

Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

NYSEG - Ithaca Court Street MGP Site

**Operable Unit No. 1 - Former MGP Site and
Structures**

Ithaca (C), Tompkins County, New York
Site No. 7-55-008

September 2003

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

DECLARATION STATEMENT - RECORD OF DECISION

NYSEG - Ithaca Court Street MGP Operable Unit No. 1 - Former MGP Site and Structures Ithaca (C), Tompkins County New York Site No. 7-55-008 September 2003

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for Operable Unit 1 of the NYSEG - Ithaca Court Street Manufactured Gas Plant (MGP) 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 (NYSDEC) for Operable Unit 1 of the NYSEG - Ithaca Court Street MGP inactive hazardous waste disposal 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 releases 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/or the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the NYSEG - Ithaca Court Street MGP site and the criteria identified for evaluation of alternatives, the NYSDEC has selected excavation to individual polycyclic aromatic hydrocarbon (PAH) levels defined in Technical and Administrative Guidance Memorandum (TAGM) 4046 to a depth of 8 feet, and to 500 part per million (ppm) total PAHs below 8 feet with off-site treatment or disposal. The components of the remedy are as follows:

- Excavation of the top two (2) feet of soil from the entire site;
- Excavation and off-site treatment or disposal of all subsurface soil to a depth of eight (8) feet containing individual PAHs above objectives in TAGM 4046;
- Excavation and off-site treatment or disposal of all subsurface soil below eight (8) feet which is visually impacted by coal tar or which contains total PAHs in excess of 500 parts per million (ppm), including the excavation of all MGP structures;

- Removal of the subsurface wooden duct which runs along West Court Street from the site to Meadow Street;
- Implementation of institutional controls which will allow for residential use, but will prohibit construction of drinking water wells and limit/control subsurface excavations.

New York State Department of Health Acceptance

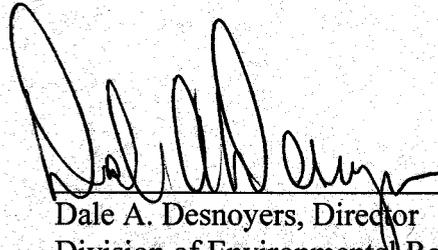
The New York State Department of Health (NYSDOH) concurs that the remedy selected for this site is protective of human health.

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.

SEP 10 2003

Date



Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

NYSEG - Ithaca Court Street MGP Operable Unit No. 1 - Former MGP Site and Structures Ithaca (C), Tompkins County New York Site No. 7-55-008 September 2003

SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the NYSEG Ithaca Court Street MGP Site, Operable Unit No. 1, Site and Structures. The presence of hazardous waste has created significant threats to human health and/or the environment that are addressed by this proposed remedy. As more fully described in Sections 3 and 5 of this document, operations at the former manufactured gas plant have resulted in the disposal of hazardous wastes, including coal carbonization and water gas tars. These coal tars contain chemicals including polycyclic aromatic hydrocarbons (PAHs) and benzene, toluene, ethylbenzene, and xylene (BTEX). These wastes have contaminated the subsurface soils, groundwater and soil gas at the site, and have resulted in:

- a significant threat to human health associated with potential exposure to subsurface soils, groundwater and soil gas vapors.
- a significant environmental threat associated with the impacts of contaminants to groundwater and subsurface soils.

To eliminate or mitigate these threats, the NYSDEC has selected the following remedy:

- Excavation of the top two (2) feet of soil from the entire site;
- Excavation and off-site treatment or disposal of all subsurface soil to a depth of eight (8) feet containing individual PAHs above objectives in TAGM 4046;
- Excavation and off-site treatment or disposal of all subsurface soil below eight (8) feet which is visually impacted by coal tar or which contains total PAHs in excess of 500 parts per million (ppm), including the excavation of all MGP structures;
- Removal of the subsurface wooden duct which runs along West Court Street from the site to Meadow Street;
- Implementation of institutional controls which will allow for residential use, but will prohibit construction of drinking water wells and limit/control subsurface excavations.

The selected remedy, discussed in detail in Section 8, 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 former MGP site is located in the City of Ithaca, Tompkins County. The original plant site comprises the western half of the block bounded by Esty Street, North Plain Street, West Court Street, and North Albany Street, and is approximately 2 acres in size. The site is set in a primarily residential neighborhood, approximately 1 and 1/4 miles south of Cayuga Lake. The block to the south of the site includes a public school, a private school and a community center. The site location is shown on Figure 1.

The layout of the former MGP plant at the time of operations is shown on Figure 2. Of the structures shown on this figure, remnants remain of the three cylindrical gas holders, tar wells and purifier facilities below the ground surface at this site. The main gas plant building is still standing, and is now referred to as the Markles Flat Building. This building is listed as a local City landmark, and currently houses a variety of industrial and commercial activities. The coal sheds are also still standing, along the site border on North Plain Street.

The site structures also include a wooden duct which conveyed coal tar approximately 1/2 mile from the site to the Cayuga Inlet Coal Tar Site, to the west. This duct is approximately five to six feet below ground surface, and runs along the north side of West Court Street, between the road and the sidewalk.

Operable Unit (OU) No. 1, which is the subject of this PRAP, consists of the site property, extending to the surrounding sidewalks, as shown on Figure 3, and the wooden duct, as shown on Figure 4. 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.

The remaining operable unit for this site, (operable unit 2) will address any remnants of the wooden duct which may remain west of Meadow Street and all coal tar which has migrated from the site and the wooden duct, along with any associated soil, groundwater, and soil gas contamination.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

An MGP was operated on this site by predecessor companies of New York State Electric and Gas (NYSEG) from 1853 to 1927. The largest layout of the facility during operations is shown

on Figure 2. The plant operated as a coal carbonization facility until 1911, at which time a water gas system was added. The plant then utilized both the coal carbonization process and water gas process through 1927. The coal carbonization process heated coal in retorts or beehive ovens, carbonizing the coal in the absence of air. The carburetted water gas process involved the passage of steam through burning coal. This formed a gaseous mixture (water gas or blue gas) which was then passed through a super heater which had an oil spray. The oil spray would generate additional gas, enhancing the heat and light capacity of the overall gas mixture. In each process, the gas produced was purified prior to distribution. Coal tar was formed as a condensate as the gas cooled, and was a by-product of the gas production.

A wooden duct, located beneath the northern edge of West Court Street, transported coal tar from the site to the Cayuga Inlet from 1909 until 1927. The tar handling facility at the Inlet end of the duct was addressed as a separate site, the NYSEG Cayuga Inlet Coal Tar Site, No. 7-55-007. In 1999, NYSEG performed an Interim Remedial Measure (IRM) at the Cayuga Inlet site, which removed contaminated surface and subsurface soil and tar storage/handling structures. Confirmatory sampling verified that the remedial goals had been met. This work was followed by additional investigation of the waterway and, in 2003, a Record of Decision was issued indicating that no further action is required at the Inlet site.

3.2: Remedial History

In 1986, the NYSDEC listed the NYSEG Ithaca Court Street MGP Site 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.

NYSEG conducted preliminary investigations of the site in the mid to late 1980's to determine if MGP related contamination was present. In March, 2000, NYSEG completed an Interim Remedial Measure (IRM) to remove coal tar, contaminated soil and water associated with two tar wells. This IRM is more fully described in section 5.2.

In October 2001, a remedial investigation was initiated to fully delineate the extent of contamination. During this investigation, substantial off-site contaminant migration was detected. To facilitate the remediation of the plant site, while the off-site impacts are further investigated, the site was divided into two operable units, as described in Section 2.

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 the New York State Electric and Gas Corporation (NYSEG) entered into a Consent Order on March 30, 1994. The Order obligates NYSEG to investigate and, where

necessary, remediate 33 former MGP sites in their service area. The Ithaca Court Street MGP Site is one of the sites included in the multi-site order.

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 October 2001 and October 2002. The field activities and findings of the investigation are described in the RI report.

The following activities were conducted during the Operable Unit 1 RI:

- Installation of 37 soil borings and 8 monitoring wells for analysis of soils and groundwater as well as physical properties of soil and hydrogeologic conditions;
- Sampling of 26 new and existing monitoring wells;
- Collection of approximately 12 discrete groundwater samples using a direct push technique;
- Collection of 20 discrete subsurface soil samples from soil borings;
- Collection of approximately 5 indoor air samples and 2 soil gas samples.

To determine whether the soil, groundwater and soil gas contain contamination at levels of concern, data from the investigation was 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”.
- Soil gas SCGs are based on a database of background levels of chemicals found in indoor and outdoor air compiled by the NYSDOH. Soil gas results above these levels may indicate a potential for indoor air impacts which then must be further evaluated.
- Since the on-site buildings all contain active usage of chemicals containing the volatile chemicals of concern, indoor air samples were compared to NIOSH/OSHA standards.

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 fill and native soil (the overburden). The most critical layer for understanding the site geology and hydrogeology is a silty clay layer which varies in depth from 5 to 18 feet below ground surface (bgs). This layer is relatively impermeable, and appears to be acting as a confining unit for both coal tar and impacted groundwater. Above this layer is a variety of more permeable material. The uppermost layer is a fill layer which ranges in depth from 4 to 12 feet bgs and contains gravels, sands, brick fragments and ash. The layer between the fill and the silty clay is typically silty sand, with intermittent deposits of sand and gravel.

Within the more permeable materials above the silty clay layer, both coal tar and contaminated groundwater are present, migrating generally north and west from the site. The coal tar appears to be following the uneven surface of the silty clay layer, while the groundwater appears to be following the general lay of the land, which gradually slopes toward Cayuga Lake.

Beneath the silty clay layer, at a depth of approximately 25 feet bgs is a second more permeable sand layer. This layer is in turn underlain by another clay deposit which appears to be contiguous and has low conductivity (i.e. it is relatively impermeable).

Two distinct groundwater aquifers were identified in the investigation. The “shallow aquifer,” is present above the silty clay layer, with a groundwater surface elevation approximately 3-6 feet below grade. The second, confined aquifer, is referred to as the “intermediate aquifer.” The intermediate aquifer consists of the above referenced sand layer located at a depth of approximately 25 feet below grade.

Since it was determined that the groundwater in the intermediate aquifer was not impacted by site related contamination, no borings or wells were advanced past this layer.

5.1.2: Nature of Contamination

As described in the RI report, many soil and groundwater samples were collected to characterize the nature and extent of contamination. As summarized in Table 1, 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 are benzene, toluene, ethylbenzene and xylenes. These are referred to collectively as BETX in this document.

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

acenaphthene	acenaphthylene
anthracene	<i>benzo(a)anthracene</i>
<i>benzo(a)pyrene</i>	<i>benzo(b)fluoranthene</i>
benzo(g,h,i)perylene	<i>benzo(k)fluoranthene</i>
<i>dibenzo(a,h)anthracene</i>	<i>chrysene</i>
fluoranthene	fluorene
<i>indeno(1,2,3-cd) pyrene</i>	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 are referred to in this document as cPAHs.

As reported in Section 5.1.3, coal tars are present at this site in the form of a dense oily liquid which does not readily dissolve in water. Materials such as this are typically found at MGP sites, and are referred to as non-aqueous phase liquids or NAPL. Analysis of the NAPL reveals that it contains BTEX and PAHs several orders of magnitude greater than the SCGs for these compounds. The NAPL was found to saturate the unconsolidated deposits and/or exist in scattered, discontinuous globules. Any of these conditions could coincide with high BTEX and PAH concentrations in soil, groundwater and soil gas.

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 and soil, and micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for air samples. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for the contaminants of concern in soil and groundwater 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.

Waste Materials/Structures

Coal tar was found in and/or in the immediate vicinity of all MGP structures. Structures at this site include the Court Street wooden duct, one below-grade gas holder, two above-grade gas holders, two tar wells, a tar separator, purification facilities and the plant building. From these structures, the tar migrated vertically downward until encountering the less permeable silty clay layer discussed in Section 5.1.1. The tar appears to have migrated north and west along the surface of the confining layer. The tar contains PAHs at levels up to 332,000 ppm and BTEX levels up to 6,440 ppm. The extent of coal tar is presented on Figure 3.

Surface Soil

Since the entire site area is covered with asphalt pavement and buildings, no surface soil was available from which to collect samples.

Subsurface Soil

Subsurface soil in direct contact with and in the vicinity of MGP structures or related coal tar deposits has been impacted by PAHs and BTEX. Subsurface soil which was visibly impacted by coal tar was not sampled, so the contamination found in analytical samples is relatively low. Analytical samples were generally used to define the outer edge of contamination rather than to characterize the heavily impacted areas. PAH levels in soils ranged from non-detect to 517 ppm. BTEX levels in subsurface soils ranged from non-detect to 2.5 ppm.

Groundwater

Groundwater in the vicinity of the coal tar and the contaminated subsurface soil has also been impacted by PAHs and BTEX. PAH levels in groundwater ranged from non-detect to 7,100 ppb. BTEX levels in groundwater ranged from non-detect to 24,000 ppb. These results are two to three orders of magnitude above SCGs. As with most MGP sites, the groundwater contamination was found only in close proximity to the coal tar. Significant groundwater impacts appear to be limited to an area within 100 feet of coal tar deposits.

Soil Gas/Indoor Air

Soil gas collected from beneath one on-site building, the Markles Flat building, contained BTEX at levels ranging from 95 to 1109 $\mu\text{g}/\text{m}^3$.

Indoor air samples collected in the on-site buildings did not detect any chemicals associated with MGP contamination except for a detection of toluene during the second sampling event at the custodial warehouse. Toluene was not detected in the first sampling event in this building. The inventory of products stored in the building include a number of products containing toluene.

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

As discussed in section 3.2, an IRM was performed in March, 2000, prior to the RI/FS process. The goal of this IRM was to remove coal tar and contaminated soil and water associated with two tar wells in close proximity to the Markles Flat building. The tar wells were uncovered, and the liquid contents removed.

A scrubber and tar separator were also encountered during this operation, and these structures were removed. A wooden duct was found attached to the tar separator. This duct was removed to the point where it entered the plant, at which point it was sealed with non-shrink grout. A trench was excavated to the south of the southern tar well in an attempt to locate the wooden duct between this site and Cayuga Inlet. No evidence of this duct was encountered.

This IRM resulted in the removal of 255 tons of solid material and 26,916 gallons of water and liquid tar classified as RCRA hazardous waste, which were sent off-site to permitted hazardous waste disposal/treatment facilities. An additional 542 tons of material classified as non-hazardous waste was also removed during that operation and was sent off-site to a permitted solid waste landfill.

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 and includes 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.

No completed human exposure pathways associated with Operable Unit #1 are currently known to exist. Contamination is below the surface with pavement or buildings providing an effective barrier to direct contact with contaminated materials. Groundwater at the site is not used for any purpose. Site-related indoor air sampling did not identify any discernable impact associated with the MGP contamination.

Human exposures to contamination may occur in the future should the use of the property change or should excavation occur for any reason. Pathways which might become complete in the future are:

- direct contact with waste materials or contaminated soil or groundwater;

- inhalation of VOCs volatilizing from affected media; directly or via soil gas entering indoor air in structures erected at the site; or,
- inhalation of contaminated dust from uncovered subsurface soil at the site.

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.

- NAPL has impacted the groundwater resource in the shallow aquifer at the site, and contamination is migrating off-site as NAPL and as dissolved phase.
- The potential for direct contact by fauna and flora with NAPL and contaminated subsurface soils.

