Department of Environmental Conservation

Division of Environmental Remediation

Record of Decision

Delphi Harrison Thermal Systems Site
Lockport, Niagara County, New York
Site Number 9-32-113

March 2005

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

DECLARATION STATEMENT - RECORD OF DECISION

Delphi Harrison Thermal Systems
Inactive Hazardous Waste Disposal Site
Lockport, Niagara County, New York
Site No. 9-32-113

Statement of Purpose and Basis

The Record of Decision (ROD) presents the selected remedy for the Delphi Harrison Thermal Systems Site, a Class 3 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 the Delphi Harrison Thermal Systems 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 potential threat to public health and the environment.

Description of Selected Remedy

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Delphi Harrison Thermal Systems Site and the criteria identified for evaluation of alternatives, the NYSDEC has selected monitored natural attenuation. The components of the remedy are as follows:

- monitored natural attenuation with groundwater monitoring to ensure the continued effectiveness of the remedy;
- development of a contingency plan for groundwater control/treatment if natural attenuation processes can no longer be demonstrated or if significant off-site groundwater contamination is observed;
- development of a site management plan to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment, (b) evaluate the potential for vapor

intrusion for all current site buildings and any developed on the site in the future, including provision for mitigation of any impacts identified; (c) provide for the operation and maintenance of the components of the remedy; (d) monitor site groundwater; and (e) identify any use restrictions on site development or groundwater use;

- imposition of an environmental easement to restrict groundwater use and ensure compliance with the approved site management plan; and

- 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. 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.

MAR 3 1 2005

Date

Dale A. Desnoyers, Director
Division of Environmental Remediation

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RECORD OF DECISION

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Lockport, Niagara County, New York
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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 this remedy for the Delphi Harrison Thermal Systems Site. The presence of hazardous waste has created potential threats to human health and the environment that are addressed by this remedy. As more fully described in Sections 3 and 5 of this document, releases of trichloroethene from a former storage tank (Area of Concern or AOC) have resulted in the contamination of upper bedrock groundwater at the site, and have resulted in:

- a potential threat to human health associated with exposures to site groundwater; and
- a potential environmental threat associated with the impacts of contaminants to site groundwater resources.

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

- monitored natural attenuation with groundwater monitoring to ensure the continued effectiveness of the remedy;
- development of a contingency plan for groundwater control/treatment if natural attenuation processes can no longer be demonstrated or if significant off-site groundwater contamination is observed;
- development of a site management plan to address site groundwater contamination and any future use restrictions;
- imposition of an environmental easement to restrict groundwater use and ensure compliance with the approved site management plan; and
- 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

Delphi Harrison Thermal Systems (Delphi) owns and operates an automotive component manufacturing complex in Lockport, New York (Figure 1). Trichloroethene (TCE) releases occurred in an area near Building No. 8 in the north-central portion of the complex (AOC on Figures 2 thru 4). This building is used for manufacturing and formerly housed degreasing operations that utilized TCE. An above ground TCE storage tank within a secondary containment structure was located outside near the southeast corner of this building from the early 1970s until May 1994 when it was decommissioned. The TCE storage tank and secondary containment structure are identified as the Area of Concern (AOC), while the AOC and TCE-related groundwater contaminant plume together constitute the "Site".

SECTION 3: SITE HISTORY

3.1: Operational/Disposal History

The above ground TCE storage tank near Building No. 8 (AOC on Figures 2 thru 4) was closed in May 1994. TCE is no longer used at the site. Four underground water lines exist in the area of the former tank, one of which ruptured in October 1994. Workers noted a solvent odor during excavations to repair this rupture. The NYSDEC was notified of the release at that time and assigned the incident Spill Number 9410972. Due to the presence of TCE, this project was transferred to the Remediation Unit for follow-up. The presence of TCE in the subsurface was likely related to historical spills and leaks related to the storage and handling of TCE at the facility.

Tetrachloroethene (PCE) was also used as a degreasing solvent at the Delphi facility. Use of PCE as a manufacturing solvent was discontinued in 1992, and in March 1994 PCE use at the plant was discontinued entirely.

