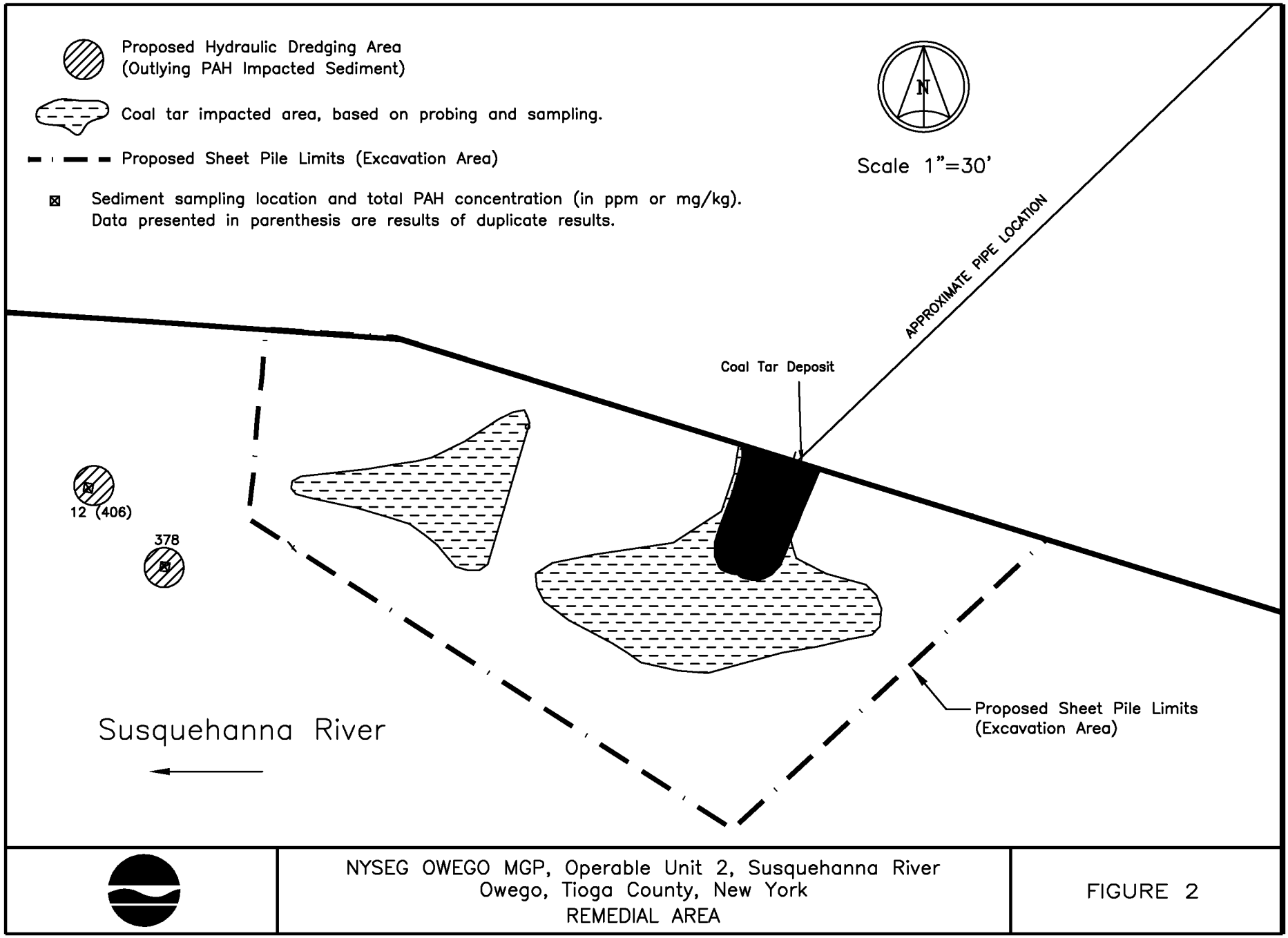
**Criteria derived from USEPA National Recommended Water Quality Criteria. 12/7/98 Federal Registry.

[+] Criteria for the protection of humans from bioaccumulation.

Table 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual O&M	Total Present Worth
Alternative 1: No Action	$7,700	$116,000	$123,700
Alternative 2: Containment with Institutional Controls	$ 852,000	$375,600	$1,227,600
Alternative 3: Removal and Off-site Disposal/Treatment of River Sediments	$ 957,700	$0	$ 957,700


N
Scale 1"=500'
FORSYTHE
FORMER MGP SITE
FULTON ST.
JOHN ST.
EAST MAIN ST.
EAST FRONT ST.
BRICK POND
O W E G O
Owego MGP OU2
Estimated Pipe Location
FIFTH AVE.
ERIE LACKAWANNA RAILROAD
℄ DRAINAGE DITCH
FRONT STREET
17C
S U S Q U E H A N N A
R I V E R
17
New York
NYSEG OWEGO MGP, Operable Unit 2, Susquehanna River
Owego, Tioga County, New York
SITE LOCATION
FIGURE 1