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. 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 to the extent feasible and authorized by law through the proper application of scientific and engineering principles.

The remedial goals presented in this section apply only to the area defined for this operable unit.

The remedial goals for this site are to eliminate or reduce to the extent practicable:

- the presence of NAPL and MGP-related contaminants as the sources of soil, groundwater and soil vapor contamination;
- migration of NAPL and MGP-related contaminants that would result in soil, groundwater or soil vapor contamination;
- the release of contaminants from NAPL in on-site soil into groundwater that result in exceedances of groundwater quality standards;
- the potential for ingestion of groundwater with contaminant levels exceeding drinking water standards;
- the potential for ingestion/direct contact with contaminated soil;
- impacts to biota from ingestion/direct contact with soil;

- the release of contaminants from subsurface soil under buildings into indoor air through soil vapor.
- the inhalation of or exposure to contaminants volatilizing from soil;

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

- recommended soil cleanup objectives in TAGM 4046;
- ambient groundwater quality standards;

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 requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. Potential remedial alternatives for the NYSEG Ithaca Court Street MGP Site were identified, screened and evaluated in the FS report which is available at the document repositories identified in Section 1.

A summary of the remedial alternatives that were considered for this site are discussed below. The present worth represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved.

7.1: Description of Remedial Alternatives

The following potential remedies were considered to address the contaminated soil, groundwater and soil gas at the site.

Alternative 1: No Further Action

<i>Present Worth:</i>	<i>\$0</i>
<i>Capital Cost:</i>	<i>\$0</i>
<i>Annual OM&M:</i>	
<i>Years 1-5:</i>	<i>\$0</i>

The No Further Action alternative recognizes remediation of the site conducted under a previously completed IRM. To evaluate the effectiveness of the remediation completed under the IRM, only continued monitoring is necessary.

This alternative would leave the site in its present condition and would not provide any additional protection to human health or the environment.

Common Elements - Alternatives 2-4

Alternatives 2 through 4 define the extent of excavation based on the concentration of PAHs present. While BTEX compounds are also contaminants of concern, areas of elevated BTEX concentrations correlate with areas of elevated PAHs and, as a result, BTEX contamination would be removed as part of the PAH defined excavation.

Alternatives 2-4 evaluated below each include the following common elements:

MGP Site:

- Demolition and removal of all existing buildings within the boundaries of OU-1 prior to remedial activities. If demolition of the Markles Flat building is not approved by the Ithaca Landmarks Preservation Committee, this building will be moved to facilitate the remedy. All utilities would be abandoned in conjunction with this demolition.
- During design, pre-characterization sampling would be conducted to delineate the subsurface materials to be removed and to determine the appropriate off-site disposal/treatment.
- The top 2 feet of material across the entire former MGP site (approximately 6,600 cubic yards) would be removed. Unless this material exceeds the cleanup criteria, this material could be used as fill on site below a depth of 8 feet. If it does not meet cleanup objectives, this material will be disposed/treated off-site.
- All subsurface MGP structures, including piping would be removed and disposed of.
- All excavation, stockpiling and truck loading of contaminated subsurface materials would be conducted beneath a Sprung (or equivalent) structure with air handling equipment to control vapors and dust generated during the remedial activities.
- After removal of the subsurface soils, end-point soil samples would be collected.
- The excavation would be backfilled and the site would be covered with a minimum of 2 feet of clean material including 6-inches of topsoil which would be graded and seeded. Sections of the site may also be paved. In the event that portions of the silty-clay confining layer require removal, backfill materials of similar permeability would be placed such that the impermeable barrier remains between the two aquifers after remediation is complete.
- Monitoring of groundwater would be addressed as part of the on-going investigation for OU-2.

Wooden Duct:

- Approximately 1,200-linear feet of the wooden duct that exists along West Court Street between the site and Meadow Street would be removed for disposal. This excavation would include all impacted soils within approximately 2.5 feet of the duct. Impacted soils beyond this extent would be mapped and sampled, and would be addressed as part of OU-2, as would any remaining portions of the duct west of Meadow Street. Approximately 2,500 cubic yards of soil with visual impacts are estimated to be removed by this excavation. The area of the excavation would then be restored to meet the requirements of the City of Ithaca.

All work involving coal tar impacted materials associated with the wooden duct would be carried out using an active vapor management system. This would involve the use of a negative pressure air handling and treatment system, including a shroud to direct air from the work zone into the air treatment system. The vapor management system was successfully field tested to demonstrate it would be effective at minimizing odors and meeting all requirements of the Community Air Monitoring Program.

Alternative 2: Excavation to 500 ppm Total PAHs with Off-Site Treatment/Disposal

<i>Present Worth:</i>	\$9,878,000
<i>Capital Cost:</i>	\$9,878,000
<i>Annual OM&M:</i>	\$0

In addition to the common elements, Alternative 2 would remove impacted subsurface soils that display visual coal tar impacts and/or total PAH concentrations above the NYSDEC TAGM guidance value of 500 ppm for total PAHs. Potential exposures by construction workers and commercial/industrial property occupants would be controlled through institutional controls. Alternative 2 includes the following:

- Excavation and off-site disposal of approximately 23,000 cubic yards of subsurface soil with either visual coal tar impacts or total PAH concentrations above 500 ppm to the depth necessary to meet these criteria.
- Institutional controls in the form of deed restrictions and/or environmental easements would limit future development of the site to commercial/industrial uses. A site management plan would be provided to control subsurface exploration and excavation below 2 feet and to restrict the future use of groundwater until monitoring demonstrates compliance with groundwater standards. Due to the continued presence of contamination beyond the limits of this operable unit, the management plan would also require that the potential intrusion of soil gas vapors is appropriately addressed for any buildings constructed on the site. Annual certification would be required to ensure that institutional controls remain in place and are effective in controlling exposure.

**Alternative 3: Excavation to Individual PAH TAGM Objectives to 8 feet, and to 500 ppm
Total PAHs below 8 feet with Off-Site Treatment/Disposal**

<i>Present Worth:</i>	\$12,835,000
<i>Capital Cost:</i>	\$12,835,000
<i>Annual OM&M:</i>	\$0

In addition to the common elements, Alternative 3 would remove subsurface soils with individual PAH concentrations above NYSDEC TAGM 4046 recommended soil cleanup objectives to a depth of 8-feet below grade. Below 8-feet, soils with visual coal tar impacts or PAH concentrations above 500 ppm would be removed. Alternative 3 includes the following:

- Excavation and off-site disposal of approximately 33,300 cubic yards of subsurface soils from 0 to 8-feet bgs with PAH concentrations above individual NYSDEC TAGM 4046 recommended soil cleanup objectives.
- Excavation and off-site disposal of approximately 5,700 cubic yards of subsurface soils below 8-feet with either visual coal tar impacts or total PAH concentrations exceeding 500 ppm.
- Institutional controls in the form of deed restrictions and/or environmental easements would be implemented. Future development of the site would include the potential for residential use. A site management plan would be provided to control subsurface exploration and excavation below 8-feet and to restrict the future use of groundwater until monitoring demonstrates compliance with groundwater standards. Due to the continued presence of contamination beyond the limits of this operable unit, the management plan would also require that the potential intrusion of soil gas vapors is appropriately addressed for any buildings constructed on the site. Annual certification would be required to ensure that institutional controls remain in place and are effective in controlling exposure.

**Alternative 4: Excavation to Individual PAH TAGM Objectives with Off-Site
Treatment/Disposal**

<i>Present Worth:</i>	\$15,526,000
<i>Capital Cost:</i>	\$15,526,000
<i>Annual OM&M:</i>	\$0

In addition to the common elements, Alternative 4 would involve excavation and off-site disposal/treatment of all subsurface soils to individual PAH NYSDEC TAGM 4046 recommended cleanup objectives. Alternative 4 is characterized by the following:

- Excavation and off-site disposal of approximately 52,500 cubic yards of subsurface soils with PAH concentrations above individual NYSDEC TAGM 4046 recommended soil cleanup objectives.

- There would be no limits on development of this site following the completion of this remedy. A site management plan would restrict the use of groundwater until monitoring demonstrates compliance with groundwater standards. Due to the continued presence of contamination beyond the limits of this operable unit, the management plan would also require that the potential intrusion of soil gas vapors is appropriately addressed for any buildings constructed on the site. Annual certification would be required to ensure that institutional controls remain in place and are effective in controlling exposure.

7.2 Evaluation of Remedial Alternatives

The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375, which governs the remediation of inactive hazardous waste disposal sites in New York State. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

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

1. 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.
2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the NYSDEC has determined to be applicable on a case-specific basis.

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.
4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.
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.
6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative

feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

7. Cost-Effectiveness. Capital costs and operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision. The 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 PRAP have been evaluated. The responsiveness summary (Appendix A) presents the public comments received and the manner in which the NYSDEC addressed the concerns raised. In general, the public comments received were supportive of the selected remedy. Several comments were received, however, pertaining to the removal of street trees and the 2 story brick building located on the plant site, the “Markles Flat” building, which is a locally designated historic landmark. The remedy has been revised to evaluate and minimize tree removal, and to consider other options to the demolition of the Markles Flat building.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Based on the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected Alternative 3, Excavation to Individual TAGM Objectives to 8 feet, and to 500 ppm Total PAHs below 8 feet with Off-Site Treatment/Disposal as the remedy for this site. The elements of this remedy are described at the end of this section.

The selected remedy is based on the results of the RI and the evaluation of alternatives presented in the FS.

Alternative 3 has been selected because, as described below, it satisfies the threshold criteria and provides the best balance of the primary balancing criteria described in Section 7.2. It will achieve the remediation goals for the site by removing the coal tar and impacted soils with contaminant levels greater than applicable SCGs. Removal of these materials will eliminate the threats to public health and the environment posed by these on-site MGP impacts.

Alternative 1 has been rejected as a remedy since it would not satisfy the threshold criteria of being protective of public health and the environment; and complying with New York State standards, criteria and guidance.

Alternative 2 would meet remedial goals and comply with the threshold selection criteria, but would rely more heavily on institutional controls and use restrictions to prevent contact with contamination which would remain on site.

Alternative 4 would meet the remedial goals, but was not selected because Alternative 3 also meets the remedial goals, and is more easily implemented and less costly. Alternative 4 would eliminate slightly more contamination by removing a substantial additional volume of soil with lower concentrations of contaminants.

Because Alternatives 2, 3, and 4 would satisfy the threshold criteria, the five balancing criteria are particularly important in selecting a final remedy for this site.

Alternatives 2 (excavation and removal to total PAH TAGM objectives), 3 (excavation and removal to individual PAH TAGM objectives to 8 feet), and 4 (excavation and removal to individual PAH TAGM objectives) would all have short-term impacts. Alternatives 2 through 4 involve excavation and disposal of increasing volumes of material, resulting in increasing short term impacts. Short term impacts include truck traffic through the neighborhood which would increase as a result of the increase in the volume of excavation and backfill material. The increasing amount of excavation would also require a longer project duration, along with the associated noise from heavy construction equipment and the air handling system (24 hours per day). While the structure and air handling system would minimize vapor emissions and odors from the excavation, some odors and emissions would occur and minimizing the project duration would minimize these impacts, as well as emissions from project related construction equipment.

Each of these three alternatives would be similar in their long-term effectiveness, since each would result in the permanent removal of over 95% of the contaminants of concern. The remaining contamination would not be expected to adversely impact soil gas, and any remaining groundwater impacts would be expected to naturally attenuate in a reasonable time period. Alternative 4 would eliminate the potential for human health exposure by removing all PAH contamination, while Alternatives 2 and 3 each eliminate this potential exposure with a combination of institutional controls and a physical barrier of clean soil between the impacted soils and the ground surface. Alternative 2 provides a 2 foot layer of clean soil, which would provide an adequate barrier. Alternative 3 would provide an eight foot layer. NYSEG has indicated a preference to provide the 8 foot layer of clean soil to limit future liability and facilitate the future use of the site.

Each of the three alternatives would remove all visibly impacted soils and free product present in structures, which would eliminate the mobility of the contamination on site. Alternatives 2 through 4 would remove an increasing volume of impacted material (23,000; 39,000; and 52,000 cubic yards). This increased excavation would result in a modest increase in the total mass of removed contaminants of concern (95.8%, 98.5%, 99.9%).

Each of the three alternatives would be technically implementable. Alternative 4 would be more difficult and costly to implement than Alternatives 2 and 3 because there would be more deep excavation. In Alternative 4, 19,200 cubic yards of material would be removed below 8 feet,

while only 5,700 cubic yards would be removed in Alternatives 2 and 3. The necessary shoring and dewatering makes deep excavation more complicated, difficult and costly to obtain a minimal increase in contaminant removal.

The estimated present worth cost to implement the remedy is \$12,835,000. The cost to construct the remedy is estimated to be \$12,835,000, and no on-going maintenance or monitoring will be associated with this remedy.

The elements of the selected remedy are as follows:

1. Excavation of MGP impacted soil, waste, and structures as described below. All excavated material, with the exception of surface soils, will be treated or disposed of off-site. Surface soil will either be treated/disposed off site or, if analytical results show that this soil meets the 500 ppm remedial objective, it may be used as fill in the excavation below 8 feet.

The extent of excavation will be determined as follows:

- To facilitate the excavation, the entire site will be excavated to a depth of two (2) feet;
 - Soils containing individual PAHs above the objectives in TAGM 4046, or which are visibly impacted by coal tar, will be excavated to a depth of eight (8) feet bgs;
 - Soils below 8 feet bgs will be excavated if they contain either total PAHs over 500 ppm or are visibly impacted by coal tar;
 - All MGP structures will be excavated, including piping.
2. The West Court Street wooden duct, along with impacted soil within 2.5 feet of the duct, will be removed between the plant site and Meadow Street. All excavated materials will be disposed of or treated at an appropriately permitted facility. Impacted soils beyond this extent will be mapped and sampled, and will be addressed as part of OU-2, along with any remaining portions of the duct west of Meadow Street. Approximately 2,500 cubic yards of soil with visual impacts are estimated to be removed in this excavation.
 3. All excavation of coal tar impacted materials will be accomplished using appropriate vapor management systems to prevent human exposure to vapors and to minimize nuisance odors.

A Sprung (or equivalent) structure with associated air handling/treatment facilities will be used at the plant site. The effectiveness of emission controls will be demonstrated with appropriate air monitoring.

A negative pressure air handling and treatment system, including a shroud to direct air from the work zone into the air treatment system would be used during the removal of the

wooden duct. This vapor management system has been field tested at the Binghamton, Court Street MGP site demonstrating that it is effective at minimizing odors and meeting the requirements of the Community Air Monitoring Program.

4. The excavation will be backfilled and the site will be covered with a minimum of 2 feet of material complying with NYSDEC TAGM 4046 recommended soil cleanup objectives, including 6-inches of topsoil which will be graded and seeded. Sections of the site may also be paved. All excavation backfill from 2-8 feet will also comply with NYSDEC TAGM 4046 recommended soil cleanup objectives. In the event that portions of the silty-clay confining layer require removal, backfill materials of similar permeability will be placed such that the impermeable barrier remains between the two aquifers after remediation is complete.
5. Following completion of the site restoration, institutional controls will be implemented to ensure the integrity of the remedy and to prevent contact with the remaining site related contamination. Development of the site will not be restricted provided that the institutional controls are in place and enforced. These institutional controls will include:
 - A site management plan which will address residual contaminated soils. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations. The plan will also identify worker and community safety concerns associated with any planned subsurface work, and will provide for the development of a health and safety plan to address these concerns.
 - Restrictions to prevent the use of groundwater as a source of potable or process water without necessary water quality treatment, as determined by the Tompkins County Department of Health.
 - A requirement that the potential intrusion of soil gas vapors, due to the continued presence of contamination beyond the limits of this operable unit, will be appropriately addressed for any buildings constructed on the site. This requirement could be modified based on the remedy for Operable Unit 2.