3.2: Remedial History

Several geologic and hydrogeologic studies have been performed on the Delphi plant property. These studies have been conducted since at least 1986 and were generally performed to assess subsurface conditions prior to plant construction activities. Since these studies pre-dated the discovery of the TCE release, they were not associated with the present area of concern (i.e., the "site" as defined in this document). Some of the information obtained from these studies was used in developing a conceptual model, which was used in preparing the initial work plan for sampling and analysis in the present area of concern.

As part of the initial discovery of the TCE release, soils in a 27 x 22 foot area were excavated to the top of bedrock, which in this area was encountered at a depth of about 7.5 feet. All of the contaminated soil could not be removed, however, due to the irregular nature of the bedrock surface which made excavation difficult. The excavated soils were properly disposed off-site and the excavation was subsequently backfilled with clean material. In 1999, the NYSDEC listed the site as a Class 3 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. A Class 3 site is defined as a site where hazardous waste does not present a significant threat to the public health or the environment and action may be deferred.

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 Delphi entered into a Consent Order on July 31, 2001. The Order obligates the responsible party to implement an RI/FS at the site. After the remedy is selected, the NYSDEC will approach Delphi to implement the selected remedy under an Order on Consent.

SECTION 5: SITE CONTAMINATION

A remedial investigation/feasibility study (RI/FS) has been conducted to evaluate the alternatives for addressing the potential 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 August 1995 and April 2002. The field activities and findings of the investigation are described in the RI report.

The Remedial Investigation was conducted in several phases:

- August 1995 - April 1996: Completed 20 soil borings with organic vapor screening of soils in the vicinity of the former tank location to assess the extent of potential contamination. Collected and analyzed 23 subsurface soil samples from boring locations. Performed a soil gas survey at 5 locations along the buried utility lines and sampled utility bedding material at 4 locations. Installed and sampled eight bedrock groundwater monitoring wells. A community well assessment was also conducted by the NYSDEC and NYSDOH;

- October 1996 - August 1997: Sampled 4 existing monitoring wells for volatile organic compound (VOC) analysis. Installed and sampled 5 additional bedrock groundwater monitoring wells. Collected and analyzed a sample of Dense Non-Aqueous Phase Liquid (DNAPL) from one well location;

- December 1998 - October 1999: Completed two rounds of sampling of 9 previously installed monitoring wells. Analysis of samples included VOCs and parameters to assess natural attenuation of groundwater contaminants; and

- August 2001- October 2001: Sampled 6 of the existing monitoring wells for VOCs and natural attenuation parameters. Installed and sampled three additional bedrock groundwater monitoring wells.

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

- Groundwater and drinking 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".

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: <u>Site Geology and Hydrogeology</u>

At the Delphi Site three distinct geologic units exist. These units, in order of increasing depth, are as follows:

- fill material consisting of broken concrete, stone, sand and gravel. This material is generally found in the western portion of the site and is typically less than 2 feet thick;

- a glaciolacustrine deposit that directly underlies the fill material or is found at the ground surface in the eastern portion of the site. This deposit consists primarily of reddish brown to brown silty clays, clayey silts, and silts containing gravel and sand. A higher percentage of sand and gravel is noted near the bedrock surface. This deposit directly overlies bedrock, and ranges in thickness from 3.5 to 8.0 feet; and

- Lockport Dolostone bedrock, which is a grey dolomitic limestone that is typically hard and fine grained, and contains vertical and horizontal bedding plane fractures. The thickness of this formation beneath the Delphi Site is approximately 40 to 45 feet, but does not have a sharp contact with the underlying Rochester Shale. The bedrock monitoring wells installed at the site (except well MW-3D) monitor the Lockport Dolostone.

The primary water bearing zone encountered at the site is located within the upper Lockport Dolostone bedrock; depth to groundwater ranges from 5.5 to 7.9 feet below ground surface. Groundwater flow within the Lockport bedrock is generally controlled by fractures and joints within the rock mass, but in general, is from west to east across the site (Figure 3). Groundwater flow is also greatly influenced by "The Gulf", a large topographic depression to the north-east of the Delphi plant property (Figures 1 and 3). The Gulf is approximately 110 feet deep and acts as a giant "sink", drawing groundwater towards it. The Gulf completely bisects the Lockport Dolostone and Rochester Shale.

