Department of Environmental Conservation

Division of Environmental Remediation

Environmental Restoration
Record of Decision
Former Halstead Quinn/ATI Tank Farm Site

Yonkers, Westchester County, New York
Site Number B-00193

March 2006

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

DECLARATION STATEMENT
ENVIRONMENTAL RESTORATION RECORD OF DECISION

Former Halstead Quinn/ATI Tank Farm
Environmental Restoration Site

Yonkers, Westchester County, New York
Site No. B-00193

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for of the Former Halstead Quinn/ATI Tank Farm site, an environmental restoration site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (NYSDEC) for the Former Halstead Quinn/Former ATI Tank Farm environmental restoration 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 substances and petroleum products 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 Site Investigation/Remedial Alternatives Report (SI/RAR) for the Former Halstead Quinn/Former ATI Tank Farm site and the criteria identified for evaluation of alternatives, the NYSDEC has selected clean soil cover after removal of grossly contaminated soils. The components of the remedy are as follows:

1. The excavation and off-site disposal or beneficial reuse (e.g., incorporation into asphalt paving products) of grossly contaminated vadose zone soils.

2. Backfill with clean soil to return the site to original grade.

3. A remedial design program to provide the details necessary to implement the remedial program.

4. In order to isolate the remaining contamination all vegetated areas will be covered with two feet of clean soil and all non-vegetated areas will be covered with either concrete or a paving system.

5. Development of a site management plan to address residual contamination and any use restrictions.

6. Imposition of an environmental easement.

7. Periodic certification of the institutional and engineering controls.

New York State Department of Health Acceptance

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

Declaration

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

MAR 24 2006
Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

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SECTION 1: SUMMARY OF THE RECORD OF DECISION

The New York State Department of Environmental Conservation (NYSDEC), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the Former Halstead Quinn/ATI Tank Farm. The presence of hazardous substances has created threats to human health and/or the environment that are addressed by this remedy.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Under the Environmental Restoration (Brownfields) Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated the property can then be reused.

As more fully described in Sections 3 and 5 of this document, the operation of a major oil storage facility (MOSF) has resulted in the disposal of hazardous substances, including volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons (PAHs). These hazardous substances have contaminated the soil, soil vapor, and groundwater at the site, and have resulted in:

- a threat to human health associated with potential exposure to surface and subsurface soil, soil vapor, and groundwater.
- an environmental threat associated with the potential impacts of contaminants to the Hudson River from groundwater or surface runoff from the site.

To eliminate or mitigate these threats, the NYSDEC has selected the following remedy to allow for restricted residential use of the site, which would also permit commercial or industrial uses:

- The excavation and off-site disposal or beneficial reuse (e.g., incorporation into asphalt paving products) of grossly contaminated vadose zone soils.
- Backfill with clean soil to return the site to original grade.
- A remedial design program to provide the details necessary to implement the remedial program.

- In order to isolate the remaining contamination, all vegetated areas will be covered with two feet of clean soil and all non-vegetated areas will be covered with either concrete or a paving system.

- Development of a site management plan to address residual contamination and any use restrictions.

- Imposition of an environmental easement.

- Periodic certification of the institutional and engineering controls.

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 Halstead Quinn/ATI Tank Farm is on the east bank of the Hudson River in the City of Yonkers, Westchester County. The site is located at 79–91 Alexander Street, which is near that street's intersection with Ashburton Avenue. (See Figure 1). The 2.8 acre site is in an urban area bordered by the river on the west, Alexander Street on the east, the Department of Social Services building to the north, and industrial buildings to the south.

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

A section of the Hudson River was filled between 1886 and 1898 to create the site. Over the years the site was occupied by a lumber company, an elevator company, a fuel company and a coal and wood company. In 1951 Standard Oil acquired the property for the purpose of installing a tank farm. Standard Oil installed 9 aboveground storage tanks (ASTs) in the early 1950s. In 1978 the site was sold to A.Tarricone Inc. (ATI). ATI installed two large 1.1 million gallon ASTs in 1983. The 11 large ASTs had a combined capacity of just over 5 million gallons of unleaded gasoline, diesel, and fuel oil. Sometime between 1995 and 2001 ATI sold or changed it's name to Halstead-Quinn Propane, Inc. Halstead-Quinn declared bankruptcy in 2001, and the site was taken over by Yonkers Alexander Street Redevelopment, Inc. (YASR), which remains the current owner. Spills are known to have occurred in 1989 when 4,000 gallons of #6 fuel oil were recovered after a spill, and in 1998 when an estimated 10,372 gallons of #2 fuel oil was spilled. It is possible that other unreported spills have also occurred during the site's long history of use as a MOSF.

3.2: Remedial History

The 1989 spill resulted in the recovery of 4,000 gallons of #6 fuel oil which was pumped back into tanks and an additional 1,000 gallons of contaminated product which was placed into drums for disposal. Due to the consistency of #6 fuel oil and the cold February temperatures almost all of the product was scraped up and recovered.

The 1998 spill was the result of a leak in a #2 fuel oil pipe. Over the next 6 months a Scavenger Oil Recovery System using 3 foot diameter recovery wells captured 8575 gallons of the estimated 10,372 gallon spill.

In September 2001 a Phase I Environmental Assessment Report was prepared for YASR by SCS Engineers, P.C.. SCS also prepared a Site Screening Investigation Report in September of 2001.

SECTION 4: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past owners and operators, waste generators, and haulers.

The Potential Responsible Parties (PRPs) for the site, documented to date, include: A. Tarricone, Inc. and Halstead-Quinn Propane, Inc.

The Yonkers Alexander Street Redevelopment Corporation will assist the state in their efforts by providing all information to the state which identifies PRPs. YASR will also not enter into any agreement regarding response costs without the approval of the NYSDEC.

SECTION 5: SITE CONTAMINATION

YASR has recently completed a site investigation/remedial alternatives report (SI/RAR) to determine the nature and extent of any contamination by hazardous substances at this environmental restoration site.

5.1: Summary of the Site Investigation

The purpose of the SI was to define the nature and extent of any contamination resulting from previous activities at the site. The SI was conducted between August 2003 and August 2005. The field activities and findings of the investigation are described in the SI report.

The following activities were conducted during the SI:

1. Research of historical information;

2. Demolition and removal of 15 above ground storage tanks (11 large ASTs and an additional 4 small tanks in the on-site buildings) at the site to clear the site for investigation activities;

3. An asbestos survey and lead paint survey were conducted on the three remaining buildings on-site;

4. Surface soil samples were collected at 15 locations;

5. Continuous sampling of subsurface soils at 22 soil boring locations;

6. Installation of one permanent monitoring well for analysis of groundwater and hydrogeologic conditions;

7. Sampling of three monitoring wells;

8. Collection of discrete groundwater samples at nine locations using a direct push technique;

9. Collection of a water sample from the on-site oil/water separator.

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

1. 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.

2. Soil SCGs are based on the NYSDEC "Technical and Administrative Guidance Memorandum (TAGM) 4046; Determination of Soil Cleanup Objectives and Cleanup Levels".

Based on the SI 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 SI report.

5.1.1: Site Geology and Hydrogeology

Site soils consist of fill materials, sand, gravel, and clay. Site lithology consists of historic fill underlain by flood plain sediments. Groundwater under the site is tidally influenced and flows to the Hudson River, which is a tidal estuary, on the western side of the site. Depth to groundwater varies from approximately 4.5 feet to 7.5 feet below ground surface across the site.

5.1.2: Nature of Contamination

As described in the SI 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 that exceed their SCGs are volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and inorganics (metals).

The VOC of concern is benzene.

The SVOCs of concern are benzo(a) anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene.

The metal of concern is mercury.

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 and parts per million (ppm) for soil. For comparison purposes, where applicable, SCGs are provided for each medium.

Table 1 summarizes the degree of contamination for all the contaminants which exceeded SCGs in surface soils, subsurface soils, and groundwater and compares the data with the SCGs for the site. The following are the media which were investigated and the primary contaminants of concern for each media.

Surface Soil

Surface soil (0-2 inches) sampling revealed that six SVOCs exceeded SCGs (See Figure 2). The primary SVOCs of concern were as follows. Concentrations of benzo(a)anthracene exceeded the SCG for soils of 0.224 ppm at seven locations, with a maximum concentration of 3.5 ppm. Concentrations of benzo(a)pyrene exceeded the SCG for soils of 0.061 ppm at eight locations, with a maximum of 14 ppm.

Surface soils exceeded SCGs for three metals, cadmium, chromium, and mercury. Of these, the contaminant with the greatest number of SCG exceedances is mercury. Mercury exceeded the SCG of 0.1 ppm at twelve locations, with a maximum concentration of 2 ppm.

Subsurface Soil

Six VOCs were in excess of SCGs in subsurface soils at the site (See Figures 3, 4 and 5). The only VOC for which the concentrations found at this site are of concern is benzene. Concentrations of benzene exceeded the SCG for soils of 0.06 ppm at two locations, with a maximum concentration of 32 ppm.

Thirteen SVOCs were in excess of SCGs in subsurface soils at the site. The SVOCs of greatest concern are benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene. Concentrations of benzo(a)anthracene exceeded the SCG for soils of 0.224 ppm at 12 locations, with a maximum concentration of 20 ppm. Concentrations of benzo(a)pyrene exceeded the SCG for soils of 0.061 ppm at 22 locations, with a maximum concentration of 18 ppm. Concentrations of dibenz(a,h)anthracene exceeded the SCG for soils of 0.014 ppm at two locations, with a maximum concentration of 3.4 ppm

Subsurface soils exceeded SCGs for seven metals, with mercury being the metal of greatest concern. Concentrations of mercury exceeded the SCG for soils of 0.1 ppm at 18 of the 28 locations sampled with a maximum concentration of 37.8 ppm.