The property owner will complete and submit to the NYSDEC an annual certification that the institutional controls put in place, pursuant to the Record of Decision, are still in place, have not been altered, and are still effective. This certification will continue until the NYSDEC notifies the property owner in writing that this certification is no longer needed.

6. Monitoring of groundwater contamination at this site will be addressed by Operable Unit 2 (OU-2). Post-remediation monitoring of the groundwater at the site will be initiated as a component of the OU-2 Remedial Investigation, and will be expected to continue as a part of the OU-2 remedy.

SECTION 9: 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 was sent to the contact list in May 2001 announcing a Remedial Investigation and describing findings from previous investigation.
- A meeting was held with the Washington Park Neighborhood Association on August 22, 2001.
- A fact sheet was sent to the contact list (expanded to include the entire neighborhood) in September 2001 describing the Remedial Investigation work plan, and announcing the start of the Remedial Investigation field work.
- A public meeting was held October 15, 2001 to present and receive comment on the Remedial Investigation work plan.
- A fact sheet was sent to the contact list February 2002 describing the progress made to date in the remedial investigation.
- The NYSDEC, NYSDOH and NYSEG attended the annual meeting of the Washington Park Neighborhood Association on April 25, 2002
- Representatives from the NYSDEC and NYSDOH attended a meeting on September 26, 2002, hosted by the Mayor Alan Cohen to talk with community representatives.
- A meeting was held with the Coal Tar Advisory Committee on November 6, 2002 to discuss removal of the wooden duct.
- A fact sheet was sent to the contact list June 2003 announcing the PRAP and upcoming public meeting.
- A public meeting was held on July 2, 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.

TABLE 1
Nature and Extent of Contamination
 January 1986 - June 2002

COAL TAR	Contaminants of Concern	Concentration Range Detected (ppm)^a
Volatile Organic Compounds (VOCs)	Benzene	1,800 - 1,900
	Toluene	2,200 - 2,600
	Ethylbenzene	120 - 140
	Xylene	1,900 - 2,200
Semivolatile Organic Compounds (SVOCs)	Total PAHs	2,838 - 332,000
Other	Flash Point	81 - 99 Degrees F

SHALLOW SUBSURFACE SOIL (Less than 8 feet bgs)	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND - 0.044	0.060	0 of 12
	Toluene	ND - 0.15	1.5	0 of 12
	Ethylbenzene	ND - 1.0	5.5	0 of 12
	Xylene	ND - 1.28	1.2	1 of 12
Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND - 517	500	1 of 12
	Total CPAHs	ND - 230	10	3 of 12

DEEP SUBSURFACE SOIL (Over 8 feet bgs)	Contaminants of Concern	Concentration Range Detected (ppm)^a	SCG^b (ppm)^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND - 0.039	0.060	0 of 8
	Toluene	ND - .0047	1,500	0 of 8
	Ethylbenzene	ND - 0.87	5,500	0 of 8
	Xylene	ND - 0.26	1,200	0 of 8
Semivolatile Organic Compounds (SVOCs)	Total PAHs	ND - 148	500	0 of 8
	Total CPAHs	ND-27.64	10	1 of 8

TABLE 1 (Cont.)
Nature and Extent of Contamination
 January 1986 - June 2002

GROUNDWATER (Shallow Aquifer)	Contaminants of Concern	Concentration Range Detected (ppb)^a	SCG^b (ppb)^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND - 5,900	1	3 of 11
	Toluene	ND - 5,400	5	2 of 11
	Ethylbenzene	ND - 5,400	5	3 of 11
	Xylene	ND - 7,300	5	3 of 11
Inorganic Compounds	Cyanide	ND - 47	200	0 of 11

GROUNDWATER (Intermediate Aquifer)	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 15
	Toluene	ND - 0.27	5	0 of 15
	Ethylbenzene	ND - 0.22	5	0 of 15
	Xylene	ND - 0.24	5	0 of 15
Inorganic Compounds	Cyanide	ND	200	0 of 15

SOIL GAS	Contaminants of Concern	Concentration Range Detected ($\mu\text{g}/\text{m}^3$)^a	SCG^b ($\mu\text{g}/\text{m}^3$)^a	Frequency of Exceeding Background
Volatile Organic Compounds (VOCs)	Benzene	34 - 340	3.2 - 5.0	2 of 2
	Toluene	30 - 280	6.5 - 25	2 of 2
	Ethylbenzene	3.7 - 49	1.7 - 4.8	1 of 2
	Xylene	27.5 - 440	4.1 - 14.5	2 of 2

TABLE 1 (Cont.)
Nature and Extent of Contamination
 January 1986 - June 2002

INDOOR AIR	Contaminants of Concern	Concentration Range Detected ($\mu\text{g}/\text{m}^3$) ^a	SCG ^b ($\mu\text{g}/\text{m}^3$) ^a	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Benzene	ND	1 ppm	0 of 5
	Toluene	ND - 0.5 ppm	200 ppm	0 of 5
	Ethylbenzene	ND	100 ppm	0 of 5
	Xylene	ND	100 ppm	0 of 5

^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=Not detected above laboratory quantifiable limits

^b SCG = standards, criteria, and guidance values;

Coal Tar - N/A

Subsurface Soil - NYSDEC TAGM 4046 Remedial Cleanup Objectives

Groundwater - NYS DEC Groundwater Standards

Soil Gas - NYSDOH Background Database

Indoor Air - NIOSH/OSHA Exposure Limits

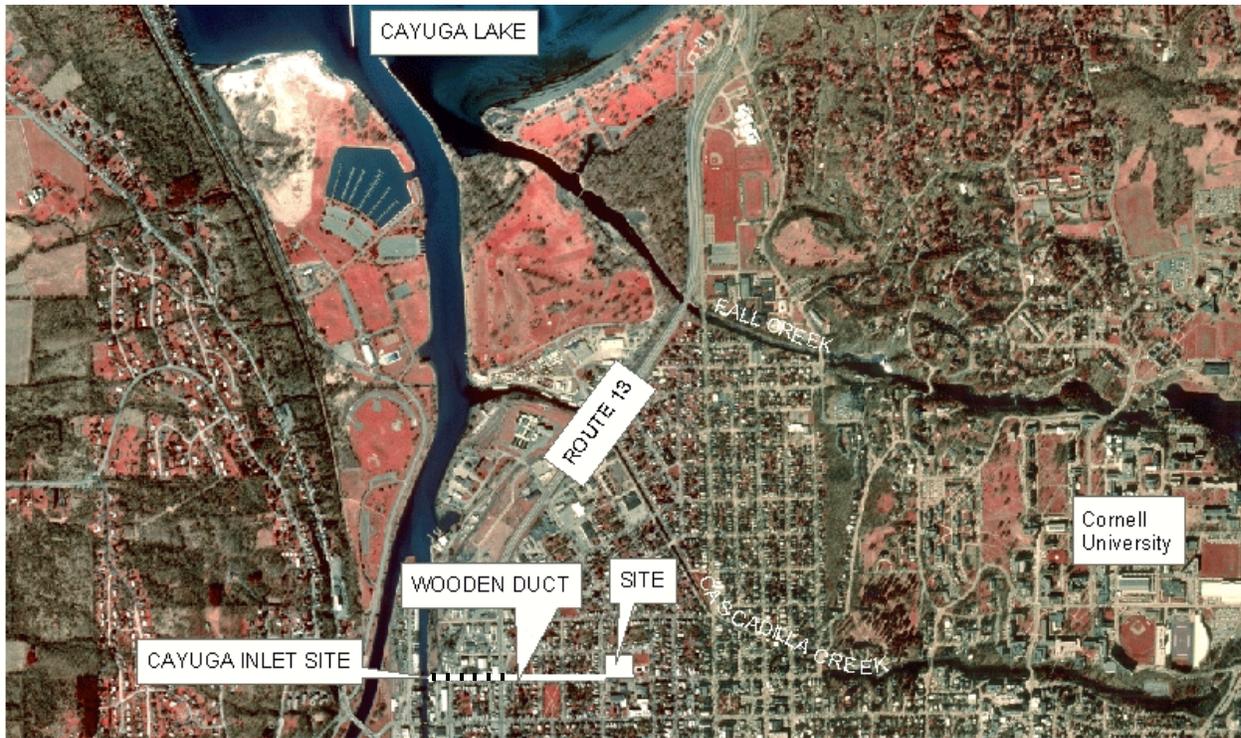
^c LEL = Lowest Effects Level and SEL = Severe Effects Level. A sediment is considered to be contaminated if either of these criteria is exceeded. If both criteria are exceeded, the sediment is severely impacted. If only the LEL is exceeded, the impact is considered to be moderate.

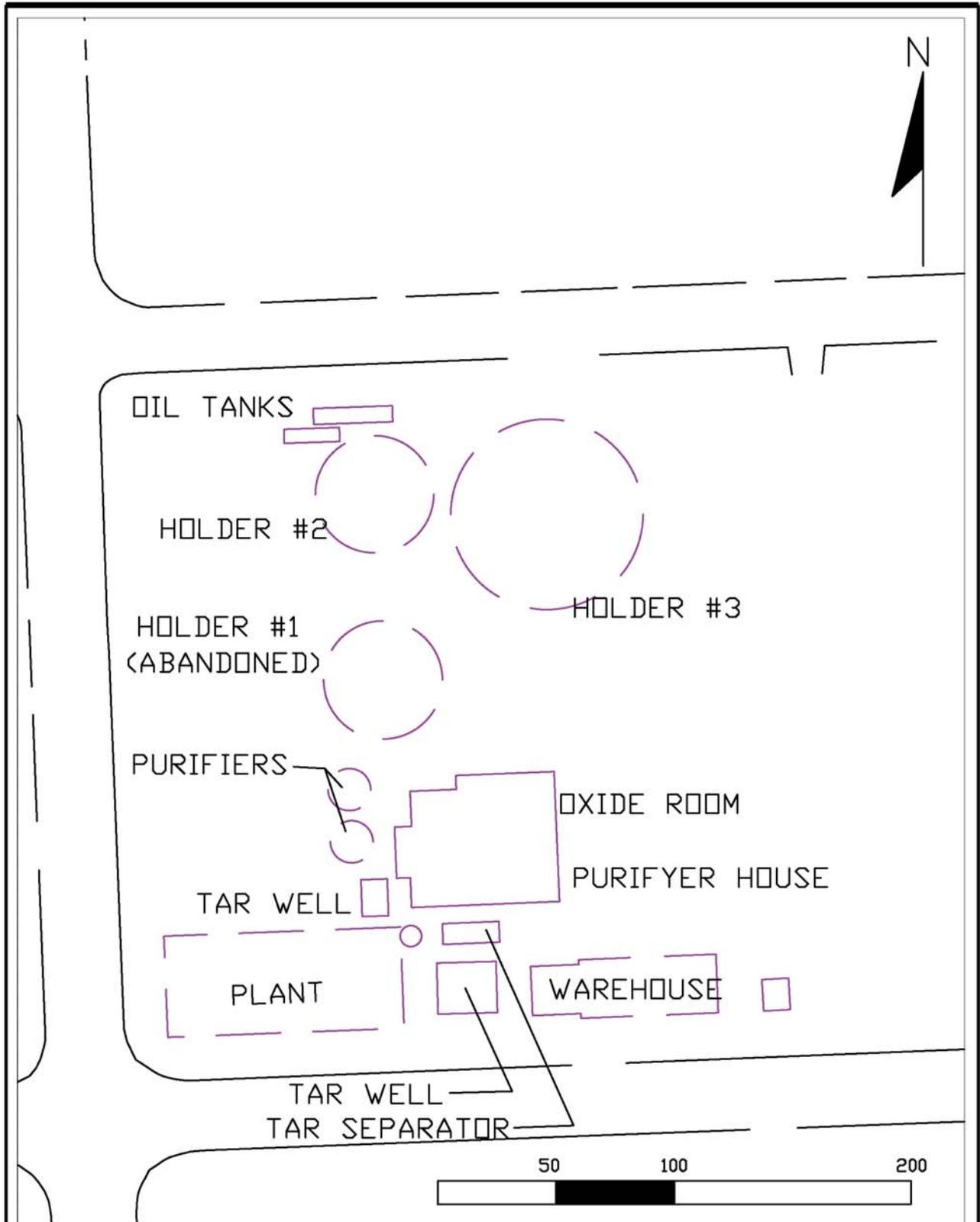
TABLE 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Alternative 1. No Action	\$0	\$0	\$0
Alternative 2.	\$9,878,000	\$0	\$9,878,000
Alternative 3.	\$12,835,000	\$0	\$12,835,000
Alternative 4.	\$15,526,000	\$0	\$15,526,000

NYSEG ITHACA COURT STREET FORMER MGP SITE
ITHACA (C), TOMPKINS COUNTY, NEW YORK
SITE NO. 7-55-008

FIGURE 1. SITE LOCATION MAPS





NYSEG - ITHACA COURT STREET FORMER MGP SITE
 ITHACA (C), TOMPKINS COUNTY, NEW YORK
 SITE NO. 7-55-008
 HISTORICAL MGP SITE