Based upon hydraulic conductivity tests conducted on wells installed during the RI, shallow bedrock near the former storage tank has a relatively low hydraulic conductivity, ranging between $3x10^{-7}$ cm/s and $2x10^{-5}$ cm/s. The hydraulic conductivity of shallow bedrock generally increases away (downgradient) from the TCE release area, with the furthest downgradient wells having hydraulic conductivities that range from $8x10^{-6}$ cm/s to $1x10^{-2}$ cm/s.

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 category of contaminants that exceed their SCGs are volatile organic compounds (VOCs).

The VOCs of concern related to the suspected release of TCE include: trichloroethene (TCE), tetrachloroethene (PCE), cis- & trans-1,2-dichloroethene (DCE), and vinyl chloride (VC). DCE and VC are known breakdown products of TCE. PCE is sometimes present in commercial TCE as an impurity, although it was historically used at the facility. Other VOCs detected at the site include xylenes, toluene, ethylbenzene and benzene, which are commonly associated with gasoline spills.

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 million (ppm) for soil and parts per billion (ppb) for water 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 subsurface soils and bedrock 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.

Soils

Site related contaminants were detected sporadically in saturated and unsaturated soil in the vicinity of the former storage tank. Detected concentrations ranged up to 160 ppm (vs. SCG of 0.7 ppm) for TCE; 5.6 ppm (vs. SCG of 0.3 ppm) for 1,2-DCE; 1.7 ppm (vs. SCG of 1.4 ppm) for PCE; 51 ppm (vs. SCG of 1.2 ppm) for total xylenes; and 1.7 ppm (vs. SCG of 1.5 ppm) for toluene (Table 1). It is important to note that the highest concentration of TCE (160 ppm) was detected in a sample collected from soil that could not be removed from the top of bedrock by the excavator during the tank removal in 1994. Analysis of six overburden soil samples collected from five locations outside the excavation (all within 15 to 25 feet of the 160 ppm sample location) were found to be at or near SCGs. One additional sample contained TCE at 43 ppm, with the remaining samples that exceeded the TCE SCG having concentrations that ranged from 1.1 to 9.4 ppm.

While some subsurface soil samples indicated concentrations of site contaminants above SCGs, these detections do not indicate the presence of a remaining significant source in the Area of Concern.

Dense Non-Aqueous Phase Liquid (DNAPL)

A brownish black, dense non-aqueous phase liquid (DNAPL) was encountered in well MW-5. This material was observed during purging and sampling of the well, but was not of sufficient thickness to collect and measure with a bailer. Two attempts were subsequently made to measure the DNAPL thickness with an oil/water interface meter. No measurable DNAPL layer was found during either attempt. A sample of the DNAPL was collected and found to contain PCE at a concentration of 640,000 ppm and TCE at a concentration of 430,000 ppm.

DNAPL was not observed in any of the other wells installed during the RI, nor was DNAPL encountered in the overburden soil. It appears, therefore, that the DNAPL is contained within isolated bedrock fractures near well MW-5. While this DNAPL is not thought to be highly mobile, it does present a continuing source of PCE and TCE to groundwater.

Groundwater

Eighty-nine groundwater samples from wells installed in the Lockport Dolostone were collected during the RI. A summary of the detected compounds is given in Table 1. Of the VOCs detected, TCE, 1,2-DCE and VC exhibited more exceedances of their respective ambient groundwater quality standards than the other VOCs. The lateral extent of total VOC contamination in Lockport Dolostone groundwater on October 7, 1999 is shown on Figure 4. This figure indicates that total VOC contamination is greatest at the AOC and decreases significantly downgradient of the former TCE storage tank. The increase in total VOC concentrations at well MW-5 is likely related to the presence of DNAPL in this well. Figure 4 indicates, however, that total VOC concentrations attenuate rapidly downgradient of well MW-5, with concentrations of individual contaminants (TCE, 1,2-DCE and VC) either achieving or slightly exceeding SCGs in the furthest downgradient wells (MW-11, MW-12, MW-13, MW-14 and MW-15).