NYSEG OWEGO MGP, Operable Unit 2, Susquehanna River
Owego, Tioga County, New York
REMEDIAL AREA

FIGURE 2

APPENDIX A

Responsiveness Summary

NYSEG-Owego Coal Gas" Inactive Hazardous Waste Site
Operable Unit No. 2 - Susquehanna River
Owego, Tioga County, New York
Site No. 7-54-008

The Proposed Remedial Action Plan (PRAP) for the NYSEG-Owego Coal Gas Site, Operable Unit No. 2, was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on February 27, 2002. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil and sediment at the NYSEG-Owego Coal Gas Site, Operable Unit No. 2. The preferred remedy is removal and off-site disposal/treatment of river sediments.

The release of the PRAP was announced via a notice to the mailing list, informing the public of the PRAP's availability.

A public meeting was held on March 12, 2002 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. No written comments were received. The public comment period for the PRAP ended on March 28, 2002.

This Responsiveness Summary responds to all questions and comments raised at the March12, 2002 public meeting. The following are the comments received at the public meeting, with the NYSDEC's responses:

COMMENT 1: When will the proposed remedial work for the removal of contaminated sediments in the Susquehanna River start and how long will it take to complete?

RESPONSE 1: The remedial work is scheduled to be performed during the months of August and September, 2002. The project is estimated to take eight (8) weeks to complete.

COMMENT 2: Where does the pipe enter the Susquehanna River?

RESPONSE 2: The pipe, suspected of historically conveying coal tar waste, enters the Susquehanna River on the north shore approximately 3500 feet upstream of the former Route 38/96 bridge.

COMMENT 3: Can the water in the area of contamination be used for recreational purposes?

RESPONSE 3: The River water has been tested and, based on the test results, the contamination has not impacted the water quality. Additionally, the coal tar impacted sediments are currently covered by a layer of sediments which prevents contact under normal recreational use.

COMMENT 4: What impact will this project have on village traffic?

RESPONSE 4: This project may have a slight impact on traffic when the contaminated soils are transported from the site. An estimated six (6) trucks/day for a five (5) day period will be exiting the site onto Route 17C.

COMMENT 5: If the portion of pipeline that is not currently scheduled for removal is 500 feet away from the river, why would you be concerned?

RESPONSE 5: If it is determined that the pipeline that remains contains coal tar that could leak, the pipe needs to be evaluated to determine if a potential human exposure scenario exists or if the coal tar could result in an impact to groundwater.

COMMENT 6: Why is the sediment going to be excavated to a depth of only one (1) foot?

RESPONSE 6: The sediments will be excavated to a minimum of one (1) foot in depth since the sampling conducted during the RI indicated generally low levels of contamination below one foot. In the immediate area of the discharge pipe, where coal tar impacts extend to three feet, waste will be excavated to depths greater than one (1) foot. Excavation depth will be governed by the presence of contamination and all visible coal tar will removed.

COMMENT 7: Is there a contingency plan for addressing the remaining portion of pipe if it is found to contain an unacceptable amount of coal tar?

RESPONSE 7: Not at this time. If it is determined that the remaining portion of pipe can not be abandoned in place, a plan to investigate and remediate the remaining portion of pipe will be developed.

COMMENT 8: Will elevated river water be a problem?

RESPONSE 8: Slight changes in the elevation of the river will not present a problem. If flooding conditions are forecasted, measures would be taken to stabilize the remediation area to prevent the spread of contamination.

COMMENT 9: How do you plan on accessing the pipe? Will an access road be used and, if so, on who's property will it be placed?

RESPONSE 9: An access road must be constructed to address both the contaminated sediments and the removal of the pipe. NYSEG will be contacting the landowners to obtain the necessary

access agreements prior to performing this work. The actual properties that will be involved in the project access have not been determined.

COMMENT 10: Is there any danger of contaminants coming from the sediment stockpile runoff?

RESPONSE 10: No, the sediment stockpiles will be managed to assure the runoff will be contained and removed from the site for proper disposal/treatement.

COMMENT 11: Will there be replacement of destroyed trees?

RESPONSE 11: Every effort will be made to keep tree removal and damage to a minimum. Trees can be replaced; however, tree replacement should be discussed with NYSEG prior to the start of the project. The NYSEG contact is Bert Finch at (607) 762-8683.

COMMENT 12: Will Brick Pond be tested for the presence of coal tar?

RESPONSE 12: Brick Pond was previously evaluated by studies which did not indicate any potential historical impacts from the MGP site or the associated pipeline.

COMMENT 13: Will the sheet piling placed in the Susquehanna River be a hazard to the jet skiers?

RESPONSE 13: The sheet piling will be well delineated and marked and should not be a hazard to recreational users of the river.