FIGURE 2

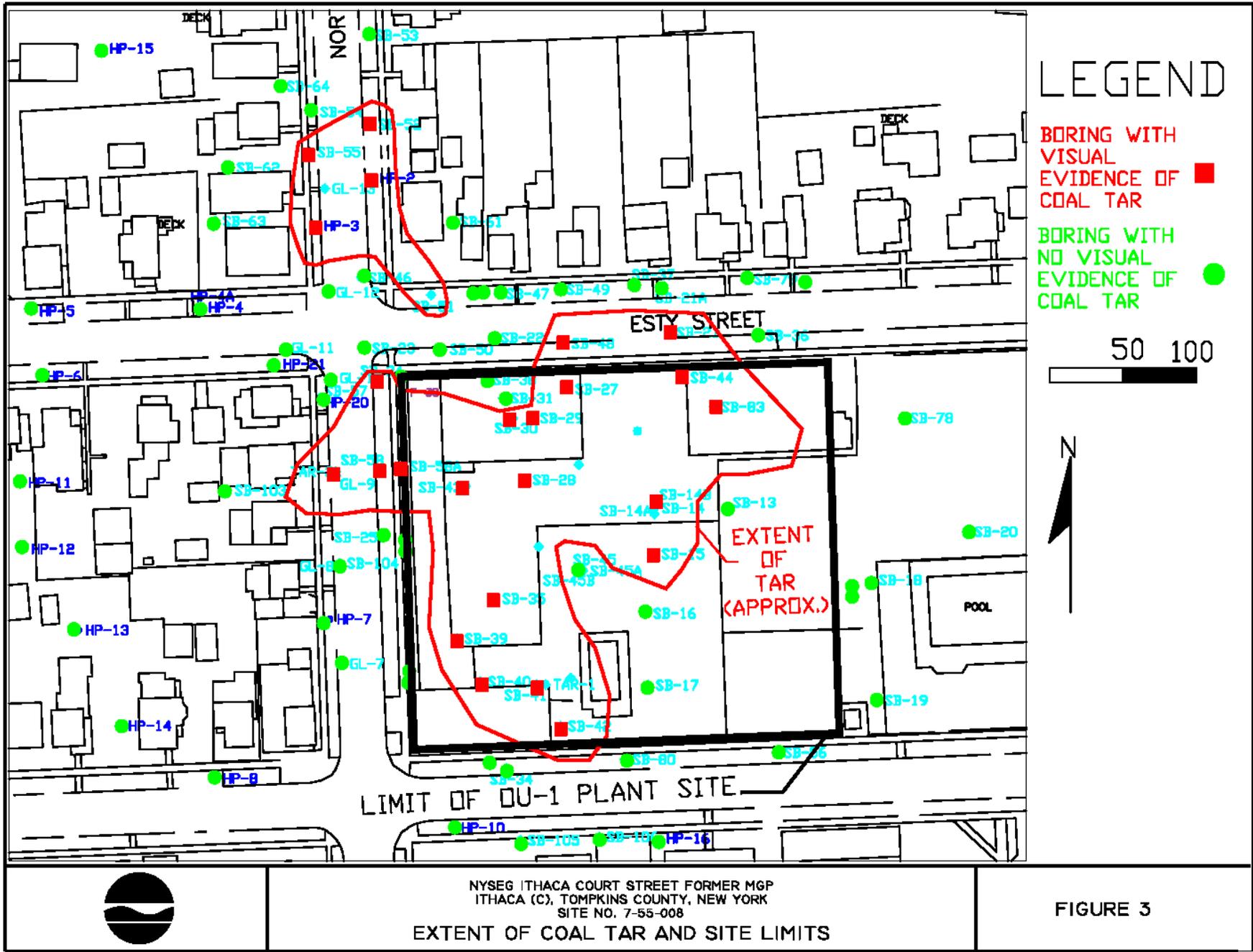


FIGURE 3

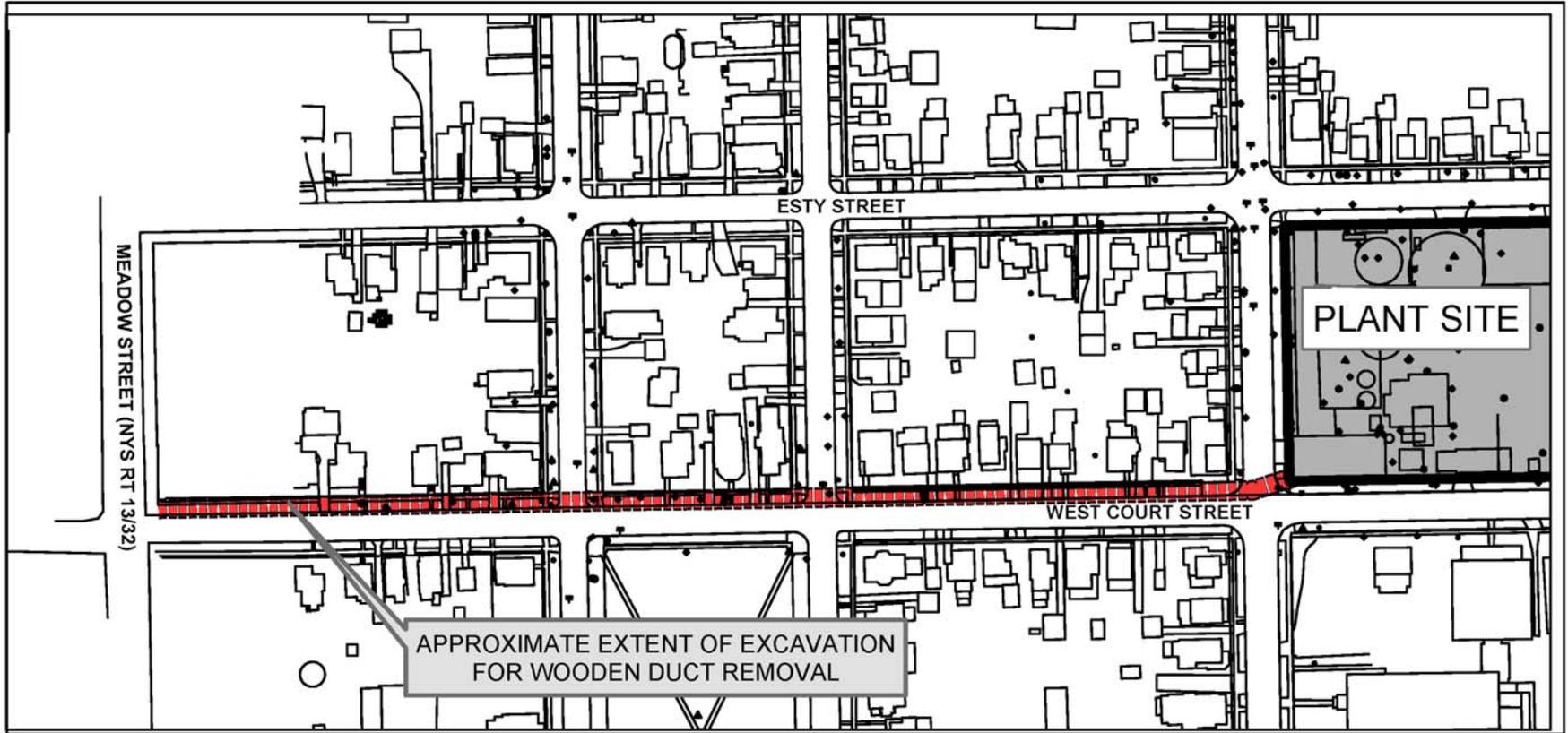
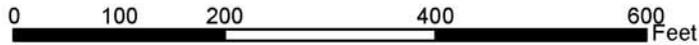


FIGURE 4
LOCATION OF WOODEN DUCT



APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

NYSEG - Ithaca Court Street MGP Operable Unit No. 1 - Former MGP Site and Structures Ithaca (C), Tompkins County New York Site No. 7-55-008

The Proposed Remedial Action Plan (PRAP) for the NYSEG - Ithaca Court Street MGP 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 June 16, 2003. The PRAP outlined the remedial measure proposed for the contaminated soil, groundwater and soil gas at the NYSEG - Ithaca Court Street MGP site and removal of an off-site wooden duct.

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 July 2, 2003, 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 August 1, 2003.

A demonstration of the vapor management system proposed for use during the wooden duct removal was attended by representatives of the community on July 24, 2003 in Binghamton, NY. This included a demonstration of BioSolve, which will be used to coat impacted material to limit vapors and odors, and the air handling system which will draw potentially impacted air from the trench and the truck bed into air filters.

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

To start the meeting, the Coal Tar Advisory Committee requested the opportunity to read into the record a letter dated July 2, 2003, which included the following comments:

Comment 1: All three documents note that the plant site is covered in asphalt and therefore surface samples could not be taken to determine contamination levels at shallow depths. This is not correct. A significant width of surface soils is available along Plain Street to the west of the coal sheds and the Markles Flats building, as well as in the tree lawn in this location. Similar open soils are available along Esty Street to the north of the buildings.

Limited testing of surface soils in Fall 2001 immediately east of the site in the GIAC ball field showed exceedances of guidance levels for benzo(a)pyrene. In September 2002 the State Health Department ordered further testing of this portion of the site. The testing was conducted in late Spring 2003. The data have never been released to the public, and they appear not to have been considered in these documents.

Surface soils must be further tested to determine surface contamination, particularly if the first two feet of soils might be recycled as fill.

Response 1: No site related activity has been documented in the unpaved areas noted above. In the area defined as Operable Unit 1, the top 2 feet of soil will be removed across the entire plant site, addressing any potential concern. This soil will be reused only if it is analyzed and found to meet remedial criteria. The surface soil samples collected in 2003 at the GIAC ballfield and other locations in the study area will be included in the OU2 report and evaluated for further action as part of that effort.

Comment 2: The State DOH determined that the Fall 2002 indoor air monitoring program was flawed and ordered an expanded retesting program. The testing took place in spring 2003, and included homes along Court Street. Court Street homes were tested in an attempt to identify plumes of soil gas that might better indicate breaches in the wooden duct and therefore inform the design of the duct removal.

The data gathered in the second round of the indoor air monitoring has never been released to the public and it appears not to have been considered in the current analysis. It is premature to make assumptions about soil gases, on the plant site and around the duct, or about their remediation without releasing complete data to the public and fully analyzing them.

Response 2: The expanded air monitoring program was not undertaken due to flaws in the original sampling. Indoor air and soil gas monitoring completed in the fall of 2002 found elevated levels of potentially MGP related compounds in the soil gas vapors beneath a number of homes. These chemicals are also found in petroleum products and natural gas. While the compounds were detected above typical background levels, the levels detected are not expected to have an adverse effect on indoor air, as was supported by the indoor air sampling.

Since compounds were detected above background levels at some homes, an expanded investigation was undertaken in 2003. This investigation attempted to look for soil gas impacts at all homes within 100 feet of known site related contaminants, to determine whether the subsurface contamination was impacting any homes, and to determine whether the compounds detected were a result of site related contamination. The sampling for this investigation took place during March and April of 2003. Validated data from this sampling was received on May 20, 2003 and reports were sent to homeowners on July 31, 2003.

If any compounds had been detected at levels that presented an immediate health concern, the NYSDOH would have contacted the homeowner immediately upon receipt of the data. No such detections were noted.

A complete discussion of the results will be provided in the Remedial Investigation Report for OU2. Information about individual houses will not be released to the public for reasons of confidentiality.

Indoor air and soil gas sampling was not intended to delineate breaches in the wooden duct. That will be accomplished with the removal of that structure. The second round of air monitoring was considered in the remedy selection.

Comment 3: In Fall 2002, CTAC located a City of Ithaca map showing a storm sewer located in the center of the plant site, running diagonally to the intersection of Plain and Esty, then west on Esty. CTAC shared this information with the DEC and expressed its concern that this sewer is potentially another "preferred pathway" for contamination to follow off-site. This information was not acknowledged by the DEC and appears not to

have been considered in the analysis to date. The potential conduit must be investigated before the site is disturbed.

Response 3: All piping encountered on the plant site will be removed. Any of these pipes which extend beyond the site boundaries will be further investigated and addressed as appropriate, as part of the OU2 Remedial Investigation.

Comment 4: There are and have been multiple conflicting statements in the current documents, past documents and statements made by the DEC, DOH and NYSEG regarding the location of the Court Street wooden duct. CTAC insists that spaced cross cuts be made along the length of Court Street to determine the duct's location before the street is arbitrarily excavated.

Response 4: Apparent conflicting statements from earlier reports were resolved during the Operable Unit 1 (OU1) Remedial Investigation (RI) when a total of 12 borings were installed along West Court Street to locate the duct. Borings 422C, 504B, and 609B all encountered the duct. Each of these 3 borings is just north of the curb along the northern edge of West Court Street. It is currently assumed that the duct follows a roughly straight line defined by these three points, roughly following the northern curb line. Once the duct removal begins (at the corner of Court and Meadow Streets), the excavation will follow the duct, so the suggested cross cuts would not be necessary to determine where the excavation will occur.

Comment 5: The duct's terminus appears to be in question - is it at the intersection of Court and Meadow? Court and Fulton? somewhere in between? The status of the duct between Meadow and Fulton must be properly investigated and its related contamination in this location fully remediated. The definition of OU-1 must be extended to include this block of Court Street, as well.

Response 5: The portion of the duct between Meadow Street and the plant site is included in OU1. Any remaining portions of the duct under Meadow street and to the West will be addressed in Operable Unit 2 (OU2). The OU2 Remedial Investigation will document the removals which have been completed, and will investigate the nature and extent of any remaining contamination, including any remaining portions of the duct itself.

Comment 6: CTAC has repeatedly documented community concerns that a full containment structure be used over the duct removal as it will be used over the plant site remediation. These concerns have not been addressed, and the reasons for their rejection have not been documented.

Response 6: The use of a "Sprung" type structure was evaluated in the Feasibility Study (FS) and was determined not to be a feasible alternative. To address the need to control vapors and odors during the duct removal, NYSEG has developed a comprehensive program including an active air collection and treatment system. This program was demonstrated to the public on July 24, 2003 at the Binghamton, Court Street MGP site and includes the following elements:

During intrusive activities, the trench will be misted with BioSolve, which coats the organic chemicals and keeps them from being exposed to the air. This product was successfully demonstrated at the Binghamton site to control odors from a bucket of tar coated bricks.

When the excavation proceeds below three feet, the trench and truck bed will be covered with plastic, and air will be drawn into an activated carbon treatment system. Only the portion of the trench being excavated will be uncovered, and air from this area will be drawn back into the handling system through the trench. This will

prevent untreated air from leaving the trench or the truck bed. The excavator will reach into the trench and fill its bucket. While still in the trench, the bucket will be sprayed with BioSolve, which will control odors as the bucket moves from the trench to the truck. Provisions will be included to apply BioSolve to the material in the truck bed and the bucket after dumping if either is a significant source of odors.

Comment 7: On March 4th, 2003, DEC and DOH officials said that the objective for the duct removal would be "no odors." The language used in the PRAP is to "minimize" odors. These ideas are not the same. How is "minimize" defined? Is it not subjective? Who will determine when odors are adequately minimized? Only an objective of no odors will be accepted, and a measurable standard must be agreed upon to avoid subjectivity.

Response 7: The goal of the duct removal vapor and odor control plan will be to have no odors. While it can not be guaranteed that there will be no odors, a significant effort is planned to control/limit odors. NYSEG will be developing an optional, temporary relocation program for residents immediately adjacent to the work, and every effort will be made to minimize odors by a combination of techniques. In all cases, the Health and Safety Plan and Community Air Monitoring Plan standards will be maintained.

Comment 8: The Feasibility Study states that "the trench shroud. . .will be constructed and disassembled daily." Will the trench itself be closed daily? If not, what will keep toxins, dust and odors under control overnight?

Response 8: It is planned that the duct excavation will be closed at the end of each work day.

Comment 9: There is no contingency plan for the failure of the proposed shroud at this location. CTAC will not accept a remedial action plan that does not include, at a minimum, a stop work order and a plan for corrective measures in the case of release of toxic fumes and offensive odors.

Response 9: If vapor emissions begin to approach established guidelines, or if excessive odors are noted, appropriate engineering controls will be implemented. These measures could include increasing the draw on the air handling system or changing the configuration of the air collection facilities, additional application of BioSolve, or modifying excavation practices (i.e. removing less in each bucket). If vapors can not be controlled, excavation will be suspended until an effective plan can be developed and implemented.

Comment 10: The estimated trenching width of 5-7 feet and depth of 7-9 feet seem insufficient given previous estimates of the duct's size, as well as the depth to which tar has leaked at specific breaches. Insufficient contamination is likely to be removed.

NYSEG's plan to address migration pathways when they are encountered is insufficiently documented. What is the maximum width, depth and distance to which NYSEG will excavate when breaches are encountered?

Response 10: The work plan and access agreements will be designed to provide as much flexibility as possible. If contamination extends beyond the original planned extent of removal along the wooden duct, these excursions will be assessed on a case by case basis. It is the NYSDEC's understanding that NYSEG intends to remove all contamination if feasible. However, larger excavations would not be feasible with the equipment and procedures provided for this removal. The air system is not designed to accommodate wide excavations. The commitment to close the excavation on a daily basis is not practical for larger excavations. Shoring needed for deeper excavations will not be immediately available. Dewatering facilities would also not be designed to accommodate larger excavations. Excavations near buildings would require structural analysis, so major excursions will have to be carefully evaluated before they are addressed.