In addition to the total VOC concentrations decreasing downgradient from the AOC, total VOC concentrations have also decreased over time in individual wells. For example, Figure 5 is a plot for wells MW-7 at the AOC and MW-10 approximately 600 feet downgradient of the AOC (see Figure 2 for well locations). These plots show that over time the total VOC concentrations have decreased significantly in each well. In well MW-7, the concentration has decreased approximately 91%, while a decrease of approximately 73% has been observed in well MW-10.

The groundwater analytical results obtained between 1996 and 2003 indicate that natural attenuation of TCE and PCE is occurring at the site. This is demonstrated by the presence of the breakdown products DCE and VC. Figure 4 illustrates that the total VOC concentration at the site decreases significantly downgradient of the AOC, while Figure 5 indicates that total VOC concentrations have decreased over time in individual wells. These figures, therefore, lend further proof that natural attenuation is occurring at the Delphi Harrison Thermal Site. In addition, monitored natural attenuation parameters (e.g., dissolved oxygen, oxidation-reduction potential, chloride, methane) provide evidence that biochemical degradation is the mechanism responsible for the natural attenuation of the groundwater plume.

Soil Gas

A soil gas survey was completed within utility bedding material to assess the potential for soil gas migration along the buried utility alignments. TCE was detected in 4 of 5 samples at concentrations up to 52 ppm, while DCE was detected in 3 of 5 samples at concentrations up to 0.5 ppm (Table 1). A detailed evaluation of these data indicate that TCE concentrations in soil gas are greatest near the AOC (52 ppm at a distance of 20 feet from the AOC) and decrease significantly downgradient of the former TCE storage tank (30 ppm at a distance 65 feet and 0.08 ppm at a distance of 100 feet). The concentrations of DCE in soil gas show a similar relationship (0.5 ppm at 20 feet; 0.2 ppm at 65 feet; and non-detect at 100 feet).

In June 2004 the NYSDEC and NYSDOH suggested that Delphi screen the storm sewer manhole inside Building 8 near the area of concern for organic vapors as organic vapors in this manhole have the potential to impact the building. Delphi completed this evaluation on June 22, 2004 with a Photo-ionization Detector (PID). This screening identified low levels of vapors (0.6 ppm above background levels) in the manhole, but no vapors above background levels at the manhole rim when the manhole was closed.

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.

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 RI 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.

At this site, limited contamination exists in subsurface soil in the vicinity of the former storage tank location, and widespread bedrock groundwater contamination exists downgradient of the former tank, with no current off-site impacts. For a complete exposure pathway to occur, persons would have to come into contact with the contaminated soil or groundwater, or inhale organic vapors. Exposure to these media could occur through utility maintenance, construction activities, or potentially through soil vapor intrusion into onsite buildings. Currently, the completed pathways of exposure are for workers entering on-site utilities, buildings, or excavations. These pathways of exposure are:

- dermal contact with contaminated subsurface soils and groundwater; and

- inhalation of organic vapors.

The site is located in an industrial complex and is not readily accessible to the public. All occupied structures in the area are served by public water. Complete pathways could occur in the future to utility workers or site workers during subsurface construction activities and routine utility work.

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.

Other than a small intermittent stream located on the eastern portion of the plant property, there are no significant wildlife or wetland resources on the site. Site contamination has impacted groundwater in the upper bedrock aquifer, but this contamination is generally not migrating from the site at concentrations above SCGs.

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 through the proper application of scientific and engineering principles.

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

- exposures of persons at or around the site to direct contact with contaminated subsurface soil, groundwater, or inhalation of organic vapors; and
- the further migration of contaminated bedrock groundwater.

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

- 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 Delphi Harrison Thermal Site were identified, screened and evaluated in the FS report which is available at the document repositories established for this site.

A significant quantity of contaminated soils impacted from the release of TCE have already been removed and disposed. As a result, site contamination is primarily limited to upper bedrock groundwater. In addition, dense non-aqueous phase liquid (DNAPL) has been detected at small quantities in one bedrock monitoring well (MW-5). Due to the small quantities of DNAPL detected, and the limited number of technologies available to remediate DNAPL and contaminated groundwater within a fractured bedrock aquifer, the Feasibility Study was focused in nature.