Groundwater

Twenty-eight groundwater samples were taken from the site for analytical results. Three VOCs were in excess of SCGs in on-site groundwater at one or more location. (See Figures 6 and 7)

Four SVOCs were in excess of SCGs in on-site groundwater. The SVOC of the greatest concern is benzo(a)anthrcene. Benzo(a)anthracene was found in GW-6 and MW-6 at a maximum concentration of 2.1 ppb, which is above the SCG for that compound of 0.002 ppb.

Seven metals were in excess of SCGs in on-site groundwater. Of greatest concern was mercury. Mercury exceed the SCG of 0.7 ppb in 11 wells with a maximum concentration of 710 ppb in an unfiltered sample. In a filtered sample mercury exceeded the SCG of 0.7 ppb in GW-12 with a concentration of 0.83 ppb.

Based on this data and similar results from the other metals found in groundwater, NYSDEC believes the unfiltered results are primarily due to turbidity in the groundwater samples and the unfiltered results do not appear to be representative of the mobile contaminant concentrations.

None of the contaminants were at concentrations great enough to warrant a groundwater remedy or impact the Hudson River.

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 SI/RAR.

There were no IRMs performed at this site during the SI/RAR.

5.3: Summary of Human Exposure Pathways:

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 6 of the SI report.

An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source, [2] contaminant release and transport mechanisms, [3] a point of exposure, [4] a route of exposure, and [5] a receptor population. The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a

contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

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

Currently, there are no known completed exposure pathways at the site. The potential exposure pathways of concern at this site in the absence of a remedy include the following:

- Incidental ingestion of contaminated surface soil by on-site workers, trespassers and future occupants of buildings that may be constructed on site. Incidental ingestion of contaminated sub-surface soil by on-site workers involved with excavation activities. Ingestion of contaminated groundwater by future occupants of buildings, if wells are developed on-site for potable or other purposes;

- Inhalation of contaminated dust or vapors by trespassers and on-site workers involved in excavation activities. Inhalation of contaminated vapors in indoor air by occupants of buildings that may be constructed on the site; and

- Direct contact with contaminated surface soil by trespassers, on-site workers and future occupants of on-site buildings. Direct contact with subsurface soil by on-site workers involved with excavation activities or development of 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.

Groundwater or surface runoff from the site could impact the Hudson River, which borders the site on the west. Site contamination has also impacted the groundwater resource in the water table aquifer. However, this aquifer is not a sole source aquifer and is unlikely to be used as a source of drinking water in the future.

SECTION 6: SUMMARY OF THE REMEDIATION GOALS AND THE PROPOSED USE OF THE SITE

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 substances disposed at the site through the proper application of scientific and engineering principles.

The proposed future use for the Former Halstead Quinn/ATI Tank Farm is restricted residential, which would also permit commercial or industrial uses.

The remediation goals for this site are to eliminate or reduce to the extent practicable, the release of contaminants from:

- soil into groundwater that may create exceedances of groundwater quality standards;
- surface soil and subsurface soil into surface water through groundwater transport or surface runoff, and;
- groundwater and subsurface soil into soil vapor through subsurface vapor transport.

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

- ambient groundwater quality standards ; and
- soil cleanup SCGs.

SECTION 7: SUMMARY OF THE EVALUATION OF ALTERNATIVES

The selected remedy must be protective of human health and the environment, be cost-effective, and comply with other statutory requirements. Potential remedial alternatives for the Former Halstead Quinn/ATI Tank Farm Site were identified, screened and evaluated in the RA report which is available at the document repositories created for this site.

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 soils at the site.

Alternative 1: No Action

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

Alternative 2: Removal and Off-Site Disposal of All On-Site Vadose Zone Soils

Present Worth: *$4,840,000*
Capital Cost: *$4,840,000*
Total 30 year OM&M *$0*

Under this alternative all on-site soils located in the vadose zone (above the water table) which exceed SCGs would be excavated and transported off-site for disposal or beneficial reuse. Approximately 34,000 cubic yards of soil would be removed. Clean fill would then be brought in to replace the excavated soil and return the site to it's original grade. Any future on-site buildings would be required to have a sub-slab depressurization system to prevent the migration of vapors into the building from groundwater. Implementation of this remedy would require approximately 11 months.

Institutional controls, in the form of an environmental easement, would be implemented to prevent exposure to the contamination remaining on-site. A site management plan would be implemented and a prohibition on the use of groundwater would be put in place.

Alternative 3: Clean Soil Cover After Removal of Grossly Contaminated Soils

Present Worth: *$2,567,000*
Capital Cost: *$2,305,000*
Total 30 year OM&M *$496,000*

Under this alternative the areas with the highest concentrations of contamination would be excavated down to the depth of groundwater and transported off-site for disposal or beneficial reuse. Clean fill would then be brought in to replace the excavated soil and return the site to its original grade. The areas to be excavated would be defined as those exceeding 50 times the soil SCGs for the contaminants of concern (CoCs - mercury, benzo(a)pyrene, benzo(a)anthracene, dibenz(a,h)anthracene, and benzene) (See Figure 8). This approach would remove grossly contaminated soils from the site.

Approximately 12,000 cubic yards of soils would be excavated and disposed of off-site under this alternative. The subsurface concrete pads beneath some of the former ASTs would also be removed. This alternative would remove approximately 70.9% of the CoC mass which would be removed under Alternative 2.

Residual soil contamination in areas outside the area to be excavated would be addressed by either a soil cover or buildings/pavement. All areas of the site which would remain unpaved would be covered with two feet of clean fill, underlain by an indicator to demarcate the cover soil from the subsurface soil. Any future on-site buildings would be required to have a sub-slab depressurization system to prevent the migration of vapors into the building from groundwater. A site management plan would be prepared to address any future excavation of subsurface soil and any use restrictions. This alternative would also include an environmental easement and periodic certification of the institutional and engineering controls.

The time required to implement this alternative is estimated to be 6 months.

Alternative 4: Clean Soil Cover After Limited Removal of Grossly Contaminated Soils

Present Worth: *$1,835,000*
Capital Cost: *$1,573,000*
Total 30 year OM&M *$496,000*

This alternative is the same as Alternative 3 except that only soils exceeding 100 times SCGs for CoCs would be removed, as opposed to the 50 times SCGs for CoCs used in Alternative 3. Under this alternative the areas with the highest concentrations of contamination would be excavated down to the depth of groundwater and transported off-site for disposal or beneficial reuse. Clean fill would then be brought in to replace the excavated soil and return the site to it's original grade. The area to be excavated would be defined as areas that exceed soil SCGs for CoCs by a multiple of 100 times or more. (See Figure 9) This approach would remove the most grossly contaminated soils from the site. Approximately 7,300 cubic yards of soils would be excavated and disposed of off-site under this alternative. The subsurface concrete pads beneath some of the former ASTs would also be removed. This alternative would remove approximately 58.9% of the CoC mass which would be removed under Alternative 2.

Residual soil contamination in areas outside the area to be excavated would be addressed by either a soil cover or buildings/pavement. All areas of the site which would remain unpaved would be covered with two feet of clean fill, underlain by an indicator to demarcate the cover soil from the subsurface soil. Any future on-site buildings would be required to have a sub-slab depressurization system to prevent the migration of vapors into the building from groundwater. A site management plan would be prepared to address any future excavation of subsurface soil and any use restrictions. This alternative would also include an environmental easement and periodic certification of the institutional and engineering controls.

The time required to implement this alternative is estimated to be 5 months.

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 environmental restoration projects in New York State. A detailed discussion of the evaluation criteria and comparative analysis is included in Section 9 of the SI/RA 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-Effectivness. 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 SI/RA 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. No significant public comments were received.

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, Clean Soil Cover After Removal of Grossly Contaminated Soils, 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 SI and the evaluation of alternatives presented in the RAR.

Alternative 3 is being proposed because, as described below, it will satisfy the threshold criteria and provide 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 soils that create the most significant threat to public health and the environment, it will greatly reduce the source of contamination to groundwater, and it will create the conditions needed to restore groundwater quality to the extent practicable. Alternatives 2 (Removal and Off-Site Disposal of All On-Site Vadose Zone Soils) and 4 (Clean Soil Cover After Limited Removal of Grossly Contaminated Soils) would also comply with the threshold criteria.

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

Alternatives 2, 3, and 4 all would have short-term impacts which can easily be controlled. The time needed to achieve the remediation goals would be longest for Alternative 2 and about half that time for Alternatives 3 and 4.

Achieving long-term effectiveness would be best accomplished by excavation and removal of the contaminated vadose zone soils (Alternative 2). Alternatives 3 and 4 would result in the removal of grossly contaminated overburden soils. While Alternative 2 would have the greatest long term effectiveness by removing all soil above the water table, Alternatives 3 and 4 would be almost as effective through the removal of the grossly contaminated soil and isolation of the remaining contamination from human contact beneath a two feet of clean soil. Alternative 3 is more favorable than Alternative 4 because it removes a much greater percentage of the contaminant mass (see Table 3).

Alternatives 2, 3, and 4 would all be readily implementable with common construction equipment and techniques.

Alternatives 2, 3, and 4 would all reduce the volume of waste on-site. Since practically all of the CoC mass is contained in soils above the water table, Alternative 2, would remove almost all of the on-site soil contamination (essentially 100 % of the CoC mass). However this alternative would require the excavation of approximately 34,000 cubic yards of soil. Approximately 70.9 % of the CoC mass will be removed under Alternative 3 while requiring an excavation of only 12,000 cubic yards of soil. Although some contaminated soil will remain, the most highly contaminated soils will be removed and the remainder will be isolated from contact by pavement or two feet of clean soil. Approximately 58.9% of the CoC mass would be removed under Alternative 4 with the excavation of 7,300 cubic yards of soils. As with Alternative 3 the remaining soils would be isolated beneath

a soil cover or pavement, however the concentrations and volume of the remaining contamination would be somewhat higher under Alternative 4.