If the extent of contamination from the duct is too extensive to remove in this mobilization, NYSEG will carefully document the location of the contamination, and investigate the full extent as part of OU2.

Comment 11: On March 4th, 2003, DOH officials stated that NYSEG has been asked to design a temporary resident relocation plan for the duct removal. This plan is not referenced in the PRAP. CTAC will not accept a PRAP without the details of a relocation plan having been released to the public.

Response 11: Temporary relocation will be offered by NYSEG to individual homeowners immediately adjacent to the work. This will be addressed during a series of meetings between NYSEG and the residents planned for September of 2003.

Comment 12: CTAC will not accept a PRAP for the duct until at least the following issues are addressed to the public in writing: 1) interruptions in utility services, as part of work or in the case of accidental breakage or as a result of the work 2) traffic interruptions 3) owner and emergency access to homes during duct removal 4) provisions for the blind and deaf residents (most of them are pedestrians) who live along Court Street and elsewhere in the neighborhood 5) school bus access 6) protection of children on playgrounds and sidewalks 7) quick and comparable replacement of any trees removed as part of the remediation

Response 12: This is design level planning. Therefore, these details will be addressed during the remedial design.

Comment 13: There is no true evaluation of different remedial approaches, only an evaluation of varying degrees of soil removal criteria. Based on this evaluation, the PRAP does not offer actual alternatives, only slight degrees of the same plan. There was no consideration of alternatives such as in situ treatment of subsurface soils.

Response 13: In an area with a large volume of NAPL contamination at relatively shallow depths, the most effective means of achieving compound specific TAGM cleanup objectives is by excavation. In-situ remedies can be effective in addressing relatively thin seams of coal tar, or residual contamination, but they have not been demonstrated as effective in addressing source areas such as we see on the plant site. An in-situ remedy may be a consideration when NYSEG evaluates areas out into the neighborhood, where there is a relatively small amount of tar 14 feet down, near houses. A remedy to contain the contamination on the site may have been feasible, but would not have been the preferred remedy based on the selection criteria, so these alternatives were also screened out.

Comment 14: The short-term effectiveness of each remedy to eliminate exposure to volatile organic compounds during the remedial action has not been addressed.

Response 14: Short term effectiveness is addressed in both the Feasibility Study and PRAP. Air handling and treatment systems will be used both on the plant site and during the wooden duct removal as part of a comprehensive program to minimize odors and to ensure that vapors do not exceed established thresholds. Also as noted, haul routes will be controlled to minimize impact to the community.

Comment 15: All of the alternatives would leave all raw tar product, contaminated soil, and contaminated groundwater below eight feet in place, effectively leaving a contamination source in the ground.

Response 15: All three of the removal alternatives, Alternatives 2, 3 and 4 developed in the PRAP, require removal of all coal tar product and visually identifiable contamination from the plant site regardless of depth. The comment that coal tar would remain below 8 feet under the proposed remedy is not correct.

Comment 16: A plan to prevent the recontamination of fill material following excavation was not developed. CTAC will not accept a PRAP without a detailed groundwater and NAPL management plan. The impact of OU-1 on OU-2 must be considered as part of this plan. "Institutional controls" for future groundwater management are insufficient.

Response 16: Recontamination of backfill material following remediation will be discussed during the remedial design. Since the coal tar/NAPL is to be removed from the site, a NAPL management plan is not needed. Investigation and monitoring of groundwater will be addressed in OU2.

Comment 17: The recycling of untested surface soils as fill at deeper depths is unacceptable. Further, the community has a right to have documented, in advance, the locations where any soil recycling and the reuse of contaminated soils will occur.

Response 17: As indicated in Section 7.1 of the PRAP, material at the plant site would be sampled and analyzed to determine the appropriate off-site disposal/treatment, and the top two feet of soil would be used as fill below 8 feet only if the remedial objectives applicable below 8 feet are met. There is no proposal to use untested fill material.

Comment 18: In no document yet released by the DEC is there any commitment on the part of the State relating to future cleanups of OU-1 and OU-2 should the responsible party pull out. CTAC will not accept any PRAP that does not include a contingency regarding the potential abandonment by the responsible party. That contingency must include a documented commitment on the part of the State to fully remediate any remaining contamination in OU-1 and OU-2 should the responsible party abandon its commitment.

Response 18: The consent order signed by NYSEG obligates that company or any corporate successor to complete the remediation of this site. Hazardous waste sites which do not have identified responsible parties may be addressed under the State Superfund program, but that scenario does not currently apply to this site.

Comment 19: The PRAP does not justify the selection of an eight feet excavation cutoff. Does it indicate the level of the water table during the construction season? Does it indicate a standard building foundation excavation level? This choice must be documented and justified to the public.

Response 19: The 8 foot cut-off is based on future use of the site, and not existing conditions. General construction and utility work for residential development generally occurs at depths of 4-6 feet. Therefore 8 feet is a conservative depth. Work below a depth of 8 feet is not common in a residential neighborhood such as this and such deeper excavation would likely be associated with a large scale construction project where soil management techniques are routine.

Comment 20: Only Full Cleanup to Residential Standard Will Be Accepted. On several occasions since Spring 2000, State Health Department officials stated that the agency would insist upon a cleanup to residential standard. Such a cleanup would allow all future uses of the property and include no deed restrictions on the property. The preferred alternative presented in the PRAP would allow unrestricted use of the property only if "institutional controls" are in place. These include deed restrictions, a site management plan, a health and safety plan, annual owner certification of compliance, and restrictions on use of ground water.

In effect, the burden of the remaining contamination will be shifted from the current corporate responsible party to future individual or institutional property owners.

Those owners would have to meet burdensome compliance requirements and financial costs. This is unconscionable, unethical and unfair. It will not be accepted.

CTAC will accept no less than alternative #4 - full cleanup of all contamination.

If the DEC allows any contamination to remain on the plant site or in the community that could have been reasonably remediated, we shall bear the stigma of a contaminated zone in perpetuity. Property values are likely to founder, and any redevelopment of the plant site is likely to be substandard and not reflective of the quality of the community that surrounds it. What private investor would knowingly acquire a property with deed restrictions related to remnant contamination from a Type 2 Hazardous Waste Site? Why would she invest good money in the property? It is a fantasy. This community will not bear NYSEG's burden.

Response 20: NYSEG is currently negotiating to acquire the property. If successful, NYSEG will be the property owner responsible for the institutional controls. The proposed remedy will allow residential use of the property, however, for this to occur, the new owner will be knowingly assuming the responsibility for complying with the institutional controls. If no new owner is willing to purchase this property with the institutional controls in place, then NYSEG will maintain the property consistent with community planning and zoning requirements.

Comment 21: Allowing source contamination to remain will continue to feed PAHs into the groundwater, which feeds into Cayuga Lake. The PRAP states that there will be no completed exposure pathways if contamination is left below eight feet. CTAC reminds the regulating agencies that Cayuga Lake is a source of drinking water for many Tompkins County residents. This represents a completed exposure pathway which must be eliminated.

Response 21: Although final delineation of groundwater contamination in Operable Unit 2 (OU2) remains to be completed, at this time a general understanding of the groundwater impacts has been established. Groundwater above standards appears to be limited to the area within approximately 100 feet of coal tar contamination. Groundwater contamination would have to extend more than 1000 feet beyond these areas to impact a tributary to Cayuga Lake and over 5,500 feet before directly impacting the Lake, a scenario which is not expected to occur. Consumption of water from the Public Water Supply is not a completed, nor a potential, exposure pathway for this site.

Comment 22: The increased cost of alternative #4 over alternative #3 is 21%. Given NYSEG's recent lavishing of retirement packages on top executives, the choice of alternative #3 demonstrates an unacceptable lack of concern for public health, the environment and the well-being of a residential neighborhood.

How is it that alternative #4's 15.5 million dollar price tag is prohibitively expensive and #3's 12.8 million price tag is not? Why is #4's 15-month project duration prohibitively long and #3's 11-month duration is not?

Response 22: As noted, the logic used to reject Alternative 4 could also be used to reject Alternative 3 in favor of Alternative 2. In fact, the NYSDEC and NYSDOH have selected remedies at several other MGP sites which were comparable to Alternative 2. The NYSDEC, in other scenarios, would not have considered the increased cost between Alternative 2 and Alternative 3 to be justified, given the small incremental increase in contamination which would be removed and the comparable level of protection provided by Alternative 2.

Alternatives 2 and 3 are both protective of the public health as both eliminate source materials and incidental contact with contaminated soil. NYSEG's decision to propose Alternative 3 was based on their desire to decrease their future site management costs and limit any future liability which may be associated with this site.

Comment 23: The impact of market values for private properties must be discussed going forward. It is clear from the PRAP, however, that more specific protection must be afforded to property owners.

Demolitions on the plant site, extensive excavation around the neighborhood, and heavy truck and equipment traffic, along with possible pile driving for retaining walls, will all have significant impacts-on the structural integrity of properties in this neighborhood. The buildings are largely 19th-century frame structures on masonry foundations. As it stands, private owners will bear the burden of damages caused by NYSEG equipment on a NYSEG project. This is unreasonable and unacceptable. CTAC demands that this issue be appropriately incorporated into the final PRAP, and that NYSEG negotiate with the community on the matter of property protection before any work begins.

Response 23: CTAC clarified, during the public meeting, that their concern with property value protection is related to the need for NYSEG to address any damage done to private property during the remediation activities. Any damage done to private property will be repaired or otherwise addressed by NYSEG. These provisions will be provided for both in the remedial design and access agreements.

Comment 24: Why was Binghamton selected as the site of the shroud demonstration instead of Ithaca? That doesn't make it very accessible. Could a video be provided for the people who are not going to be able to drive down to Binghamton?

Response 24: The proposed location is another NYSEG coal tar site in Binghamton, New York, in a commercial area without any nearby residential development. NYSEG provided transportation for interested community representatives, and provided a video of the demonstration to CTAC for other community members to view.

Comment 25: There's nothing in the selection criteria that discusses deed restrictions, which is what's going to affect us and our property values in this neighborhood in terms of desirability. What is on there is number seven, cost effectiveness. That's the cost to NYSEG, not us. So the bottom line is, this is just the corporation's work. They're concerned about their cost and what they have to pay, and we as neighbors and homeowners and taxpayers have to be concerned about our investments and what we have to pay, and as Kathy said, what we will pay down the road if this thing isn't dealt with correctly. So I just want to point that out after the presentation was done.

Response 25: The selected alternative allows for residential development consistent with surrounding properties. The proposed deed restrictions would not be expected to significantly impact this property or surrounding properties.

Comment 26: I am here as a member of the board of Offender Aid and Restoration (OAR), which inhabits the building on the corner of North Plain and West Court, and has inhabited that building for 25 years. Regarding the air sampling, I would like to know more about the chemistry of polycyclic aromatic hydrocarbons. I'm making the specific request that DEC provide our staff with some sound scientific information about the toxicity of these contaminants.

Response 26: In order to get into the soil gas, and then from the soil gas into the indoor air, chemicals have to readily volatilize. Polycyclic aromatic hydrocarbons are much less volatile than other coal tar constituents, so they are not the major concern in indoor or outdoor ambient air at this site. The BTEX compounds (Benzene,

Toluene, Ethylbenzene and Xylene) are highly volatile and are therefore the coal tar related chemicals of most interest for indoor air, ambient air, and soil gas. The mechanics of the vapor intrusion pathway is described in the USEPA's "Johnson-Ettinger Model." Documentation for this model is readily available on the internet, and can be requested from the NYSDEC project manager.

Comment 27: Will the air monitoring results be sent to the landlord or to tenants?

Response 27: All property owners received the letters. In addition, letters were provided to all tenants who requested the information. OAR was provided with a copy of the results pursuant to this request.

Comment 28: As a member of the board of OAR, I believe our agency deserves some kind of compensation for the need to move.

Response 28: The appropriate contact at NYSEG for such questions is Joe Simone.

Comment 29: Why doesn't everybody on the mailing list get a general idea of what the air sampling has been.

Response 29: See response #2.

Comment 30: I own a duplex on West Court Street. It's the only residential building on West Court across from Markles Flat. I lease out those two apartments. I want to know what impact the soil gas will have.

Response 30: Letters were sent on July 31 informing residents of the results of the soil gas and indoor air sampling.

Comment 31: Can you describe air sampling process

Response 31: Three samples were collected for each building sampled. One of the outdoor air to establish ambient (background) conditions, one of the indoor air closest to the ground (typically basement air) and one in the ground below the house (soil gas). All three samples are collected in metal canisters and then sent to a laboratory for analysis. The sample below the floor is collected by drilling a hole through the floor, inserting a tube, sealing the tube to the floor, and then slowly drawing air through the tube into the canister. When the canister is full, the tube is removed and the hole is sealed. In addition to the sampling, an inventory is also taken of household products which may contain the same chemicals we are looking for. These would include paints, solvents, glue, and anything which may contain any petroleum products.

Comment 32: I understand that when they remove the duct, if they find contaminated soil below or adjacent to the duct, they were not going to remove it at that time, but rather, they will document it for further investigation and remediation at another time. Given this uncertainty, how can the claims of 95 or 98 percent removal be presented as accurate?

Response 32: The percentages of contamination removed quoted in the PRAP referred to the plant site only, and not the duct removal. It is acknowledged that the contamination in the vicinity of the duct is not well understood and requires additional investigation. These numbers, while approximations, are based on extensive testing on the plant site and are much more accurate than any assessment of the wooden duct would be.

Comment 33: I understand if you're going down the street, and we know there's a breach on Washington Street, you're going to have to later dig that up. So I understand why you might document seepage in the horizontal direction, but if you see that soil is contaminated and it's contaminated 5-10 feet below that duct, why aren't you going to dig that out now rather than putting our communities through additional remedial actions?

Response 33: See Response #10.

Comment 34: Can the NYSEG presentation on the duct work be made available in print as DEC has made available this presentation?

Response 34: A paper copy of NYSEG's presentation was made available to the CTAC and will also be sent to the document repositories. NYSDEC's Presentation was made available electronically as well.

Comment 35: Many windows in our neighborhood are not airtight. Is NYSEG going to cover them to prevent air toxin making their way in the homes?

Response 35: The vapor management program designed by NYSEG and the community air monitoring plan will ensure that there will not be any substantial release of dust or vapors as a result of the duct removal, so the plastic should not be a necessary measure. However, if requested, covering windows adjacent to the duct removal work with plastic will be considered on a case-by-case basis.

Comment 36: What happens if the air toxin does make its way into the house?

Response 36: The vapor control and community air monitoring programs will ensure that there is no significant release of vapors. If there are minor releases of vapors, the levels are expected to dilute rapidly outside to non-detectable levels once work is stopped.

Comment 37: Are you expecting to work in the snow and in the rain?

Response 37: There will be contingency plans to deal with weather. Work will not be able to continue during a heavy rain because of the need to replace the storm sewer. Snow would not be expected to present a problem. The excavator will be able to move the snow.