COMMENT 14: Why doesn't the sheet piling include the two (2) isolated areas identified downstream?

RESPONSE 14: The two isolated areas of contamination identified downstream can be effectively removed by hydraulic dredging. Extending the sheet piling to include these areas would not be practical for the removal of what is estimated to be a half yard of sediment.

COMMENT 15: How do you know that the problem does not extend farther downstream?

RESPONSE 15: The investigation of the river extended approximately 3500 feet downstream of the discharge pipe. Since no contamination was identified in the 3500 ft. segment of river below the area to be remediated, we believe that the only impacted areas have been identified.

COMMENT 16: Will there be strong odors when stockpiling the sediments and will the air be monitored?

RESPONSE 16: Coal tar has a distinct odor and engineering controls will be used to control fugitive odors and dust. The air will be monitored to ensure that air emissions from the coal tar contamination are adequately controlled. A community air monitoring plan, that must be

approved by NYSDOH, will be made available to the public prior to performing the proposed work.

COMMENT 17: Did NYSEG check the Tioga County Clerk's records for easement records that might help to locate the pipeline route?

RESPONSE 17: Yes. NYSEG has reviewed the records to determine if a pipeline easement was ever granted, and no information was found.

COMMENT 18: Could you cap the pipeline by the river and not remove it?

RESPONSE 18: The pipeline must be removed back to Route 17C. This is necessary to determine if coal tar material exists in the pipe and to evaluate pipe joints and the pipe bedding material to determine if there is evidence of past or current releases or the potential for future releases from the pipeline.

COMMENT 19: How could there be upstream sediment contamination?

RESPONSE 19: Low levels of polycyclic aromatic hydrocarbon (PAH) contamination was detected upstream from the proposed remedial area. Low levels of PAH contamination do exist in soils and sediments due to a variety of possible sources. One of the main sources is highway drainage ditches. Petroleum, soot, skid control (cinders) materials etc. are all possible sources of PAH contamination.

COMMENT 20: Will this site impact the resale of homes and does the new "homeowners real property transfer disclosure" law require that this information be made available to prospective purchasers?

RESPONSE 20: The site will be remediated and therefore the site should not have an impact on the value of homes in the immediate area. With regard to the new disclosure requirements, a lawyer familiar with the laws governing real-estate transactions should be contacted.

COMMENT 21: How was the outlined area of contamination on the figure determined**?**

RESPONSE 21: The area of contamination was determined by sampling the river and determining where unacceptable levels of various PAHs associated with coal tar deposition exist.

COMMENT 22: Did NYSEG test for PCBs?

RESPONSE 22: Contaminated materials removed from the former MGP site during remediation of Operable Unit 1 (OU1) were tested for PCBs for disposal purposes. No PCBs were detected at OU1. Therefore, there is no demonstrated need to sample for PCBs if the coal tar waste originated at the former MGP site.

APPENDIX B

Administrative Record

NYSEG-Coal Gas Site, Operable Unit No. 2
Site No. 7-04-008

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1. Proposed Remedial Action Plan, prepared by NYSDEC, dated February 2002.

2. Fact Sheet and Public Meeting Announcement, issued by NYSDEC, dated February 2002.

3. O'Brien & Gere. February 2002. Operable Unit 2-Owego Former MGP Site, Focused Remedial Investigation/Feasibility Study.
4. Citizen Participation Plan, prepared by NYSDEC, dated November 1998.

5. Blasland, Bouck and Lee (BBL). 1997. Focused Remedial Investigation/Feasibility Study Work Plan. Operable Unit 2 - Owego Former MGP Site, Owego, New York, Syracuse, NY: BBL. July 1997.

6. NYSDEC. 1994. Record of Decision for the Owego Former MGP Site, March 1994.

7. ABB-ES. 1993. Investigation of the Former Coal Gasification Site at Owego, New York, Remedial Investigation summary and Feasibility Study Report.

8. New York State Department of Environmental Conservation (NYSDEC). 1991. Order on Consent Index #A7-0150-88-09, Site #7-54-008.

9. ABB-Environmental Services, Inc. (ABB-ES). 1991. Investigation of the Former Coal Gasification Site at Owego, New York, Task 3 Report, Supplemental Field Investigation Program.

10. E.C. Jordan Co. 1988. Investigation of Former Coal Gasification Site at the Owego Gas Plant Site - Owego, New York, Task 2 Report, Initial Field Investigation.

11. E.C. Jordan, Co. 1988. Investigation of Former Coal Gasification Site at the Owego Gas Plant Site - Owego, New York, Task 4 Report, Risk Assessment and Remedial Alternatives Evaluation.

12 E.C. Jordan Co. 1986. Investigation of Former Coal Gasification Site at the Owego Gas Plant Site - Owego, New York, Task 1 Report, Preliminary Site Evaluation.