Alternatives 2, 3, and 4 would all greatly reduce the mobility of contaminants, with Alternative 2 providing the greatest reduction, followed by Alternative 3, then Alternative 4. None of the alternatives would reduce the toxicity of contaminants by chemical/physical treatment.

The cost of the alternatives varies significantly. Excavation of the entire site (Alternative 2) would be the most expensive alternative at almost $5,000,000. Alternative 3 will cost only about 1/2 as much at $2,500,000. Least expensive would be Alternatives 4 at just under $2,000,000. However, this alternative would leave the greatest amount of contamination on-site.

Alternative 3 will be the most cost-effective and protective remedy, resulting in the greatest removal of contaminant mass for the estimated cost of implementation. Alternative 3 will remove the primary source of contamination to groundwater to create the conditions needed to restore groundwater quality to the extent practicable. The clean soil cover constructed under Alternative 3 will isolate the residual soil contamination and allow the site to be reused.

The estimated present worth cost to implement the remedy is $2,567,000. The cost to construct the remedy is estimated to be $2,305,000 and the estimated operation, maintenance, and monitoring costs for 30 years is $496,000.

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program.

2. The excavation and off-site disposal or beneficial reuse of grossly contaminated vadose zone soils. All soils in these areas will be excavated down to the water table (approximately 7.5 feet). Concrete pads which are located below some of the former above ground storage tanks will also be removed as they are within the disposal area and are located above the water table.

3. Areas where soils were removed will be returned to original grade with clean soils. Clean soil will constitute soil with no analytes in exceedance of NYSDEC TAGM 4046 soil cleanup objectives or local site background as determined by the procedure in DER 10 ("Tech Guide").

4. A soil cover will be constructed over all vegetated areas to prevent exposure to contaminated soils. The two foot thick cover will consist of clean soil underlain by an indicator such as orange plastic snow fence to demarcate the cover soil from the subsurface soil. The top six inches of soil will be of sufficient quality to support vegetation. Clean soil will constitute soil with no analytes in exceedance of NYSDEC TAGM 4046 soil cleanup objectives or local site background as determined by the procedure in DER 10 ("Tech Guide"). Non-

vegetated areas (buildings, roadways, parking lots, etc) will be covered by a paving system or concrete at least 6 inches in thickness.

5. Development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; (b) require that any future buildings on the site be installed with a sub-slab depressurization system to address the potential for vapor intrusion impacts; (c) identify any use restrictions; and (d) provide for the maintenance of the components of the remedy.

6. Imposition of an institutional control in the form of an environmental easement that will (a) require compliance with the approved site management plan; (b) limit the use and development of the property to restricted residential use, which will also permit commercial or industrial uses; (c) restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by NYSDOH; and (d) require the property owner to complete and submit to the NYSDEC a periodic certification.

7. The property owner will provide a periodic certification, prepared and submitted by a professional engineer or such other expert acceptable to the NYSDEC, until the NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will contain certification that the institutional controls and engineering controls allow the NYSDEC access to the site, are still in place, and that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan.

SECTION 9: HIGHLIGHTS OF COMMUNITY PARTICIPATION

As part of the Former Halstead Quinn/ATI Tank Farm environmental restoration 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 announcing the released of the PRAP and the public meeting was mailed to the public contact list.
- A public meeting was held on February 27, 2006 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
October 2004-August 2005

SURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Semivolatile Organic Compounds (SVOCs)	Benzo(a)anthracene	0.16 - 3.5	0.224	7 of 15
	Benzo(a)pyrene	0.15 - 14	0.061	8 of 15
	Benzo(b)flouranthene	0.17 - 17	1.1	3 of 15
	Benzo(k)flouranthene	0.078 - 12	1.1	2 of 15
	Chrysene	0.16 - 18	0.4	7 of 15
	Pyrene	0.79 - 50	50	1 of 15
Inorganic Compounds	Cadmium	ND - 1.76	1	1 of 15
	Chromium	1.43 - 53.3	10	1 of 15
	Mercury	0.006 - 2	0.1	12 of 15

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Acetone	ND - 1.8	0.2	3 of 28
	Benzene	ND - 32	0.06	2 of 28
	Ethyl Benzene	ND - 17	5.5	1 of 28
	Methylene Chloride	ND - 0.150	0.1	1 of 28
	Toluene	ND - 6.5	1.5	1 of 28
	Total Xylenes	ND - 66	1.2	3 of 28
Semi volatile Organic Compounds (SVOCs)	Benzo(a)anthracene	0.066 - 20	0.224	18 of 28
	Benzo(a)pyrene	0.065 - 18	0.061	22 of 28
	Benzo(b)flouranthene	0.064 - 19	1.1	7 of 28
	Benzo(k)flouranthene	0.013 - 4.8	1.1	7 of 28
	Chrysene	0.074 - 20	0.4	15 of 28
	Dibenz(a,h)anthracene	ND - 3.4	0.014	2 of 28

TABLE 1
Nature and Extent of Contamination (Continued)

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Semi volatile Organic Compounds (SVOCs)	Dimethylphthalate	ND - 15	2	1 of 28
	Indeno(1,2,3-cd)pyrene	ND - 14	3.2	1 of 28
	2-methylnaphthalene	ND - 82	36.4	3 of 28
	Napthalene	ND - 23	13	1 of 28
	4-Nitrophenol	ND-0.11	0.1	1 of 28
	Phenanthrene	0.086 - 77	50	1 of 28
	Pyrene	ND -69	50	1 of 28
Inorganic Compounds	Arsenic	1.41 - 44.2	7.5	7 of 28
	Cadmium	ND - 3.58	1	8 of 28
	Chromium	6.54 - 54.5	10	1 of 28
	Lead	15.2 - 858	500	2 of 28
	Selenium	0.797 - 5.46	2	9 of 28
	Silver	ND - 6.41	3.9	3 of 28
	Mercury	0.154 - 37.8	0.1	18 of 28

TABLE 1
Nature and Extent of Contamination (Continued)

GROUNDWATER	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Ethyl Benzene	ND - 20	5	1 of 19
	Isopropylbenzene	ND - 7.7	5	1 of 19
	Methyl tert-butyl ether	ND - 18	10	1 of 19
Semivolatile Organic Compounds (SVOCs)	Acenaphthene	ND - 75	20	1 of 19
	Benzo(a)anthracene	ND - 2.1	0.002	2 of 19
	Chrysene	ND - 2.1	0.002	2 of 19
	Benzo(b)flouranthene	ND - 1.7	0.002	1 of 19
Inorganic Compounds	Arsenic	ND - 84.1	25	7 of 28
	Barium	311 - 1540	1000	1 of 28
	Cadmium	ND - 12.6	5	3 of 28
	Chromium	ND - 202	50	6 of 28
	Lead	2.18 - 1710	25	16 of 28
	Selenium	ND - 11.2	10	3 of 28
	Mercury	0.58 - 710	0.7	15 of 28

[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;

[b] SCG = standards, criteria, and guidance values;

ND = Non Detect

Table 2
Remedial Alternative Costs

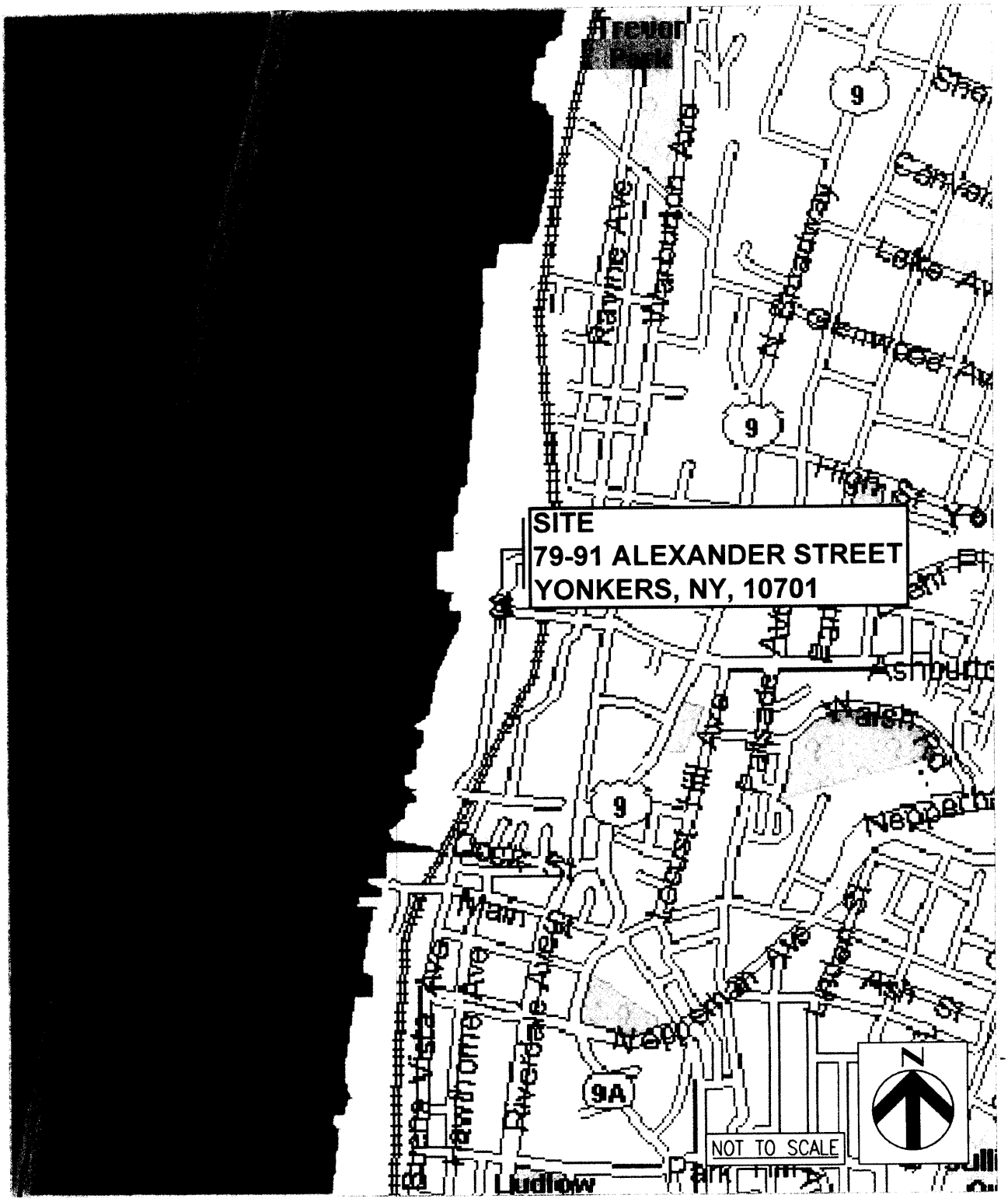
Remedial Alternative	Capital Cost	Total 30 year OM&M Costs	Total Present Worth
No Action	$0	$0	$0
Removal and Off-Site Disposal of All On-Site Vadose Zone Soils	$4,840,000	$0	$4,840,000
Clean Soil Cover After Removal of Grossly Contaminated Soils	$2,305,000	$496,000	$2,567,000
Clean Soil Cover After Limited Removal of Grossly Contaminated Soils	$1,573,000	$496,000	$1,835,000