Comment 38: I know that you're saying if you have to go down lower we will have to look at that contingency. However, what was brought up was, that -- the number four, which was the 99 percent which would be maybe 3 million -- I don't remember the difference -- or four, I think that should be thought about before, that if it's needed the money is there, not that you have to stop and check with higher ups, et cetera, et cetera. There should be -- if you want number three and you've all decided on that, there should be the contingency that if by any chance there is deeper contamination the money is there and you don't have to then stop everything and worry about it. And as we all know, because it's been written in the paper, a lot of money has been given for pensions. Ergo, that's not an enormous amount and I think that's a very good question that should be answered. Maybe not by you, perhaps, but at least to be brought forth.

Response 38: The Record of Decision selects a remedy that will have certain endpoints, such as the removal of visual tar, removal of structures and removal of material with certain analytical results. Regardless of how much larger the excavation gets, the DEC will expect NYSEG to implement the remedy to achieve these endpoints.

Comment 39: I have a question about the original site. The proposal at alternative three or four. When you described that the tar probably spread out like a mushroom and it gets wider. Why weren't there alternatives evaluated that maybe go in and maybe suck the stuff out instead of taking all the soil and all the soil that might be on the higher level and most of the stuff spreads out towards the bottom and goes down?

Response 39: See Response #13

Comment 40: When you clean the area and you put the clean fill in, if you remove the sheet piling, isn't the contamination from the outside going to come back in?

Response 40: Means to prevent this will be evaluated as part of the design.

Comment 41: If you take our advice about not removing the trees until you find out where the duct is, and you do find that it is under the trees, can the trees be removed block by block as it goes along as opposed to all at once?

Response 41: Tree removal will be phased. Unnecessary removal of trees will be avoided.

Comment 42: The Shade Tree Advisory Committee discussed this project and would like to see is a phase removal of the trees, so that the removal of the trees stays just ahead of the construction.

Response 42: See Response 41.

Comment 43: Could NYSEG just put a huge piece of plastic around the house. That would keep both vapors and dust out of houses even though in the winter it won't get through the windows leakywise?

Response 43: It is not anticipated that there will be any need for this practice, but use of plastic could be considered on a case by case basis.

Comment 44: In terms of replacement of trees, my understanding was that NYSEG was going to measure the diameter, inches or circumferences of trees that exist on Court Street and provide the city with the equivalent amount of trees. Now, that means that this neighborhood is in effect subsidizing a much larger planting throughout the city, which is great, but those trees that were showing on the slide are really puny trees.

Response 44: The city has a very detailed policy which specifies, when trees are removed, how they are replaced. NYSEG must operate under the city's guidelines. Concerns about the types of trees, how many trees, the placement of trees, should be addressed to the City Shade Tree Advisory Committee.

Comment 45: You said if things aren't going as well as we intended or if there's a measurement of air that shows that it's not up to standard, who makes that decision to stop the project? Who is going to be there every day assessing those measures?

Response 45: NYSEG will have an independent contractor performing the air monitoring. It will be this consultant's responsibility to alert the NYSEG Project Manager if air quality levels start to become elevated. The NYSDEC intends to have a representative on-site for intrusive activities to assure that the air monitoring is in place. In addition, NYSEG plans to make the air monitoring results available to the City as they did during the gas line replacement.

Comment 46: What will be the process involved in removing the duct, and how will odors and vapors be controlled during that process?

Response 46: A backhoe will start by removing the top few feet of soil, well above where the duct and contamination is present. During this excavation, the contractor will be continuously applying a mist of BioSolve. The BioSolve coats the soil to retard vapors or odors from escaping into the air. BioSolve was demonstrated on raw coal tar during the demonstration in Binghamton, and was very effective. So even before any coal tar is expected to be encountered, odor/emission controls will be in place. One of the reasons for this

is that there may be some sources of petroleum odors other than coal tar, and NYSEG does not want residents to notice those and attribute them to the coal tar, as happened during the gas line replacement.

Once the shallow trench is established, the air emission control equipment will be set up and turned on. Both the truck and the trench will be covered, with a layer of plastic. Blowers will draw air from both the truck and the trench, and this air will go through filters to remove any vapors.

While the backhoe is removing soil and other materials which may have an odor, a worker will be applying BioSolve at all times. The bucket will be sprayed with BioSolve before it is lifted out of the trench to minimize odors while it moves from the trench to the truck. There will be provisions for a second sprayer to apply BioSolve to the material in the truck if there is any odor. This second sprayer will also be able to spray the bucket if there is any odor from the bucket as it returns to the trench. The trench will also be sprayed with BioSolve.

The actual removal of the duct will involve two excavators, one with a set of shears which will cut the duct into manageable pieces and the other will lift these pieces into the truck, after they are sprayed with BioSolve.

Comment 47: From working construction, I know that water pipes are required to be 5 feet below surface, so I'm assuming that for each house on the opposite side of the street there will be a water lateral and a sewer lateral that passes under the duct, correct?

Response 47: It is assumed that some of these service lines will be above the duct, some below, and some may have been installed right through the duct. Any services as deep as or deeper than the duct may have created a breach. If the pipes are above the duct, they will have to be supported and worked around. NYSEG is not planning to cut any of these lines. If it becomes necessary to interrupt service or if the line is accidentally damaged, it will be repaired quickly. No service interruptions are planned, if they happen, they should only last a short time. NYSEG will be required to include provisions to promptly repair lines if damaged or cut.

Comment 48: With so many potential breaches, possibly one or two for every house, wouldn't it be more sensible to construct a structure and examine a smaller area before doing the entire street?

Response 48: What we see on one block may be completely different than what we encounter on the next block, so a trial dig is not likely to be representative. The key to this removal is that it will proceed on a limited basis. The odors can be readily controlled on this scale, and it can be started and stopped easily. The excavation will be covered up and all the equipment removed each evening, so residents won't have to drive around it after work hours.

Having a structure would make this a much larger scale project. For instance, overhead power lines, which are 13 feet off the ground, would all have to be removed to accommodate the structure, which would have to be 25-30 feet tall to accommodate construction equipment. It takes a pretty good size structure frame to hold this. It would cover both lanes of the road, and would take weeks to set up and take down. This would also involve removing trees on both sides of the street.

Comment 49: Could that structure be miniaturized by using miniature excavation equipment?

Response 49: There are some limitations to this possibility. There are certain minimum sizes for both the truck and the excavator. These limitations would not allow the structure to be significantly smaller than previously described. In addition, if smaller equipment were used, the project would last longer. If a structure were used, that would involve air handling equipment running 24 hours/day, and the street being closed completely for extended periods.

Comment 50: What are you doing with the rinse water?

Response 50: The BioSolve will be applied as a fine mist, so it should not create any water that needs to be handled separately. It will just make the material being handled a little damp. If there is high ground water to work around, water handling equipment will be on site. Pumps and a portable tank on a trailer will be available to take the water from the trench. At the end of the day, this will be removed to the plant site, and transferred to a larger tank or sent directly off-site.

Comment 51: Are you going to be de-watering on the base site? My impression is the water table goes to about 7 feet on the base site, and let's just say you hit coal tar, you need go deeper than that 7 feet to get to the raw product.

Response 51: There will be extensive de-watering at the plant site. This will be controlled to a degree by the sheet piling. During the design, a decision will be made whether the water that is pumped out will be treated on-site and disposed of in the sanitary sewer system, or whether it will be disposed of off-site without any on-site treatment.

Comment 52: We are just going through a very extensive remediation at a gas station site at West Jay, and I think that experience has been very instructive as you're considering this remediation, so I'd offer the following thoughts. If you do it in one fell swoop the same way West Jay Street is going to be cleaned up, that's great. Then you won't have to come back and do the job twice. They kept hitting unanticipated problems, so you should factor that in your planning. To the extent that you can remove all of the pollution in strict enforcement of the TAGMs and the ground standards that's what you ought to do.

Response 52: For smaller, simpler sites, the NYSDEC may be able to achieve the goal of cleaning a site to pre-release conditions. For larger, more complex sites, this goal is often not practicable. However, the remedy selected will be protective of human health and the environment and in this case will be removing a very significant percentage of the contamination.

Comment 53: Given the fact that almost no sampling has been done in the area of the duct, you can't say that the soil above the duct is uncontaminated and, therefore, you think, scrape it off and put it on a truck and a cart it out without the shroud in place thinking you can just put landfill in.

Response 53: The soil above the duct will be sampled and analyzed prior to the start of the removal to determine how this material should be disposed.

Comment 54: When similar work was done in this neighborhood with the upgrade of the gas mains, we were assured that there will be no contamination, and there was. And there were cases where the DEC specialist admitted to me that what I was smelling were manufactured gas waste fumes, and the analysis of material has never been sent to the document repositories.

Response 54: The gas line replacement work was not similar to the proposed remediation. It did not involve handling of any contaminated material. The DEC inspector, despite the above claim, indicated that at no time during the gas line replacement work did he smell any coal tar or any other MGP wastes, and confirmed that he did not make any statement to that effect. The analysis in question showed no detection of MGP or petroleum related products. Since this sample was collected in the immediate vicinity of an ongoing natural gas leak, that would be the most likely source of the odor. The gas line work was a standard maintenance job by NYSEG unrelated to the remediation of this site. Sample results such as this are not typically sent to document repositories.

Comment 55: We do know that there is surface soil contamination at Washington and Court. Will this cleanup of this area happen now since you're going to be working right in the adjacent area, or what time do you intend to address significant contamination a hundredfold, a hundred times, the TAGM levels for some of those carcinogenic compounds?

Response 55: At this time we have no link between the surface soil PAHs found in this community to the MGP related contamination. The NYSDOH has indicated that there is no need to restrict activities near this location due to the surface soil results reviewed to date. Although the wooden duct removal project is not specifically targeting surface soil contamination, all surface soil along the north side of West Court Street between the sidewalk and the street will be replaced with clean fill as a result of the wooden duct removal.

Comment 56: Is there a community relations director for either the DEC or NYSEG to answer the public's questions about coal tar?

Response 56: Contact information has been provided on each fact sheet distributed to date, and will be included on fact sheets provided leading up to the remediation projects.

Comment 57: My address is 416 North Plain Street. I live across the street from the site, and I just recently discovered that on this map (Figure 3) coal tar may be under the northeast corner of my house. No one has contacted me to tell me what in the world that means. Does that mean that there's something wrong with my house?

Response 57: Coal tar was found in the street near this location, at a depth of 13 feet. The potential exposure pathways are through the soil gas and groundwater. The soil gas at this home has been analyzed, and the results were sent to the homeowner on July 31, 2003. If the basement were continually wet, this may be groundwater, which may be impacted by the site. If the basement was instead wet only episodically, following a rain event, this water would typically be due to infiltrating rain water, and should not be contaminated. Surveys were distributed to the residents in 2001 and none of the homes near the contamination indicated more than occasional wetness following rain. The tar is and will be more fully delineated in Operable Unit 2.

Comment 58: We just took everything out of the basement today. Does it need to be sealed? And if it needs to be sealed, what does it need to be sealed with?

Response 58: No corrective action has been recommended for any homes at this time.

Comment 59: It's damp down there. There's water. And if the corner of my house is in that, what's coming in my house?

Response 59: Since the coal tar itself is 13 feet below the ground, it should not be impacting your home directly. See also response 57.

Comment 60: Are my grandchildren safe to come in my backyard and play? Is it okay for them to be eating the cherry tomatoes?

Response 60: No completed exposure pathways have been identified associated with surface or near surface soils related to the MGP site. This means that your grandchildren are not being exposed to site related contamination.

Comment 61: I'm concerned about the children at the Beverly J. Martin Elementary School as well, because as far as I know, no one's drilled there.

Response 61: Contamination has migrated from the former MGP, the source area, to the north and to the west. Beverly J. Martin Elementary School is located to the south and east. Borings completed between the school and the site have been free of contamination.

Comment 62: I know that when the drilling was done to take these samples, windows cracked on my house, my ceiling cracked. Who's responsible for this? If my house walls are cracking and my ceilings are cracking with all the drilling that went on, what's going to happen with all this other stuff that's happening?

Response 62: The borings located near your home were installed using a geoprobe and would be unlikely to have resulted in your house being damaged. While the remedy will require more extensive intrusive activities, NYSEG will have a program to assess property before and after construction, and will address any property damage that may occur as a result of the construction activity.

Comment 63: My home was damaged by vibrations during the gas line replacement last fall. Can I be compensated for that damage?

Response 63: You should contact Christopher Doppel, NYSEG's Ithaca Division Construction Manager. Telephone 607-347-2179. Mailing address is NYSEG, 1387 Ithaca-Dryden Road, Ithaca, NY 14852.

Comment 64: People are still using coal tar to seal their driveways all over the city in this neighborhood and elsewhere. If it's that dangerous, why is it still being sold?

Response 64: There are a lot of household products which contain benzene and other potentially hazardous compounds besides coal tar, including gasoline, paints and cleaners. Most people use these products without realizing what is in them. The manufacturers do provide information of health risks from these products and how to safely handle them in Material Safety Data Sheets (MSDS), which are generally available on the internet.

Comment 65: I'm wondering whether perhaps leaving coal tar that's really down deep is a better idea than digging it up.

Response 65: If the contamination is of a limited volume and is well contained at depth, then it could be possible to leave it there. However, at the plant site, the coal tar is not well contained. A remedy could be designed to better contain the coal tar, but at the plant site and along the duct, these options would be less effective and less practical than removal. Some combination of removal, in-place treatment, and containment may be appropriate for Operable Unit 2.

Comment 66: Could NYSEG dig up the majority of the site, and leave the Markles Flat building there to preserve this historic landmark?

Response 66: NYSDEC would not support a remedy which left the contamination under that building in place and not contained. NYSEG has been working with the City Historic Preservation Committee to evaluate the feasibility of moving the building or jacking the building up to excavate under it. No demolition can take place without the approval of two separate agencies. The first, the New York State Department of Parks, Recreation and Historic Preservation, has reviewed the proposed demolition of the Markles Flat building and has indicated their concurrence with the demolition in order to remove the contamination present beneath the building. Second, the Ithaca City Landmark Preservation Committee is currently reviewing the proposal. Note that the historic nature of the Markles flat building will be identified in Section 2 of the Record of Decision (ROD).

Comment 67: I sit on the City Historic Preservation Committee and I just want folks to know that when NYSEG came to that commission and made a presentation they proposed no alternatives but to demolish that building. The commission then asked for NYSEG to prepare a report including the options of moving the building or shoring up the building while working under it in place.

Response 67: The requested report was provided to the Commission by NYSEG, and a meeting was held to discuss it on August 18.

Comment 68: Could you leave the Markles Flat building where it is and have deed restrictions on that part of the site, and then clean up the rest of the site to residential standards?

Response 68: See Response #66.

Comment 69: Twenty-four hour notification for homeowner, that's work that's being done in front of their house, it will fluctuate. It should be at least 24 hours and then with a follow-up the night before.

Response 69: Contact of property owners will occur both early in the planning process and also right before the work starts. The 24 hour notification addresses the latter. There will be a great deal of communication between the residents along the duct and NYSEG during the planning and approval process. This has already started with the distribution of fact sheets and the public meeting announcing the proposed remedy. When the access agreements are finalized, there will be an estimated schedule for the work to take place. When the planning is finalized, all residents will be contacted to let them know what the actual start date will be. During the project, you will be able to see the work progressing toward your house. The 24 hour notification is an additional contact during which NYSEG will confirm once again what special needs and restrictions are involved with that particular property.