A summary of the focused 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 bedrock groundwater at the site.

Alternative 1: No Action

Present Worth: *$0*
Capital Cost: *$0*
Annual OM&M: *$0*

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative would leave the site in its present condition and would not provide any additional protection for human health and the environment.

Alternative 2: Monitored Natural Attenuation

Present Worth: *$255,000*
Capital Cost: *$0*
Annual OM&M: *$16,600*

Monitored Natural Attenuation (MNA) would rely on natural attenuation processes such as biodegradation, dispersion, dilution, sorption, volatilization, etc. to reduce the mass, toxicity, mobility, volume, or concentration of contaminants within bedrock groundwater. The remedial investigation has concluded that site conditions are conducive to the various natural attenuation processes. This alternative would rely on a groundwater monitoring program to ensure that natural attenuation processes continue to operate at the site. This monitoring program would include groundwater analysis for the VOC contaminants of concern as well as natural attenuation indicators such as dissolved oxygen, pH, conductivity, and oxidation-reduction potential.

In addition to groundwater monitoring, this alternative would also include institutional controls that would include access restrictions and controls for present or future workers who might encounter contaminated soil, bedrock groundwater and/or organic vapors. In addition, if future groundwater monitoring indicates that contaminant concentrations are increasing downgradient of the former storage tank (i.e., off-site groundwater contamination becomes a concern that may pose a threat to human health or the environment), or if conditions for biodegradation of site contaminants become unfavorable, additional remedial measures will be evaluated and implemented as needed.

The design (i.e., work plan) for this alternative could be completed in 3-6 months, and the remedy could be implemented immediately upon approval of the design. Due to the presence of a DNAPL source within the fractured bedrock, it is unlikely that site groundwater will achieve SCGs within a 30 year time frame. However, for the purposes of alternative comparison, the cost estimates provided were calculated using the standard 30 year period.

Alternative 3: Chemical Oxidation of Source Area DNAPL + Monitored Natural Attenuation

Present Worth: *$315,000*
Capital Cost: *$45,000*
Annual OM&M: *$17,500*

This alternative would involve injection of a chemical oxidant into the source area bedrock in order to reduce the toxicity and volume of the DNAPL. Existing monitoring wells would be used to introduce a chemical oxidant (such as sodium permanganate) into the bedrock. It is possible that more than one application of the chemical oxidant may be required. A groundwater monitoring program would be implemented to evaluate the effectiveness of the chemical oxidation application(s). DNAPL and dissolved phase groundwater contaminants remaining in the bedrock after the chemical oxidant application(s) would be allowed to attenuate naturally. A groundwater sampling program would be instituted and would include analysis for the VOC contaminants of concern as well as natural attenuation indicators such as dissolved oxygen, pH, conductivity, and oxidation-reduction potential.

Similar to Alternative 2, institutional controls would be included in this alternative to prevent human contact with contaminated groundwater. In addition, a contingency plan would be developed if natural attenuation proves unreliable or conditions for natural attenuation become unfavorable.

The design for this alternative could be completed in 9-18 months. A lab test would be required to determine the effectiveness of the proposed oxidant. Following the lab test, a pilot test would be required in the source area to assess the feasibility of the process and to design the injection volume and rate for the oxidant. The construction time needed to implement this alternative is estimated at 2-4 weeks.

Alternative 4: Extraction of Source Area DNAPL + Dissolved Phase Groundwater Extraction/Treatment

Present Worth: *$1,715,000*
Capital Cost: *$285,000*
Annual OM&M: *$93,000*

This alternative would use low flow pumping methods to recover DNAPL from bedrock in the source area. Existing well MW-5 would be used, with the extracted DNAPL disposed at an approved off-site disposal facility. Conceptually, DNAPL extraction would be conducted monthly for the first three months, quarterly for the next two years, and semi-annually for the remaining 30 years. In addition to DNAPL recovery, several new groundwater extraction wells would be installed and operated downgradient of the source area to contain the dissolved phase groundwater plume. A groundwater treatment system would be constructed on site, with discharge of the treated water to an on site drainage swale. Dissolved phase groundwater contaminants that are already present downgradient of the proposed extraction wells would be allowed to attenuate naturally. A long term groundwater monitoring program would also be included to ensure the effectiveness of this alternative. Similar to Alternatives 2 and 3, institutional controls would be included to prevent human contact with contaminated soil or groundwater.