Table 3
Comparison of Contaminant Mass Removal

Contaminant of Concern	Remedial Alternative No. 1 No Action		Remedial Alternative No. 2 Removal and Off-Site Disposal of All Vadose Zone Soils	Remedial Alternative No. 3 Clean Soil Cover After Removal of Grossly Contaminated Soils		Remedial Alternative No. 4 Clean Soil Cover After Limited Removal of Grossly Contaminated Soils	
	Total Excavation Area = 0 sf		Total Excavation Area = 100,781 sf	Total Excavation Area = 35,858 sf		Total Excavation Area = 19,839 sf	
	Mass (lbs.)	Percentage [1]	Mass (lbs.)	Mass (lbs.)	Percentage [1]	Mass (lbs.)	Percentage [1]
Mercury	0	0%	345.53	217.44	62.9%	170.59	49.4%
Benzo(a)pyrene	0	0%	230.9	171.7	74.4%	127.7	55.3%
Benzo(a)anthracene	0	0%	411.5	247.1	60.0%	206.8	50.3%
Dibenz(a,h)anthracene	0	0%	27.4	26.2	95.7%	22.5	82.3%
Benzene	0	0%	205.3	203.5	99.1%	191.2	93.1%
Total Contaminants	**0**	**0%**	**1220.63**	**865.94**	**70.9%**	**718.79**	**58.9%**

Notes:

[1] Percentage of contaminant volume removed for Remedial Alternatives No. 1, 3 and 4 is based calculated in relation to the contaminant volume removed for Remedial Alternative No. 2.



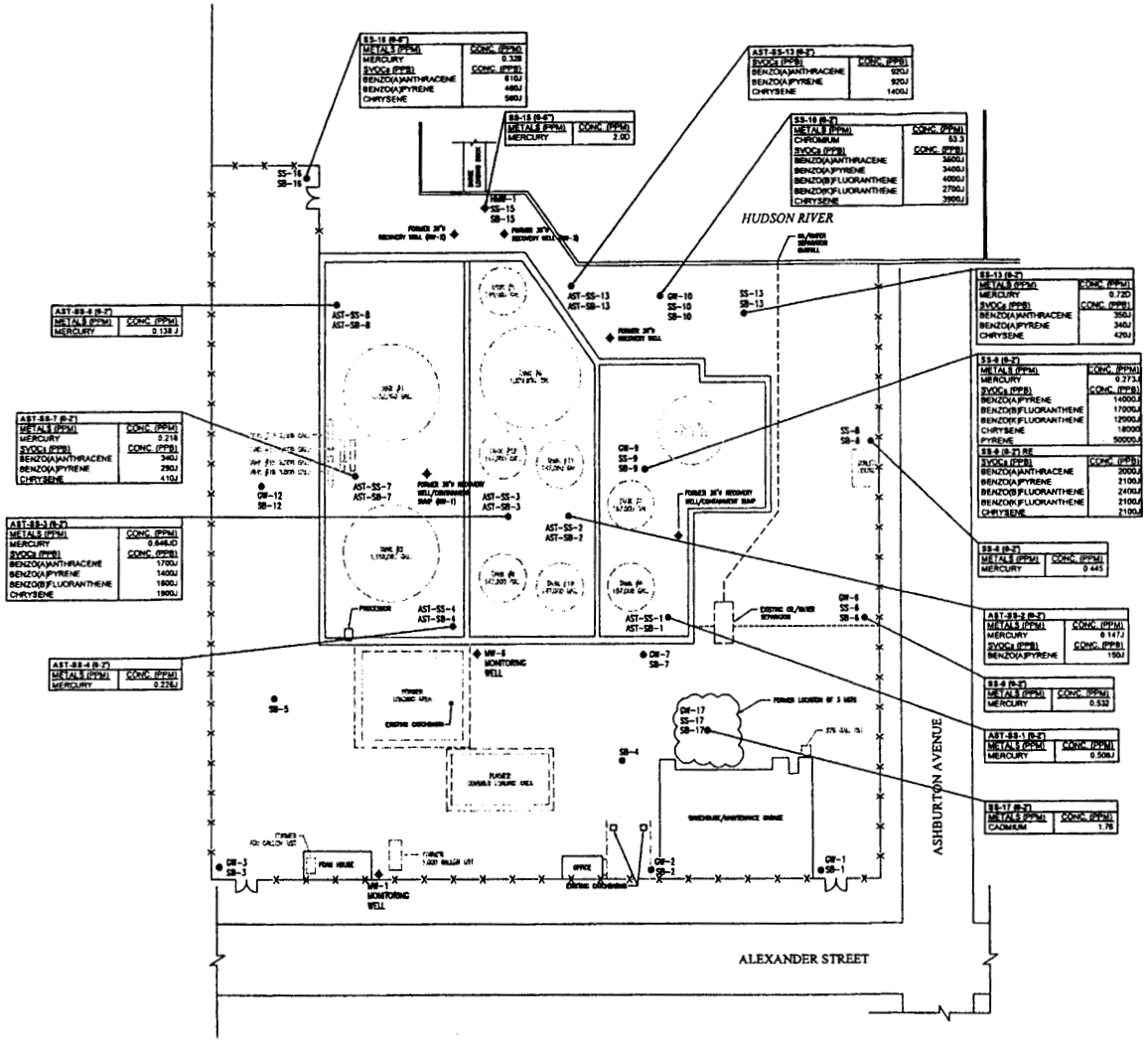
HDR

YONKERS ATI SITE INVESTIGATION/
REMEDIAL ALTERNATIVES REPORT
YONKERS, NEW YORK

SITE LOCATION

DATE
10/20/05

FIGURE
1



LEGEND:

- FORMER MONITORING WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
- DEMOLISHED/REMOVED
- FENCE
- ABOVE GROUND STORAGE TANK
- BENEATH SURFACE

NOTES:

1. SAMPLING LOCATIONS AND TANK LOCATIONS ARE APPROXIMATE.
2. TANKS LOCATED WITHIN THE SECONDARY CONTAINMENT AREA AND THE BOILER HOUSE WERE DEMOLISHED IN 2004.
3. RESULTS SHOWN ON THIS FIGURE ARE ONLY THOSE THAT EXCEEDED THE NYSDEC TAGM #4046 RSCOs OR THOSE SAMPLING RESULTS QUALIFIED WITH A "U" OR "B".

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SEE TABLES 4-4 THROUGH 4-7 IN THE FINAL SI/RAR FOR DEFINITION OF THE DATA QUALIFIERS.

NOT TO SCALE

N

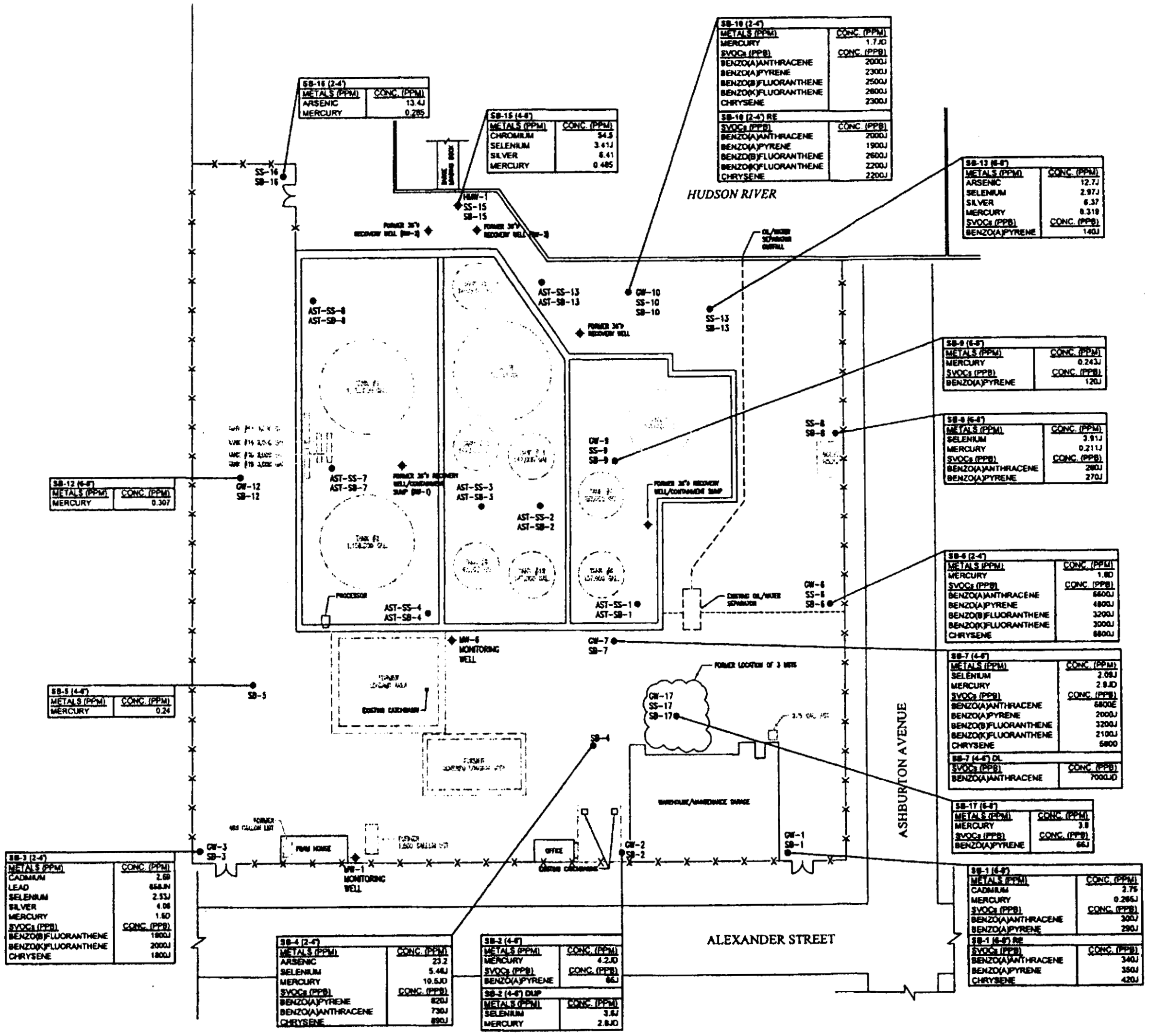
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