Comment 70: What kind of impact will there be with noise? What kind of impact with traffic? What happens through the whole process if damage is done to the building? I have to tell my tenants this will be happening and I have to tell them what kind of impact it will have. If damage is done to my building, will it be repaired?

Response 70: For the wooden duct, the road would be closed to through traffic for the block where work is currently taking place. During the day there would be noise from construction equipment and air handling facilities. At the plant site, there would be an estimated 18-month construction period, and activities would include pile driving, vehicle deliveries, trucks taking soil off-site for disposal, resulting in a general increase of noise and traffic in the area. Any time an activity such as pile driving takes place, typically surveys of nearby buildings to document pre- and post-construction foundation conditions are completed. That will be part of the formal design of the project. There will be a construction schedule developed. NYSEG will develop hauling routes, so truckers will not be allowed to move through the neighborhoods indiscriminately. That specific information will be developed in the design, and meetings will be held to sit down, look at plans and point out details.

Also see Response #62.

Comment 71: NYSEG indicates that they will document the condition of the property before construction and after the completion of construction to verify that, any damage caused by the construction is addressed. Is NYSEG intending to provide an individualized scope of potential impact for a person's property? Is there some way of resolving any disputes between NYSEG and the property owners?

Response 71: These are issues that should be addressed with NYSEG by the individual when the access agreements are developed. If an individual wants a dispute resolution clause, they should request that in the access agreement.

Comment 72: Damage repair is what we mean when we talk about property value protection. It's not what I'm going to sell my house for. It's the condition you leave my house in when you finish. That's protecting my property value. It might not be on sale tomorrow, but it is going to be for sale down the line. This is more than people taking advantage of a market. It's about protecting the condition of our homes. We live in 19th century framed structures on stone foundations. We're very concerned.

Response 72: See Response #62.

Comment 73: NYSEG will not sit at the table with the CTAC about property protection.

Response 73: At the public meeting, NYSEG indicated that they had offered to meet with the Coal Tar Advisory Committee and with their attorney and await a response. On July 30, 2003, a meeting was held between the parties to discuss their concerns.

Comment 74: I'm still a little confused on what's motivating the cleanup. I understand there's really concentrated levels of coal tar in these ducts. Is there any evidence in the indoor tests showing anything or that any water quality tests in the area are showing that it's leaching?

Response 74: The most significant potential exposure is to utility workers who may encounter the tar associated with this duct during excavation. To address this concern in the short term, NYSEG developed a protocol at the suggestion of the Coal Tar Advisory Committee that was disseminated to the City, alerting city workers and any other utility workers that the coal tar is there, and what to do about it. This protocol is similar to soil management plans which are used to address residual contamination at sites. However, in the case of the duct, we are not dealing with residual contamination, but rather a coal tar source, so this is not a sufficient solution to this potential exposure in the long term.

In addition, there is ground water contamination where we see contamination outside the duct along Washington Street and along Court Street on the block east of Washington. We have not seen any discernible impact in the indoor air or soil gas.

Comment 75: When I go down to Agway and buy a can of coal tar to do my driveway, I get a material safety data sheet and that tells me that there are carcinogens in that product and describes how to safely handle it. If I accidentally dig into some coal tar in the ground, I don't even know that it's there. I don't know what I'm into. Maybe that's one good reason to remove it because we don't know what's going to happen in the future. It's been dug into in the past, most likely many times, and so even though people are putting it on the driveway at Court and Meadow, we can't leave it in the ground in a public space.

Response 75: See response #74.

Comment 76: Is this the first site you have cleaned up? Is this the first duct like this you have removed?

Response 76: NYSDEC has identified over 200 coal tar sites in the New York State, and this is the only duct of this sort that we have found. The DEC has overseen a number of cleanups at other MGP sites, including several undertaken by NYSEG. They have even successfully removed holders, tar wells and soil from an active school yard. We have several years of experience in dealing with this kind of site. We have pulled out the big older structures, in some case with a sprung structure around it and others without a sprung structure. Depending on

the site, depending on the proximity to residents, odor and vapor control can be addressed with BioSolve and other engineering controls without a structure.

Comment 77: Have there been cleanups in other states you looked at?

Response 77: Yes we have looked at cleanups in other states.

Comment 78: Is there any way to hire people locally?

Response 78: That's an issue that will be decided by the contractor. There are requirements for OSHA training in order to work the construction.

Comment 79: I just want to get on the record that what winds up happening with the site property is going to affect our neighborhood, our community and our property values. And the scenario I see in my head, which may have even been discussed particularly with those deed restrictions, is all you can put in there is a parking lot, and then my house is right near a parking garage and property value goes down.

Can we get some kind of agreement with NYSEG to have a grand-scheme vision for that property, that site, for the community of the people who live here. We're concerned about the trees; we're concerned about the sidewalks; we're concerned about our individual homes. But it's everything in the community that makes up the community. We're looking for a commitment from NYSEG, and the City of Ithaca to have that eventually wind up to be something good for people.

Response 79: Any development of the site will have to go through the planning board and zoning requirements will have to be met. Those institutions are in place to make sure the communities concerns about the use of this property are appropriately considered.

Comment 80: What about the loss of the basketball court? That's a pretty major urban center for people who live in the neighborhood, the young people, the leagues that play there?

Response 80: No contamination has been identified under the basketball court at this time, so there may not be any interruption of court use. However, there will be areas needed for the job trailer, equipment and material storage, so these may interfere. In addition, if the demolition of the Markles Flat building is not approved, a location will be needed for that building to be moved to, and the basketball court area would be a likely location.

Comment 81: Is there any involvement of Cornell University Civil Engineering Department in developing a better understanding about the various chemicals you're dealing with?

Response 81: One professor from Cornell did attend an early meeting regarding the site, but it was the DEC's understanding that he was not from the School of Engineering. The Engineering School has not expressed any special interest in the project.

Comment 82: I have a map here that shows a cyanide levels of 1800 parts per billion, that shows some testing just outside of your red line along the side next to the plant. Is that something you think will dissipate on its own, or is there going to be a larger effort later on to clean up those levels outside of the line?

Response 82: Anything outside the black line is considered Operable Unit 2 (OU2). OU2 will be investigated much more closely, with some of that investigation work taking place this summer or fall. The investigation

will not be completed until after the wooden duct removal is completed, and any associated contamination has been delineated. A work plan is currently being prepared and will be provided to the public for comment.

Comment 83: If you find a lot of contamination spread out from the duct, will you stop the work and do more investigation?

Response 83: See response #10.

Comment 84: The feasibility study indicated that a citizen participation plan for the wooden duct removal had been prepared, but that has not been released.

Response 84: The work plan, citizen participation plan, health and safety plan are expected to be provided to the repositories for public comment in September.

Comment 85: What is the status of access agreements with individual property owners and the City of Ithaca permits?

Response 85: Preliminary discussions have been held with the City, but no permits have been finalized. Access agreements with property owners will proceed once the ROD is issued.

Comment 86: Based on the concerns and the questions that have been brought up tonight, are you still planning to have the duct removal start in October? You've indicated more borings will be done. When is all this going to be completed

Response 86: The characterization sampling work around the duct is expected to take place in early September. NYSEG and the DEC believe that the duct removal project can be started in October.

Comment 87: I think you might need to consider having another public meeting to present all the information you're intending to gather between now and the start of work.

Response 87: A public meeting is planned once the remedial design work plan for the wooden duct removal is made available for public comment, likely in mid to late September. It probably won't be a formal presentation since our experience is that this type of meeting is better handled by gathering people around the table to sit down and answer questions. Meetings may be targeted to those people who live along the area duct - the people giving the access as well as the general public. There definitely will be a lot of communication with the individuals that are along this right of way.

Comment 88: We do have a few people in the neighborhood who are blind and who are largely pedestrian. Obviously they don't drive but they walk on Court Street a lot. They live on the corner of Court and Park.

Response 88: If you can provide their names and some information, NYSEG will contact them and make the appropriate arrangements.

The Tompkins County Environmental Resources Committee submitted a letter dated July 29, 2003 which included the following comments:

Comment 89: According to the maps provided with the PRAP, no investigations of the soil were conducted south of Court Street. The cleanup of coal tar is limited to those areas where actual tests were conducted and contamination found. The investigation itself needs to be more comprehensive to fully delineate the extent of coal tar contamination.

Response 89: The map from the PRAP has been expanded in the ROD to show the borings located on the south side of West Court Street, all of which were all free of contamination.

Comment 90: Ground-penetrating radar (GPR) and GIS data can be used to provide more information. The ERC recommends that these technologies be employed to minimize unnecessary tree removal and ground disturbance by more precisely locating the duct and subsurface contamination.

Response 90: GPR was used during the RI, but that technology was unsuccessful in locating the wooden duct. GIS and CAD programs were used to map information collected during this investigation and are the basis for the figures included in the PRAP and ROD.

Comment 91: A public hearing should be rescheduled to maximize community participation. Scheduling the public hearing on the same night as the community fireworks served to minimize the amount of public input. We understand that those with comments were not asked their names, comments made during much of the hearing were not recorded, and despite the presence of a stenographer, those comments did not become part of the public record. We request that, because the public hearing was faulty, a new public hearing be scheduled in order to meet the requirement of adequate consideration of public input.

Response 91: The public meeting was appropriately advertised and was attended by approximately 75 people. Everyone was provided an opportunity to comment in writing. In addition the comment period was extended from the standard thirty day period to forty five days. We do not typically identify the source of verbal comments in the responsiveness summary, so identification of individuals was not needed. During the presentation, those attending were repeatedly asked to hold questions and comments for the end of the meeting, and limit questions during the presentation to only clarifications and definitions needed to understand the presentation. The public was told that formal comments on the remedy would be recorded at the end of the presentation.

Comment 92: The presence of coal tar by-products requires a full and complete cleanup to assure public health. By dividing the project into two separate units, contaminants will remain in the soil near residences after OU-I is completed. It is already known that contamination exists more than 2.5 feet away from the duct, which is the limit for the OU-I cleanup. It would be safer for public health and the environment if all contamination is removed once it is uncovered. Removal of all of the contaminants in one pass will also reduce disruptions to the neighborhood and the overall costs and environmental consequences caused by the project.

Response 92: This project was divided into 2 operable units to facilitate the timely remediation of the most heavily contaminated areas. The full investigation of OU2 is ongoing. If contamination is noted beyond the identified removal limits for the wooden duct, NYSEG stated its intention to attempt to remove that contamination during the wooden duct removal to the extent it can be undertaken.

Comment 93: The PRAP makes no mention of the trees that may be destroyed while removing the duct work on the north side of Court Street. In comparing the maps on pages 21 and 24, it is not clear where the duct is located.

Response 93: See Responses #4 and #41.

Comment 94: The soil above the duct work and the top two feet of soil onsite cannot be assumed to be uncontaminated soil. The re-use of potentially contaminated soil would reduce the effectiveness of the overall project, and may continue to pose threats to public health in the area.

Response 94: As stated in Section 7.1 of the PRAP and as will be stated in the ROD, all soil will be characterized for contaminant presence before disposal or reuse.

Comment 95: The proposed remedy mentions that all structures on the MGP gas site will be removed. Due to the historic nature of the original Markles Flats building, the fate of this building should be determined by agreement between appropriate historical preservation organizations and legal agencies.

Response 95: See Response #66.

Comment 96: The Environmental Review Committee urges NYSEG and the NYSDEC to implement Alternative 4 as proposed in the PRAP. This is the only remedy that assures a full and complete cleanup of the site, and the ability to return the site to a residential neighborhood without any institutional controls once the remediation is completed.

Response 96: Alternative 3 will allow residential development of this site, and is protective of human health and the environment.

Kenneth W. Christianson, submitted a letter dated July 30, 2003 which included the following comments:

Comment 97: First, it seems as though NYSEG is intent on destroying our trees no matter what. I have been to NYSEG/DEC meetings on the coal tar issue since February 2000. It's not clear to me that anyone even knows where the coal tar duct down Court Street is located.

Response 97: See Responses #4 and #41.

Comment 98: By dividing the project into OU-1 and OU-2, coal tar will remain that is 2 1/2 feet away from the duct, the ditch will be filled in, and then the remainder of the coal tar will be removed later as part of OU-2. This is undesirable for many reasons. The detrimental health effects of the coal tar will remain in the neighborhood even after OU-1 is complete. The neighborhood will have to suffer a second disruption of heavy machinery as OU-2 is implemented.

Response 99: See response # 92 regarding division of the project into 2 operable units. No completed exposure pathways have been identified under current conditions in the neighborhood; therefore no detrimental health effects are expected.

Comment 99: I fear that by splitting up the project in this way, NYSEG will be able to avoid liability for OU-2 - the harder stuff to remove.

Response 100: See response #18

Comment 100: The PRAP suggests that the top two feet of soil on the MGP site and the soil above the duct, will be treated as uncontaminated soil, and may be used for fill below six feet. Treating this soil as uncontaminated will, once again, lead to an incomplete cleanup of the coal tar contamination, and leave risks to public health.

Response 100: The material above the duct will be characterized before the start of any excavation. It will be disposed of off-site as appropriate based on this characterization. The top two feet of soil at the plant site will be reused below 8 feet only if it is tested and meets cleanup criteria. Please also see Response #17.

Comment 101: The proposed Alternative 3 does not go far enough in cleaning up the soil and preserving the integrity of the neighborhood. In comparing alternatives 3 and 4, one of the speakers at the last meeting asked if the extra \$3 million would be worth it. For public health, peace of mind, and the vitality of the neighborhood, the answer is a resounding yes. Only a completely clean and safe site will inspire the confidence necessary to make a block where people have the confidence to build new homes and allow the neighborhood to blossom. A complete cleanup is the only way to assure that residential development without institutional controls can proceed. I've looked at ugly cinderblock buildings for a long time, and I don't want to see the site turn into a parking lot or industrial site. We have a real opportunity to improve the neighborhood and city by cleaning the site to residential standards. This would be worth far more than the \$3 million price tag.

Response 101: The proposed alternative allows for residential development, in keeping with the stated desire to allow development which is consistent with the surrounding properties. Alternative 2 would also be protective of human health and the environment. NYSEG's proposal of Alternative 3 is based on a desire to limit future liability and also to meet the objectives voiced in this comment. See also response #20.

Comment 102: Third, the brick building on the corner, known as the Markle Flats building, has historical significance both architecturally and socially and should be preserved if at all possible. While the cinderblock and corrugated steel buildings around it are an eyesore that I would be happy to see removed, I believe the Markle Flats building itself is worth preserving, perhaps as a community center with residences surrounding it. It would be a shame to lose the historical significance of the building.

Response 102: See Response #66.

The City of Ithaca submitted a letter dated July 28, 2003 which included the following comments:

Comment 103: The Fire Department of the City of Ithaca would be called if a collapse or other event occurs during excavation. The following questions are related to emergency response:

- Do the soil characteristics in the area of work present any unique problems in terms of persons working in or near excavations?
- Assuming the 8-20 foot excavation depths that have been described, how will the work be conducted so that applicable regulations are complied with (for shoring or other measures), and to minimize the risk of side wall collapse or other difficulties?
- Are any tanks or other permit required confined spaces anticipated?
- Excavating to this depth will undoubtedly encounter groundwater. What provisions will be made to handle groundwater during the excavation? Will there be retention ponds or other containment on site?

Response 103: In addition to the brief answers provided below, all of the above questions will be addressed in detail during the Remedial Design. NYSEG will meet with the Fire Department to ensure that their concerns are adequately addressed.