The design of this alternative could be completed in 6-12 months. Pump tests would be required to determine groundwater extraction well locations and pumping rates. Treatability tests would likely be required to assess appropriate groundwater treatment technologies and ability to meet applicable discharge criteria. The construction time to implement this alternative is estimated at approximately 6-12 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 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 size of the contaminated groundwater plume, the frequency of well sampling during the RI/FS process, the natural attenuation process, and organic vapor intrusion. These comments do not change the selected remedy for the site.

SECTION 8: SUMMARY OF THE SELECTED REMEDY

Base upon the Administrative Record (Appendix B) and the discussion presented below, the NYSDEC has selected Alternative 2, monitored natural attenuation (MNA), 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 2 was selected because, as described below, it equally 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 through: implementation of institutional controls that will prevent potential future exposures to persons at the site by direct contact with contaminated subsurface soil, groundwater, or the inhalation of organic vapors; implementation of a groundwater monitoring program to ensure that site groundwater contaminants continue to attenuate; and a requirement to evaluate and implement additional bedrock groundwater remedial measures should site conditions change (i.e., should future monitoring activities indicate that natural attenuation is no longer demonstrated or indicate significant off site bedrock groundwater contaminant migration). Alternatives 3 and 4 will satisfy the threshold criteria to a similar degree.

Due to the extremely high concentrations of organic contaminants within site groundwater, and the presence of residual DNAPL (which will serve as a continuing source of contamination and cannot be readily extracted from bedrock fractures), achievement of groundwater standards on site within a reasonable time frame is considered technically impracticable for each alternative. As a result, Alternatives 2, 3 and 4 will offer similar protection of human health and the environment.

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

Alternatives 2 (MNA), 3 (source area in-situ chemical oxidation with MNA) and 4 (DNAPL source extraction with dissolved phase extraction/treatment) all have short-term impacts which can easily be controlled. Alternatives 3 and 4 may achieve remedial goals faster than Alternative 2. However, due to the complexities of treatment and/or extraction of DNAPL in a fractured bedrock groundwater aquifer, it is difficult to accurately estimate potential reductions in the time frames required to achieve ambient groundwater quality standards.

Alternative 4 will have a greater long term effectiveness than Alternatives 2 and 3 since it will actively remove DNAPL and intercept and treat contaminated groundwater downgradient of the source area. The effectiveness of long term DNAPL extraction, however, cannot be predicted with any certainty. Alternative 3 will have a greater long term effectiveness than Alternative 2 since it will reduce the contaminant source area within the fractured bedrock. The effectiveness of in-situ chemical oxidation of the source area, however, cannot be predicted without laboratory and pilot scale testing of the oxidant and the delivery system. Alternative 2 will offer a reliable means of reducing bedrock groundwater contamination through naturally occurring degradation processes.

Alternatives 3 and 4 will reduce a greater volume of DNAPL within the contaminant source area than Alternative 2. This will depend upon the effectiveness of the DNAPL oxidation/treatment systems. Reduction of the DNAPL mass and volume will result in a corresponding reduction in the volume of dissolved phase contaminants within the bedrock groundwater aquifer. Alternative 4 will further reduce the dissolved phase contaminant volume through groundwater extraction and treatment. Alternative 2 will rely on natural attenuation for reducing the mass and volume of DNAPL and the dissolved phase groundwater plume.

Alternative 2 is favorable in that it is readily implementable. Alternatives 3 and 4 are also implementable, but will require laboratory testing, pilot testing and/or pump tests to design and construct either of the alternatives. In addition, due to the complexities involved with DNAPL presence in fractured bedrock aquifers, there is uncertainty regarding the implementability of DNAPL oxidation proposed in Alternative 3 and DNAPL extraction proposed in Alternative 4.