SURFACE SOIL SAMPLES ABOVE NYSDEC TAGM #4046 RSCOs (OCTOBER 2004)

DATE 10/20/05

FIGURE 2



SB-16 (2-4')	
METALS (PPM)	CONC. (PPM)
ARSENIC	13.4J
MERCURY	0.285

SB-15 (4-6')	
METALS (PPM)	CONC. (PPM)
CHROMIUM	54.5
SELENIUM	3.41J
SILVER	6.41
MERCURY	0.485

SB-10 (2-4')	
METALS (PPM)	CONC. (PPM)
MERCURY	1.7JD
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	2000J
BENZO(A)PYRENE	2300J
BENZO(B)FLUORANTHENE	2500J
BENZO(K)FLUORANTHENE	2800J
CHRYSENE	2300J
SB-10 (2-4') RE	
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	2000J
BENZO(A)PYRENE	1900J
BENZO(B)FLUORANTHENE	2600J
BENZO(K)FLUORANTHENE	2200J
CHRYSENE	2200J

SB-13 (6-8')	
METALS (PPM)	CONC. (PPM)
ARSENIC	12.7J
SELENIUM	2.97J
SILVER	6.37
MERCURY	0.318
SVOCs (PPB)	CONC. (PPB)
BENZO(A)PYRENE	140J

SB-12 (6-8')	
METALS (PPM)	CONC. (PPM)
MERCURY	0.307

SB-9 (6-8')	
METALS (PPM)	CONC. (PPM)
MERCURY	0.243J
SVOCs (PPB)	CONC. (PPB)
BENZO(A)PYRENE	120J

SB-8 (6-8')	
METALS (PPM)	CONC. (PPM)
SELENIUM	3.91J
MERCURY	0.211J
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	280J
BENZO(A)PYRENE	270J

SB-6 (2-4')	
METALS (PPM)	CONC. (PPM)
MERCURY	1.6D
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	6600J
BENZO(A)PYRENE	4800J
BENZO(B)FLUORANTHENE	3200J
BENZO(K)FLUORANTHENE	3000J
CHRYSENE	6800J

SB-5 (4-6')	
METALS (PPM)	CONC. (PPM)
MERCURY	0.24

SB-7 (4-6')	
METALS (PPM)	CONC. (PPM)
SELENIUM	2.09J
MERCURY	2.9JD
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	6800E
BENZO(A)PYRENE	2000J
BENZO(B)FLUORANTHENE	3200J
BENZO(K)FLUORANTHENE	2100J
CHRYSENE	5800
SB-7 (4-6') DL	
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	7000JD

SB-17 (6-8')	
METALS (PPM)	CONC. (PPM)
MERCURY	3.8
SVOCs (PPB)	CONC. (PPB)
BENZO(A)PYRENE	66J

SB-3 (2-4')	
METALS (PPM)	CONC. (PPM)
CADMIUM	2.69
LEAD	658JN
SELENIUM	2.53J
SILVER	4.06
MERCURY	1.6D
SVOCs (PPB)	CONC. (PPB)
BENZO(B)FLUORANTHENE	1900J
BENZO(K)FLUORANTHENE	2000J
CHRYSENE	1800J

SB-4 (2-4')	
METALS (PPM)	CONC. (PPM)
ARSENIC	23.2
SELENIUM	5.46J
MERCURY	10.5JD
SVOCs (PPB)	CONC. (PPB)
BENZO(A)PYRENE	820J
BENZO(A)ANTHRACENE	730J
CHRYSENE	890J

SB-2 (4-6')	
METALS (PPM)	CONC. (PPM)
MERCURY	4.2JD
SVOCs (PPB)	CONC. (PPB)
BENZO(A)PYRENE	66J
SB-2 (4-6') DUP	
METALS (PPM)	CONC. (PPM)
SELENIUM	3.6J
MERCURY	2.8JD

SB-1 (6-8')	
METALS (PPM)	CONC. (PPM)
CADMIUM	2.75
MERCURY	0.265J
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	300J
BENZO(A)PYRENE	290J
SB-1 (6-8') RE	
SVOCs (PPB)	CONC. (PPB)
BENZO(A)ANTHRACENE	340J
BENZO(A)PYRENE	350J
CHRYSENE	420J

LEGEND:

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- FORMER RECOVERY WELL LOCATION
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
- DEMOLISHED/REMOVED
- FENCE
- ABOVE GROUND STORAGE TANK
- BENEATH SURFACE

NOTES:

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2. TANKS LOCATED WITHIN THE SECONDARY CONTAINMENT AREA AND THE BOILER HOUSE WERE DEMOLISHED IN 2004.
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SS = SURFACE SOIL SAMPLE LOCATION

SEE TABLES 4-4 THROUGH 4-7 IN THE FINAL SI/RAR FOR DEFINITION OF THE DATA QUALIFIERS.

NOT TO SCALE

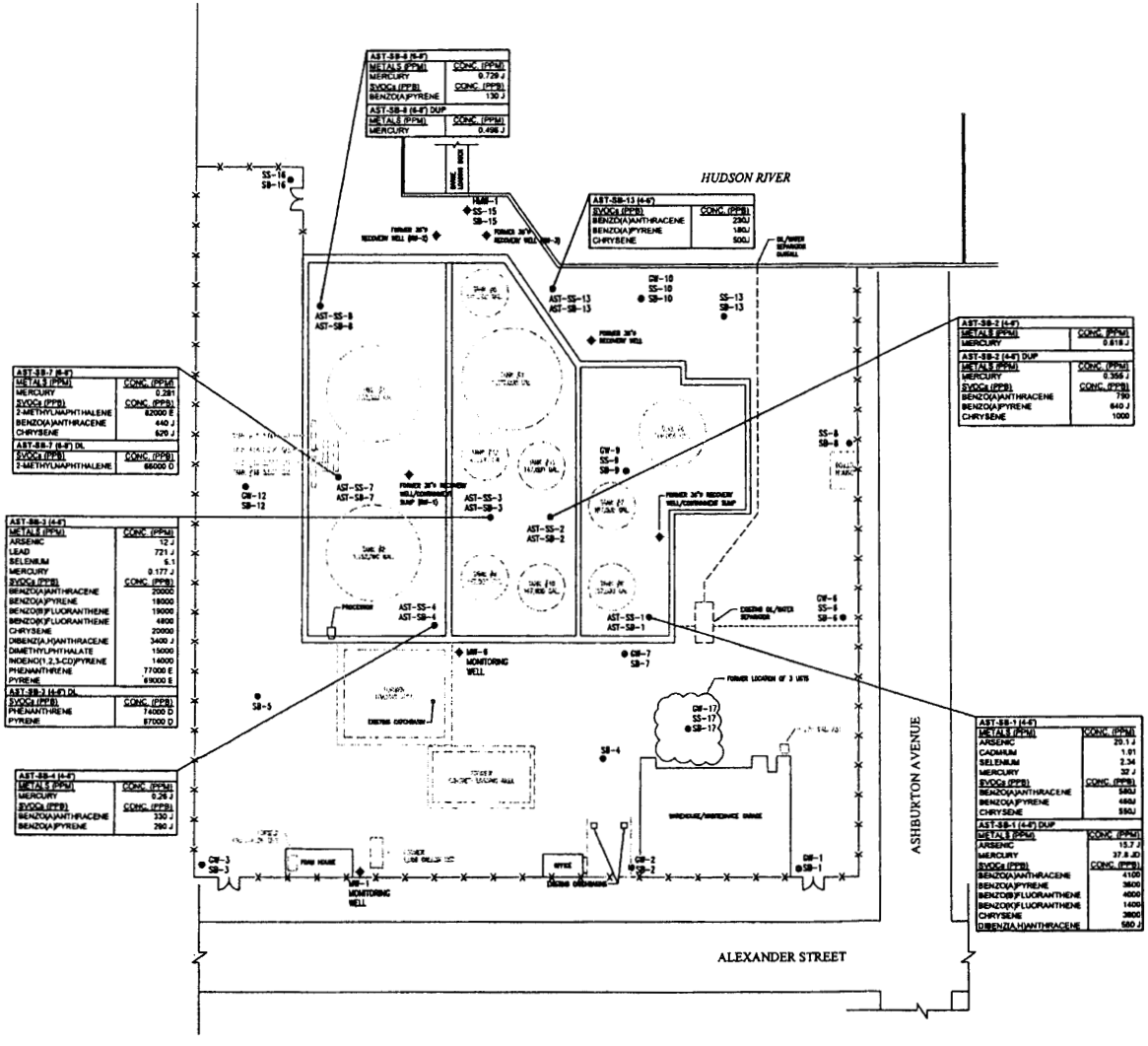
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