- The soils characteristics do not present any unique problems.
- Issues of shoring and slope stability will be addressed in the remedial design.
- It is not anticipated that any tanks will be entered. They will be demolished and removed.
- Dewatering activities will be addressed in detail during the remedial design. If necessary, water would be stored on-site in tanks.

Comment 104: With regard to the various compounds to be extracted, is sufficient information available to predict quantities of PAH's and BTEXs to be accumulated at any given time? If so, what amounts might be stored or accumulate on site at any given time?

Response 104: Soils will be pre-characterized to allow disposal without significant stockpiling. If contaminated material is stockpiled, this will occur under the sprung structure. Any stockpiling outside the structure would be confined to clean fill. Constituent chemicals will not be separated out from the contaminated soil. The quantity of PAHs or BTEX contaminated material handled at this site will be a portion of the material already on-site.

Comment 105: Will there be any accumulations of flammable or explosive vapors during any part of the process?

Response 105: The air handling facilities for both the duct removal and plant site remediation will ensure that air quality is maintained at safe levels relative to flammable or explosive vapors.

Comment 106: The Fire Department would like the opportunity to review and comment on the site safety plan and emergency response plan to be prepared prior to the start of work.

Response 106: The Ithaca City Fire Department will be provided an opportunity to review and comment of the site health and safety plan.

Comment 107: City Engineers need clarification regarding NYSEG plans in the following areas:

- Scheduling and Coordination with City of Ithaca projects - There are a number of City projects that are underway in this neighborhood for traffic signals and traffic calming.
- Street Occupation - Street Permits will be required for any work within City of Ithaca rights of way. Such occupation or use includes staging, excavation, shoring and bracing and installation of monitoring wells.
- Maintenance and Protection of Traffic Plan - An MPOT plan needs to be formulated for the project which covers parking, street closures, establishment of work zones within the right of way, detours and truck routing. The MPOT will be a condition for issuance of the City of Ithaca Street Permit.
- Protection of utilities - Due to the depth of excavation and the proximity to the right of way, shoring and bracing will need to be provided to protect water, sewer gas and underground electrical utilities.
- Staging - Where does the project propose to establish a contractor's staging area?
- Control and Monitoring of backfill operations - Because some of the work will occur in or near City of Ithaca rights of way there will need to be careful monitoring and testing of compaction of backfill materials. An erosion and sedimentation control plan needs to be developed.

Response 107: The items identified by this comment will be addressed during the remedial design process.

Comment 108: In reviewing the PRAP, the City of Ithaca would like a section added that addresses NYSEG's and NYS DEC's public information plan and/or communication strategy for the project. Specifically the city would like to know how residents, City Officials, and the schools and recreation center in the area would be informed of the status of the project, any proposed utility service interruptions, street closings and detours, loss of parking and recreational facilities, any unpredicted findings, and associated health risks

The City recommends including in the section to be added, the name and contact information of the Public Information Officers assigned to this project so members of the public would know to whom their questions and concerns could be addressed.

Response 108: The site Citizen Participation Plan, which is available in the document repositories, addresses this concern. As has been the case since the start of the Remedial Investigation, fact sheets continue to be

provided at all critical points of the remediation projects. Any individual property owners and/or institutions which are directly impacted by the project will be contacted directly by NYSEG prior to the start of work, and efforts will be made to accommodate special needs and to minimize impacts to the extent practicable. Contact information is provided on these fact sheets.

Francine Jasper submitted an e-mail dated July 28, 2003 which included the following comments:

Comment 109: Not enough consideration by NYSEG and DEC of the hazards presented to community in this area during the cleanup. When soil sampling and boring was done last Fall 2002, I witnessed the airborne material (soil and dust) in a residential area, less than 10 feet outside of neighbors homes on Park Place and close to Albany street.

Response 109: The work undertaken in the fall of 2002 was a gas line replacement which did not involve the handling of any contaminated material. The NYSDEC was asked to monitor the actual excavation to confirm that no coal tar was encountered. No elevated vapor or dust levels were registered at the excavation. Following completion of the gas line replacement, dust became airborne when clean backfill was repeatedly driven over. The DEC inspector asked that the dirt be paved over to eliminate the dust problem, and this was done the following day. This problem will be eliminated during the duct removal by providing a surface layer of 6 inches of crusher-run.

Comment 110: Not enough attention given to other solutions for this problem, ie. bioremediation or an outright cash settlement for property owners so that the area may be turned into business district.

Response 110: Bioremediation may be an appropriate remedial technology to address residual contamination, and it will be considered to address the contamination remaining in OU-2. Bioremediation was determined not to be a feasible alternative to address the amount of contamination present in OU-1. Removing people from the area might address public health considerations, but would not address protection of the environment.

Comment 111: Inadequate attention has been given to health risks or respiratory disease present before any work is done. An assessment should be done of the numbers of households in the area where people have asthma or other respiratory illnesses.

Response 111: The project will be undertaken under stringent restrictions on emission of dust and vapors which are intended to prevent harmful exposure of even sensitive individuals. Provision will be made by NYSEG for a place for concerned residents to relocate to during the daylight hours while remedial work is in progress. All excavations will be backfilled at night.

Comment 112: The land is known to shift in this area and it could be that another indoor sampling should be done since last winter. My basement got damp this year, whereas last year it did not.

Response 112: Air sampling was performed in April at new locations within 100 feet of known coal tar deposits. Results did not indicate any coal tar-related impacts to indoor air in homes over a broad area. This spring was particularly wet, so damp basements would not be surprising, and itself would not warrant additional sampling efforts.

Tracy Farrell and Ronald Chapman submitted a letter dated July 31, 2003 which included the following comments:

Comment 113: Before a remedial action plan is developed to remove coal tar from the MGP site there should be a plan for the future use of the site. The future use will help determine the degree of remediation required.

Currently the Ithaca City School District uses much of the site as a maintenance facility and storage area, a use not compatible with the residential character of the neighborhood. This use should not continue after remediation. City officials and planning staff, neighborhood residents, and other stakeholders in the area must have input in planning the future use of the property.

Response 113: The proposed alternative would allow residential development, in keeping with existing surrounding properties. Any development of the site would have to go through the City's planning review process, which allows for input from City officials and planning staff, neighborhood residents, and other stakeholders.

Comment 114: We understand that NYSEG intends to acquire the MGP site from the Ithaca City School District in order to complete the proposed remedial action. What does NYSEG plan to do with the property after remediation is completed? We ask that NYSEG transfer the property to the City of Ithaca.

Response 115: The NYSDEC cannot dictate how NYSEG may use or dispose of this property, other than by restrictions imposed by the ROD ensuring the effectiveness of the remedy.

Comment 116: The PRAP states that "no completed human exposure pathways associated with OU-1 are currently known to exist." At a public meeting about the PRAP on July 2, 2003 at the Women's Community Building in Ithaca, it was stated that most coal tar compounds are about eight feet below the surface and therefore present little risk of exposure. It appears that digging up coal tar that is buried deep below the surface will actually increase risks of exposure. Please consider and comment on whether it would be safer for human health to use a remediation method other than digging up deeply buried coal tar.

Response 116: In-situ (in-place) treatment technologies do not necessarily have less short term impacts than excavation. In-situ remedies including chemical oxidation and soil mixing have similar vapor emission concerns which need to be addressed. In-situ chemical treatment remedies frequently involves potentially dangerous chemicals which need to be handled appropriately to address potential health and safety concerns. In addition, in-situ remedies would not be expected to effectively address the volume and concentration of contamination present on-site.

Comment 117: The PRAP states that "site-related indoor air sampling did not identify any discernable impact associated with the MGP contamination." We understand that there has been additional indoor air sampling and that the results have not yet been released. These additional indoor air sampling results must be summarized and made available to the public. Results should be made public before the comment period for the PRAP is closed.

Response 117: See response #2

Comment 118: If the additional indoor air samples show evidence of MGP contamination, what remedial action will be proposed for buildings? Is it possible to vent basements and reduce risk, as is done when radon contamination is identified?

Response 118: Yes, if determined to be necessary, remedial action such as sub-slab depressurization systems similar to those used for radon remediation could be required

Comment 119: The PRAP calls for removing a wooden duct that is believed to run west from the MGP site along Court Street. However, as explained at the meeting about the PRAP on July 2, 2003, the exact location of the duct is unknown. The exact location of the duct must be determined before a remedial action plan can be finalized.

Response 119: See response #4.

Comment 120: To remove the duct, the PRAP calls for cutting down all of the street trees along the north side of Court Street between Plain and Meadow Streets. Removal of all trees is not acceptable. Please present a proposed action that retains street trees on Court Street.

Response 120: See response #41.

Comment 121: Since it is considered safe and acceptable to leave portions of the duct under Meadow Street and under the railroad tracks in the West End, a proposed action that leaves part of the duct in place on Court Street should be presented and considered. Such an action might involve in situ remediation, and/or capping portions of the duct.

Response 121: The portions of the wooden duct under Meadow Street and under the Railroad tracks are part of Operable Unit 2, and will be addressed as part of that investigation and remediation. The Department would be reluctant to leave a source of contamination within a residential neighborhood if it can be readily removed. See response #110 regarding bioremediation.

Comment 122: The PRAP calls for removing all buildings on the MGP site before removing soil and subsurface structures. It is not acceptable to demolish the Markles Flat Building which is a designated local landmark. Any proposed action to clean up the site must also retain this historic landmark.

Response 122: See Response #66

Comment 123: The PRAP presents three alternatives for remedial action. Without a plan in place for the future use of the MGP site, the site should be remediated to meet residential standards as alternative 3 would do.

Response 123: The selected remedy, Alternative 3 will allow residential development at this site.

Gary Samuels submitted a letter which included the following comments:

Comment 124: Is the solution set in stone? If so, then are public meetings and input window dressing, or is the plan open to change?

Response 124: The remedy proposed at the public meeting was evaluated and revised based on the community's concerns raised at the meeting.

Comment 125: Is the EXACT location of the entire length of the duct known? Why not use high resolution magnetic mapping of contaminated sediments to locate contaminants?

Response 125: The most applicable geophysical tool for locating the duct, ground penetrating radar, was attempted unsuccessfully. Neither the wooden duct nor the contamination has a distinct magnetic signature.

Comment 126: Why can't in-situ bioremediation be used.

Response 126 See Response #110

Comment 127: Why are the trees coming down first as opposed to following the path from the plant site and having 100 % certainty where the duct is first?

Response 127: See Responses #4 and #41.

Comment 128: Why not follow the duct from the plant site and work West, as opposed to working East back to the plant?

Response 128: The location of the duct is most accurately defined at the west end of the duct.

Comment 129: Why can't there be mixed solution to preserve large trees? Perhaps horizontal bores where large trees exist, followed by doses of bioremediation and then plugging ducts where large growth trees exist?

Response 129: The horizontal boring would not be effective for investigating the condition of the duct or whether any contamination extends beyond the duct. Most horizontal drilling techniques would be ineffective for removing the duct.

Comment 130: Some trees are quite mature and serve as shade trees. What are the plans to replace them with the largest possible trees that can be transplanted?

Response 130: See Response #44.

Mary Raddant Tomlan submitted a letter dated July 31, 2003 which included the following comment:

Comment 131: While the future of existing structures on the Ithaca Court Street MGP: Site is not the focus of the remediation project, the assumption of the demolition of the landmark gasworks (aka. Markles Flats) building is disturbing. The report contains no acknowledgment of this locally designated building's historic and architectural significance to the community, and does not discuss options for its preservation. This omission should be addressed in the final plan, with reason given for any decision about the structure's proposed disposition

Response 131: The historic nature of the Markles flat building will be added to Section 2 of the Record of Decision (ROD).

Paul Mintz, Assistant Superintendent for Business Services at the Ithaca City School District submitted a letter dated July 31, 2003 which included the following comment:

Comment 132: As the New York State Department of Environmental Conservation ("DEC") is aware, the Ithaca City School District ("District") is the owner of real property on Court Street in the City of Ithaca, a portion of which is encompassed within Operable Unit No. I at the referenced Site.

As the owner of certain property covered by the PRAP, the District has a significant interest in this matter. For this reason, representatives of the District attended the July 2, 2003 public meeting concerning the PRAP. Based on that meeting, the District recognizes that members of our community have a variety of opinions regarding the proposed remedial plan, and the final remedial plan that should be selected. The District understands that the remediation of the Site is in the public interest, and is also sensitive to the opinions of the members of our community.

The District is not in a position to provide specific, technical comments concerning the PRAP. Rather, the District would expect to be supportive of any remedial approach that is selected by the appropriate regulatory officials, and that has been selected with the benefit of community input. However, the remedial approach, and particularly the schedule for implementation, must take into consideration that the District is currently using its

property to provide necessary support operations for the educational services to the community, and that we must be able to continue to conduct these operations from the property until a suitable alternative location is secured. We will continue to work with New York State Electric & Gas Corporation in this regard.

Response 132: Comment noted.

APPENDIX B

Administrative Record

**NYSEG - Ithaca Court Street MGP
Operable Unit No. 1 - Former MGP Site and Structures
Ithaca (C), Tompkins County New York
Site No. 7-55-008**

1. Proposed Remedial Action Plan for the NYSEG - Ithaca Court Street MGP site, Operable Unit No. 1 - Former MGP Site and Structures, dated June 2003, prepared by the NYSDEC.
2. Order on Consent, Index No. DO-0002-9309, between NYSDEC and New York State Electric & Gas Corporation, executed on March 30, 1994.
3. "Work Plan for a Supplemental Remedial Investigation at the Ithaca Court Street MGP Site" September 13, 2001, prepared by IT Corporation.
4. "Ithaca Court Street MGP Site Remedial Investigation Report for Operable Unit -1" April 23, 2003 prepared by MWH Inc.
5. "Ithaca Court Street MGP Site Focused Feasibility Study for Operable Unit-1" May 9, 2003 prepared by MHH Inc.
6. "Interim Remedial Measures Final Engineering Report for activities at Ithaca Court Street Former Manufactured Gas Plant Site, City of Ithaca, Tompkins County, New York" August 2001, prepared by NYSEG Licensing and Environmental Operations Department.
7. "Supplemental Remedial Investigation Citizen Participation Plan for Activities at Ithaca Court Street Former Manufactured Gas Plant (MGP) Site, City of Ithaca, Tompkins County, New York" May 2001 prepared by NYSEG Licensing and Environmental Operations Department.
8. Fact Sheet dated June 2003 announcing the Proposed Remedial Action Plan
9. Transcript from the public meeting held 7:00, July 2, 2003 at the Women's Community Building, 100 W. Seneca Street to present the Proposed Remedial Action Plan.
10. Comments on the proposed remedy from the Coal Tar Advisory Committee dated July 2, 2003.
11. Comments on the proposed remedy from the City of Ithaca dated July 28, 2003
12. Comments on the proposed remedy from Francine Jasper dated July 28, 2003
13. Comments on the proposed remedy from the Tompkins County Environmental Management Commission dated July 29, 2003
14. Comments on the proposed remedy from Kenneth W. Christianson, Jr. dated July 30, 2003
15. Comments on the proposed remedy from the Ithaca City School District dated July 31, 2003
16. Comments on the proposed remedy from Mary Raddant Tomlan dated July 31, 2003

17. Comments on the proposed remedy from Tracy Farrell and Ronald Chapman dated July 31, 2003
18. Comments on the proposed remedy from Gary Samuels dated July 31, 2003.