SUBSURFACE SOIL SAMPLES ABOVE NYSDEC TAGM #4046 RSCOs (OCTOBER 2004)

DATE 10/20/05

FIGURE 3



LEGEND:

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- FORMER RECOVERY WELL LOCATION
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- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
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NOT TO SCALE

N

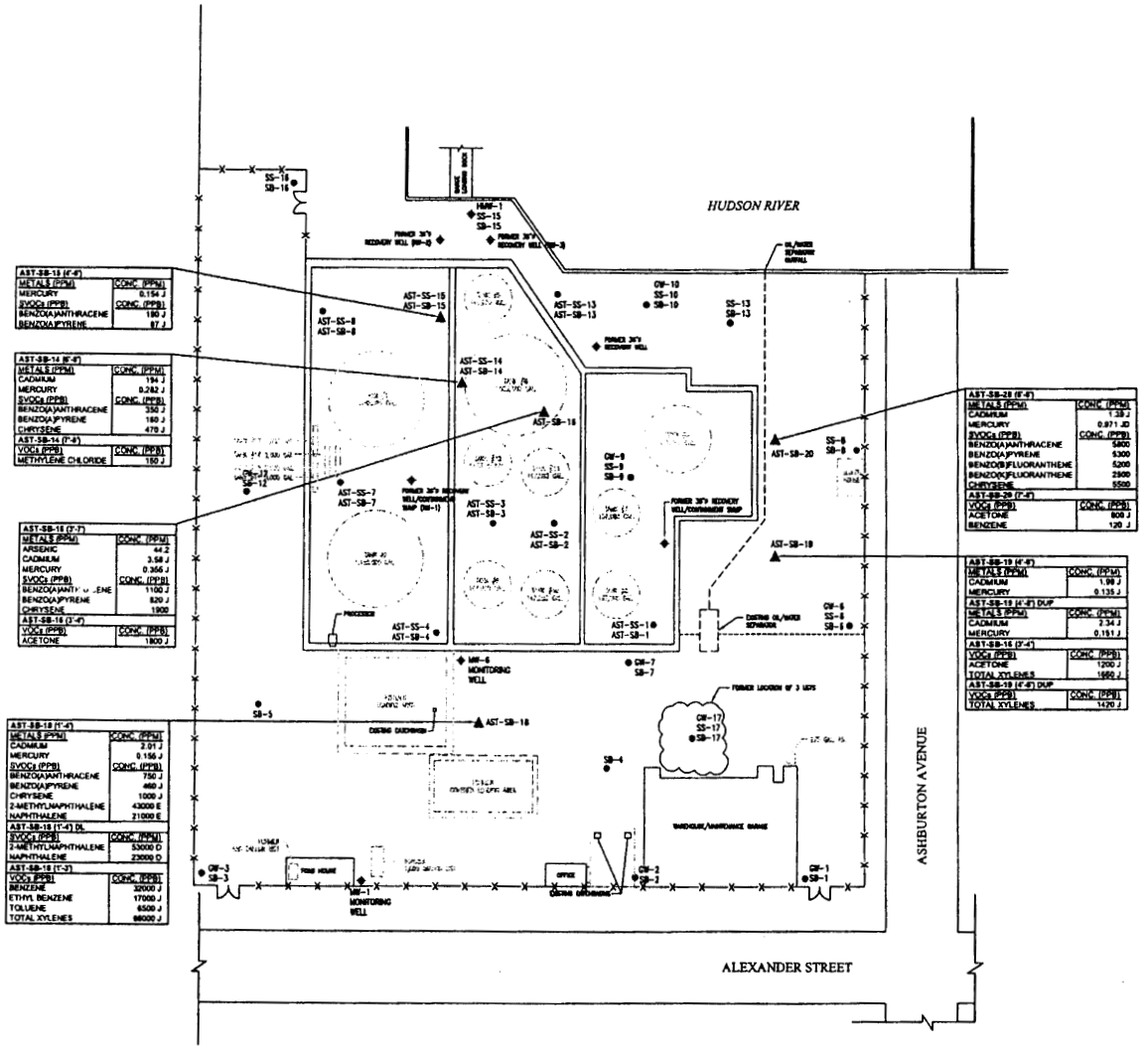
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

AST SUBSURFACE SOIL SAMPLES ABOVE NYSDEC TAGM #4046 RSCOs (OCTOBER 2004)

DATE 10/20/05

FIGURE 4



LEGEND:

- FORMER MONITORING WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
- ADDITIONAL SOIL SAMPLE LOCATION
- DEMOLISHED/REMOVED
- FENCE
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- BENEATH SURFACE

NOTES:

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SB = SOIL BORING LOCATION
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SS = SURFACE SOIL SAMPLE LOCATION

SEE TABLES 4-4 THROUGH 4-7 IN THE FINAL SI/RAR FOR DEFINITION OF THE DATA QUALIFIERS.

NOT TO SCALE

N

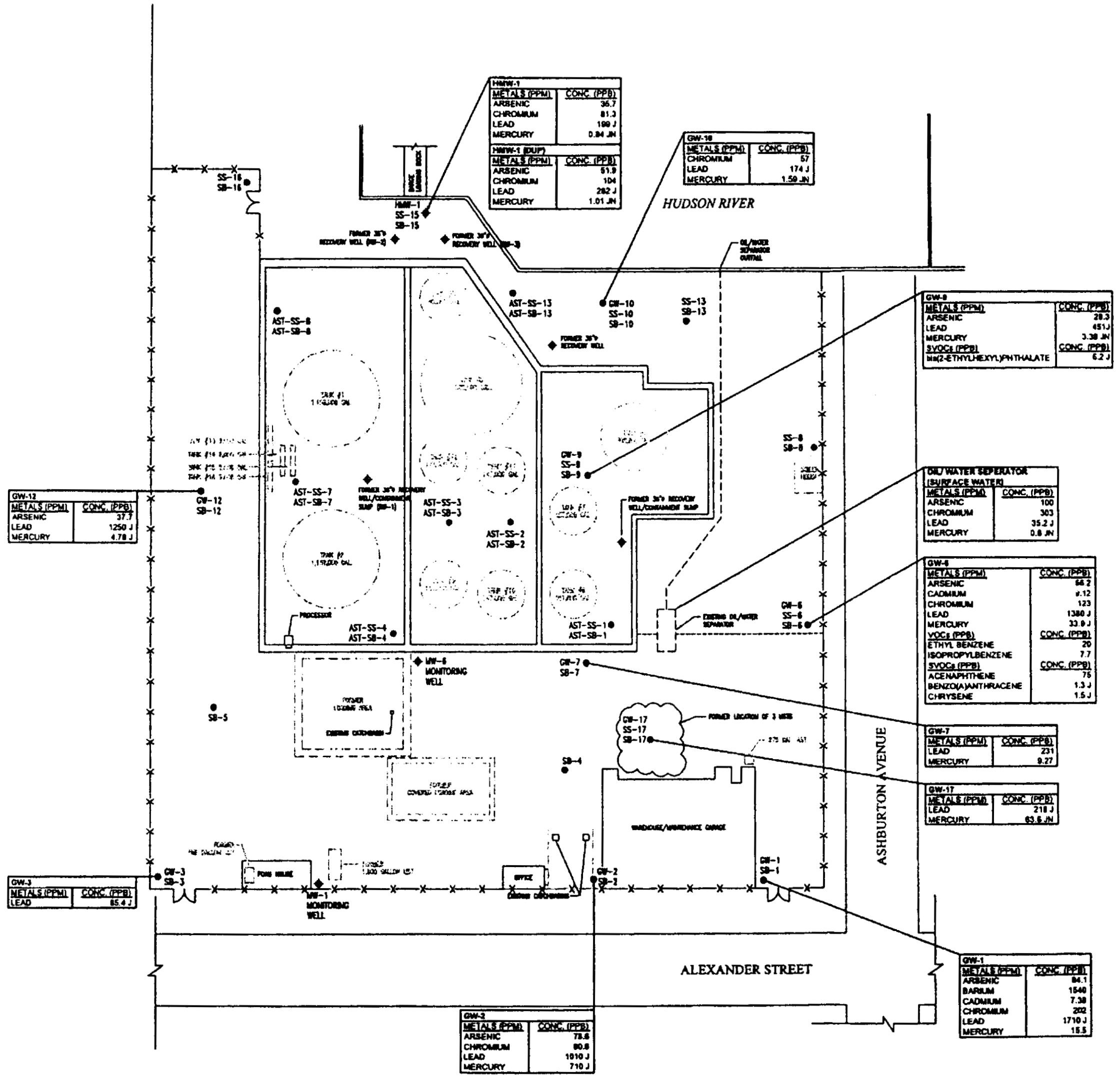
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

SUPPLEMENTAL SUBSURFACE SOIL SAMPLE ABOVE NYSDEC TAGM #4046 RSCOs (AUGUST 2004)

DATE 10/20/05

FIGURE 5



LEGEND:

- FORMER MONITORING WELL LOCATION
- FORMER RECOVERY WELL LOCATION
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
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- BENEATH SURFACE

NOTES:

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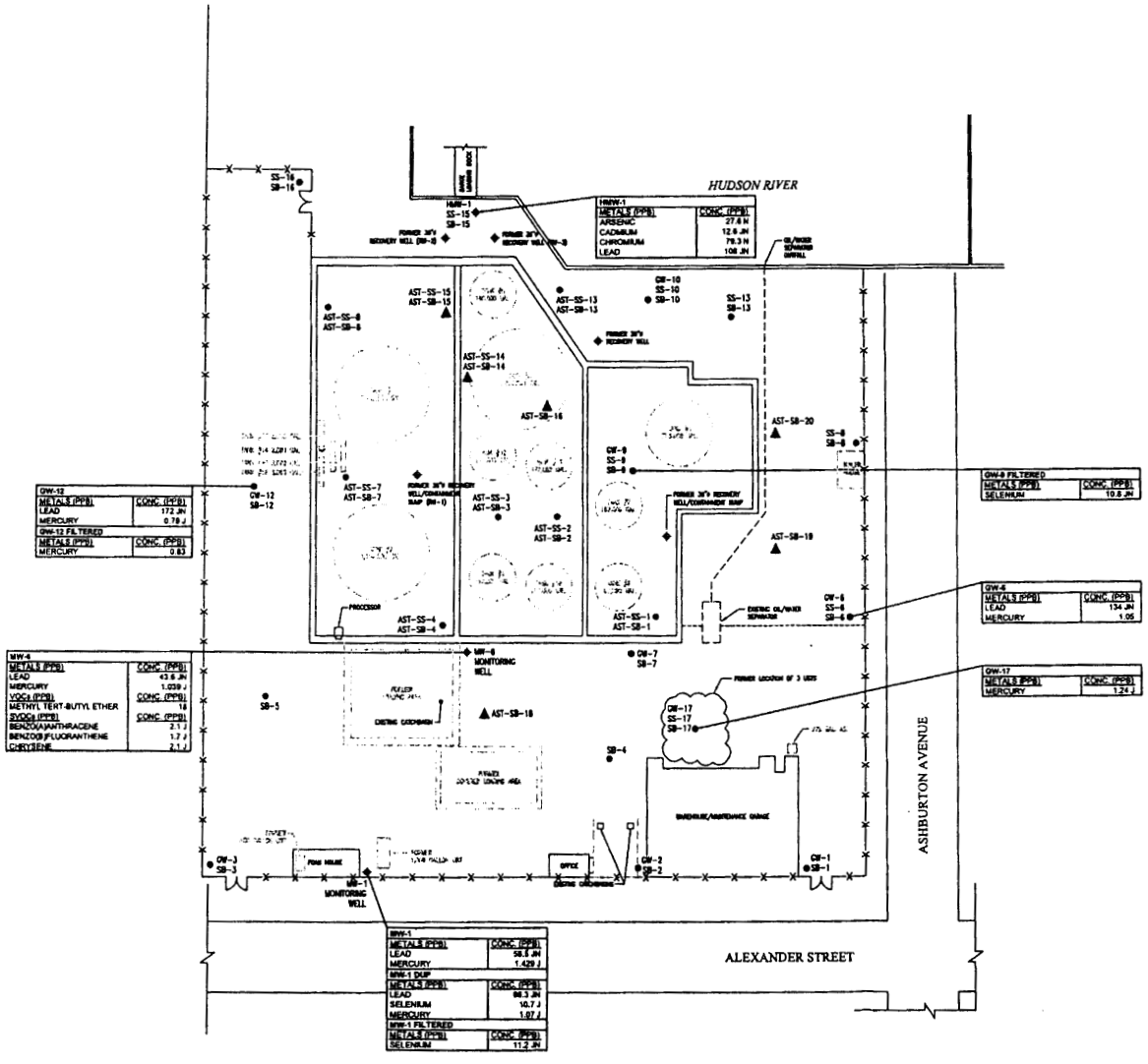
HDR

YONKERS ATI SITE INVESTIGATION REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

GROUNDWATER AND SURFACE WATER SAMPLES ABOVE NYSDEC STANDARDS/GUIDELINES (OCTOBER 2004)

DATE 10/20/05

FIGURE 6



LEGEND:

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- FORMER RECOVERY WELL LOCATION
- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
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NOT TO SCALE

N

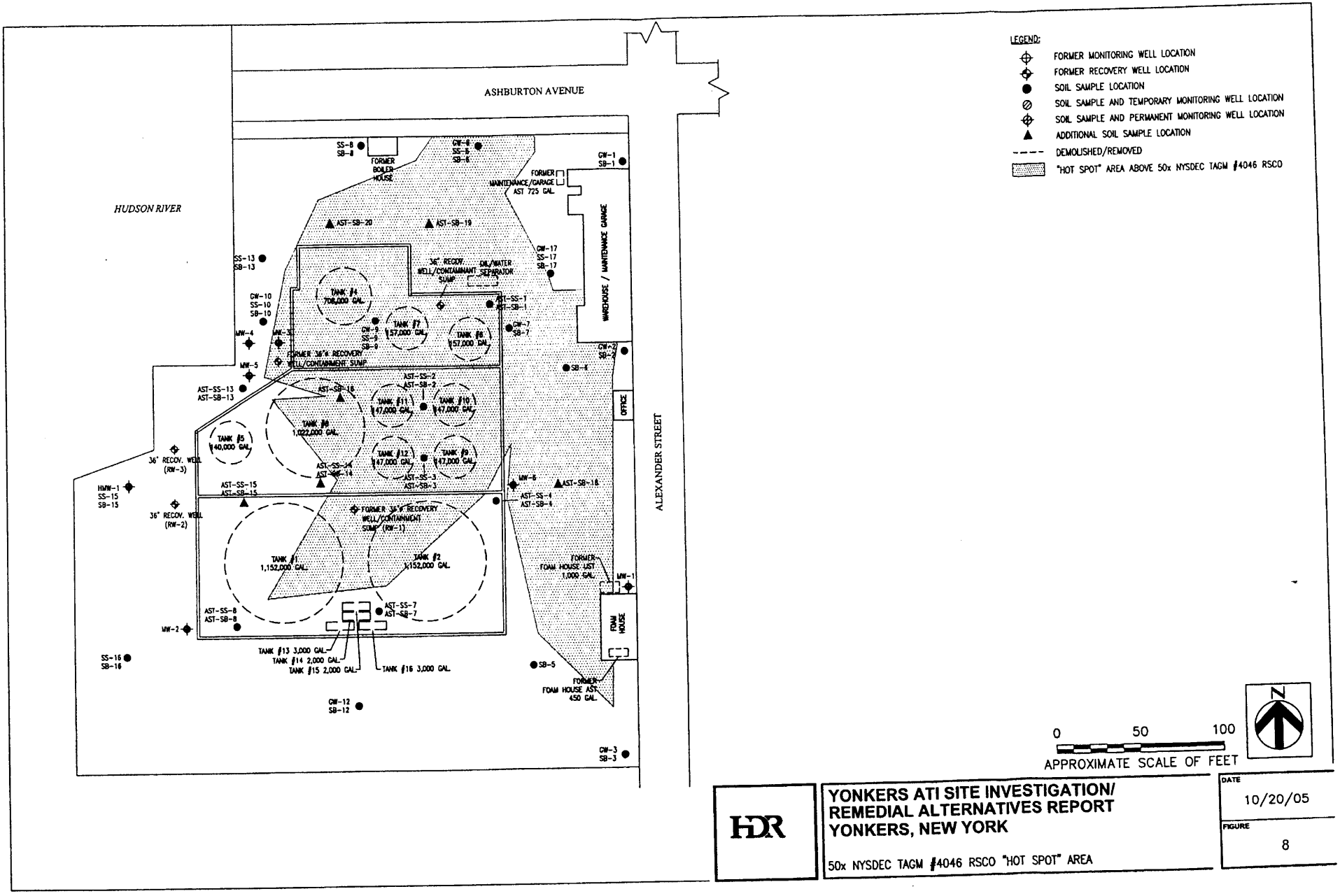
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

SUPPLEMENTAL GROUNDWATER SAMPLES ABOVE NYSDEC STANDARD/GUIDELINES (AUGUST 2004)

DATE 10/20/05

FIGURE 7



LEGEND:

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- SOIL SAMPLE LOCATION
- SOIL SAMPLE AND TEMPORARY MONITORING WELL LOCATION
- SOIL SAMPLE AND PERMANENT MONITORING WELL LOCATION
- ADDITIONAL SOIL SAMPLE LOCATION
- DEMOLISHED/REMOVED
- "HOT SPOT" AREA ABOVE 50x NYSDEC TAGM #4046 RSCO

0 50 100

APPROXIMATE SCALE OF FEET

N

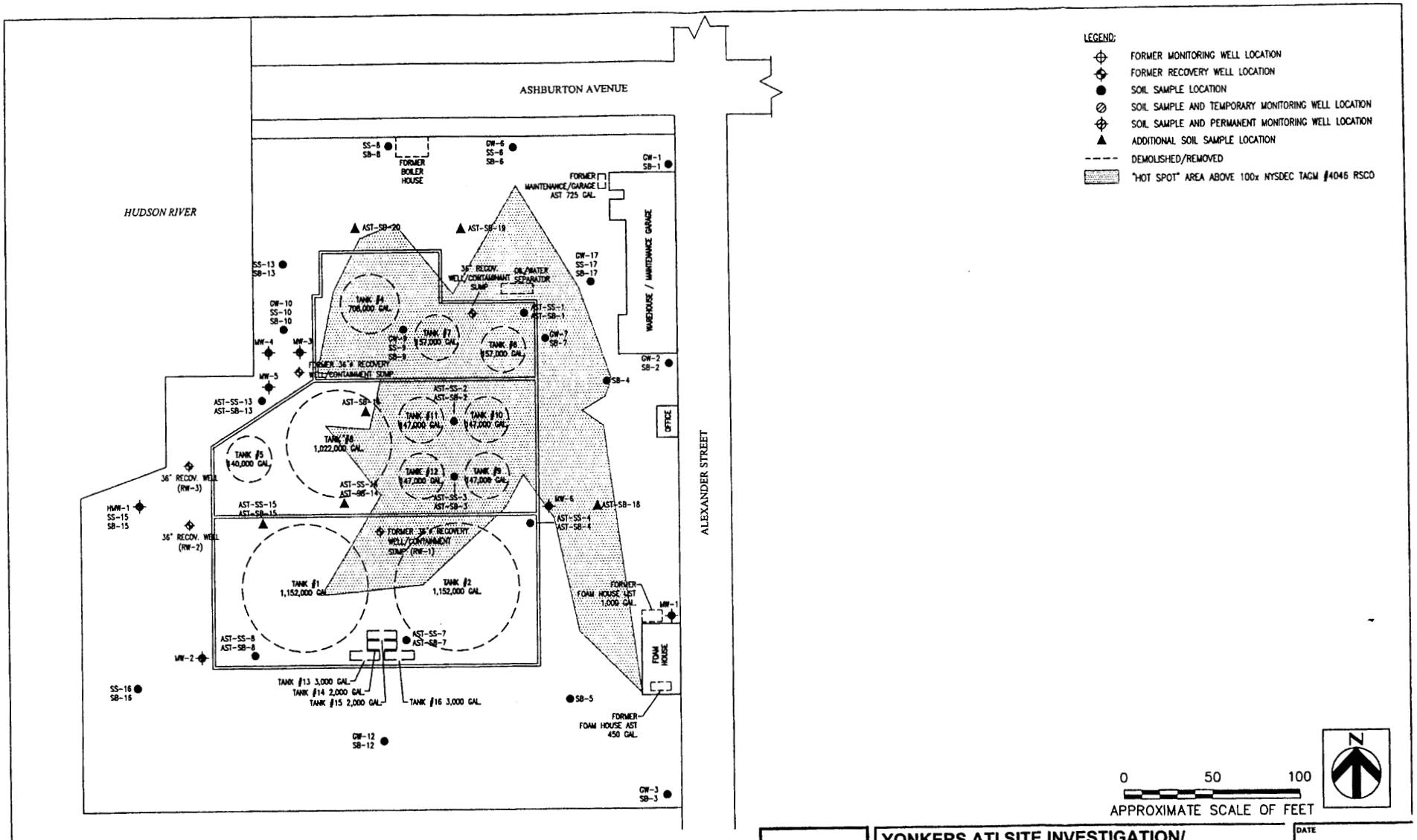
HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

50x NYSDEC TAGM #4046 RSCO "HOT SPOT" AREA

DATE 10/20/05

FIGURE 8



HDR

YONKERS ATI SITE INVESTIGATION/ REMEDIAL ALTERNATIVES REPORT YONKERS, NEW YORK

100x NYSDEC TAGM #4046 RSCO "HOT SPOT" AREA

DATE 10/20/05

FIGURE 9

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Halstead Quinn/Former ATI Tank Farm
Proposed Remedial Action Plan
Yonkers, Westchester County
Site No. B00193-3

The Proposed Remedial Action Plan (PRAP) for the Halstead Quinn/Former ATI Tank Farm site was prepared by the New York State Department of Environmental Conservation (NYSDEC) and issued to the local document repository on January 28, 2006. This Plan outlined the preferred remedial measure proposed for the remediation of the contaminated soil at the Halstead Quinn/Former ATI Tank Farm site. The preferred remedy is excavation and disposal of grossly contaminated soils, and a two foot soil cover or six inch concrete/asphalt cover.

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

A public meeting was held on February 27, 2006 which included a presentation of the Site Investigation (SI) and the Remedial Alternatives (RA) 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. One written comment was received. The public comment period for the PRAP ended on March 14, 2006.

This Responsiveness Summary responds to questions and comments raised at the February 27th public meeting and to a comment letter received that is dated February 26, 2006.

The following are the comments received at the public meeting, with the NYSDEC's responses:

Comment 1: I'm concerned that children at the nearby Center for Environmental Education would be exposed to dust from the site.

Response 1: Site access would be restricted during the remediation activities and continuous air monitoring of particulate (dust) and organic vapor would be conducted during intrusive activities. Action levels would be set prior to any intrusive activities, and, if these action levels are exceeded, appropriate corrective measures would be implemented (e.g., wetting agents may be used to control fugitive dust).

Comment 2: Would the contamination left behind impact the aquifer beneath the site or the Hudson River? What will be done to prevent contamination from moving into the River from the site via groundwater?

Response 2: NYSDEC does not believe the site poses a threat to the groundwater beneath the site or to the Hudson River. The contaminants found during the investigation are at low concentrations that would not cause impacts to the Hudson River exceeding SCGs. Once the grossly contaminated soils are removed from the site, groundwater contaminant concentrations should decrease, further reducing any potential impact to the River.

Comment 3: If I was someone considering living in a residence built on this site, I'd think twice knowing there was still contaminated soils beneath it. I know in your presentation you said there would be no exposure, but if I was going to live there with children I'd prefer that the entire site be excavated even though it is more expensive.

Response 3: While the selected remedy does leave some contamination on-site, that contamination is low in concentration and will be isolated from human contact thus preventing exposures. The excavation of the entire site would not be significantly more protective of human health than the selected remedy.

Comment 4: Underground utilities such as sewers will need to be run beneath the site for buildings or possibly for boats docking at the site. Excavations into the contaminated soils left behind may be needed.

Response 4: Excavation into the contaminated soils which will remain at the site is anticipated and can be performed without increasing exposure. Any such excavations would have to comply with the Site Management Plan. The Site Management Plan would describe the measures that would be taken to ensure that those soils would be handled and disposed of properly.

Comment 5: Does part of the site extend out into the Hudson River?

Response 5: No.

Comment 6: At what depths did you find soil contamination?

Response 6: There was low level contamination at almost any depth due to the nature of the fill materials used at the site. However, generally speaking the greatest concentrations were in the shallow soils within 6 inches of the surface.

Comment 7: Under Alternative 3 would the soil be removed to the water table?

Response 7: Alternative 3, Removal of Grossly Contaminated Soils and 2 Foot Soil or 6 inch Asphalt/Concrete Cover, includes excavation of soils to the water table in any areas where grossly contaminated soil is present. Any areas that exceed the site's soil removal criteria will be excavated from the surface down to the water table.

Comment 8: Are all the buildings on the site now demolished?

Response 8: A small office, foam house where fire fighting foam was stored, and part of the warehouse/maintenance garage still stand on-site. All other buildings have been demolished.

Comment 9: Who was the contractor who did the building demolition?

Response 9: Royal Environmental Services Corporations was the subcontractor that demolished both the buildings and the above ground storage tanks, and removed the underground storage tanks.

Comment 10: Who did the asbestos and lead abatement in the buildings?

Response 10: Asbestos Corporation of America did the asbestos and lead abatement work at the site.

Comment 11: Does the standard of cleanup effect the future use of the property?

Response 11: While the remedy selected is based on the evaluation criteria identified in Section 7 of this Record of Decision (ROD), the remedy will be protective for the future intended use of this property. In this case, the future use planned is restricted residential and commercial, so the remedy will allow for that use.

Comment 12: The Beczak Environmental Center and the Canoe Club should be made aware of this project.

Response 12: The Beczak Environmental Center and Yonkers Paddling and Rowing Club (Formerly the Yonkers Canoe Club) will be added to our mailing list for site information.

Comment 13: What are the next steps?

Response 13: All public comments are reviewed and a final decision on the remedy is issued in the form of a ROD, of which this Responsiveness Summary is a part. The ROD will be made available to the public in the document repositories and an availability notification will be sent to those people and groups on the site's mailing list.

A letter dated February 26, 2006 was received from Mr. Sidney Sloves of Bronxville, which is summarized below:

Comment 14: The Yonkers Industrial Development Agency (YIDA) put a legal notice in the papers for Federal and State funds for a cleanup - They accepted almost 2 million dollars. What happened to that money?

As with the other waterfront properties they have constantly underestimated the environmental issues and tried to get away with cursory examinations and half-hearted remedies. A 100 year old oil tank park has to be suspect. Any business being built over any of the numerous faults west and east of the Getty Square area has to be suspect. In other words just by the acknowledgment by the administration that further environmental examinations and remedy is necessary is a clear signal to proceed slowly before putting families on these sites to live and raise children.

Response 14: The Department is not in a position to answer questions concerning YIDA expenditures. The commentator should contact YIDA directly.

The site was fully investigated by the Yonkers Alexander Street Redevelopment, Inc. (YASR) under the oversight of the New York State Department of Environmental Conservation and the New York State Department of Health. The State has selected a remedy that removes a substantial amount of petroleum contaminated soil, is protective of human health and the environment, and is safe for the planned use of restricted residential and commercial development.

APPENDIX B

Administrative Record

Administrative Record

Former Halstead Quinn/ATI Tank Farm
Site No. B-00193

1. Proposed Remedial Action Plan for the Former Halstead Quinn/ATI Tank Farm site, dated February, 2006, prepared by the NYSDEC.

2. "Remedial Investigation Work Plan, Halstead Quinn Oil Storage Terminal Facility", October 2003, prepared by Henningson, Durham & Richardson Architecture and Engineering, P.C.

3. "Tank Farm Demolition Report, Halstead Quinn Oil Storage Terminal Facility", January 2004, prepared by Henningson, Durham & Richardson Architecture and Engineering, P.C.

4. "Final Remedial Site Investigation/Remedial Alternatives Report, Halstead Quinn Oil Storage Terminal Facility", Volume II of II, October 27, 2005, prepared by Henningson, Durham & Richardson Architecture and Engineering, P.C.

5. "Revised Final Remedial Site Investigation/Remedial Alternatives Report, Halstead Quinn Oil Storage Terminal Facility", Volume I of II, January 25, 2006, prepared by Henningson, Durham & Richardson Architecture and Engineering, P.C.

6. Fact Sheet: Remedy Proposed for the Halstead Quinn/Former ATI Tank Farm Site, January 2006, prepared by the NYSDEC.

7. Letter dated February 26, 2006 from Mr. Sidney Sloves.