Table 2 shows the estimated present worth cost to implement the proposed remedies. The costs of these alternatives vary significantly. In addition to the costs of Alternative 2, Alternative 3 has the added capital costs associated with the oxidation of the source area DNAPL. These capital costs may increase if repeated applications of the oxidant are required to effect treatment. Alternative 4 includes significant capital and operation and maintenance costs associated with the construction, operation and maintenance of a dissolved phase groundwater extraction/treatment system.

The estimated present worth cost to implement the monitored natural attenuation remedy is $255,000. It has no construction costs and the estimated average annual operation, maintenance, and monitoring costs for 30 years is $16,600.

The elements of the selected remedy are as follows:

1. Development of a groundwater monitoring program to evaluate the continued effectiveness of Monitored Natural Attenuation at the site. This program will include sampling of select monitoring wells for VOC contaminants of concern and specific natural attenuation indicator parameters. Reporting of the monitoring data will be required on an annual basis, and will include the evaluation of contaminant trends and a discussion of any changes observed in the nature and/or extent of the groundwater contaminant plume.

2. Development of a contingency plan for groundwater control/treatment if natural attenuation processes can no longer be demonstrated or if significant off-site groundwater contamination

is observed.

3. Since the remedy results in contamination above unrestricted levels remaining at the site, a site management plan (SMP) will be developed and implemented. The SMP will include the institutional controls and engineering controls 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) evaluate the potential for vapor intrusion for all current site buildings and any developed on the site in the future, including provision for mitigation of any impacts identified; (c) provide for the operation and maintenance of the components of the remedy; (d) monitor the groundwater; and (e) identify any use restrictions on site development or groundwater use.

4. The SMP will require the property owner to provide an Institutional Control/ Engineering Control (IC/EC) certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department annually or for a period to be approved by the NYSDEC, which will certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and 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 any operation an maintenance or soil management plan.

5. 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 commercial or industrial uses only; (c) restrict use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Niagara County Department of Health; and (d) require the property owner to complete and submit to the NYSDEC IC/EC certification.

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 Citizen Participation (CP) Plan, dated April 2001, describes the CP activities to be completed for the site during the investigation process.

- A Fact Sheet announcing the listing of the site in the Registry of Inactive Hazardous Waste

Disposal Sites in New York State as Class 3 and summarizing the ongoing investigative activities by Delphi was distributed to the mailing list in May 1999.

- A Fact Sheet announcing that Delphi has signed an Order on Consent with the Department to implement an RI/FS at the site was distributed to the mailing list in July 2001.

- A Fact Sheet summarizing the results of the RI and describing the PRAP was distributed to the mailing list in February 2005.

- A public meeting was held on March 15, 2005 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
(August 1995 - April 2003)

SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Trichloroethene	ND[c] - 160	0.7	7 of 26
	1,2-Dichloroethene	ND - 5.6	0.3	4 of 26
	Tetrachloroethene	ND - 1.7	1.4	1 of 26
	Toluene	ND - 1.7	1.5	1 of 26
	Ethylbenzene	ND - 0.012	5.5	0 of 26
	Total Xylenes	ND - 51	1.2	1 of 26

SOIL GAS	Contaminants of Concern	Concentration Range Detected (ppmv)[a]	SCG[b] (ppmv)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Trichloroethene	ND - 52	NS[d]	0 of 5
	1,2-Dichloroethene	ND - 0.5	NS	0 of 5

GROUNDWATER (LOCKPORT DOLOSTONE)	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Trichloroethene	ND - 6,500,000	5.0	64 of 89
	1,2-Dichloroethene	ND - 310,000	5.0	82 of 89
	Tetrachloroethene	ND - 120,000	5.0	37 of 89
	Vinyl Chloride	ND - 40,000	2.0	72 of 89
	Benzene	ND - 3,400	1.0	12 of 47
	Toluene	ND - 3,700	5.0	12 of 47
	Ethylbenzene	ND - 1,900	5.0	10 of 47
	Total Xylenes	ND - 3,400	5.0	12 of 47

TABLE 1
Nature and Extent of Contamination (Continued)

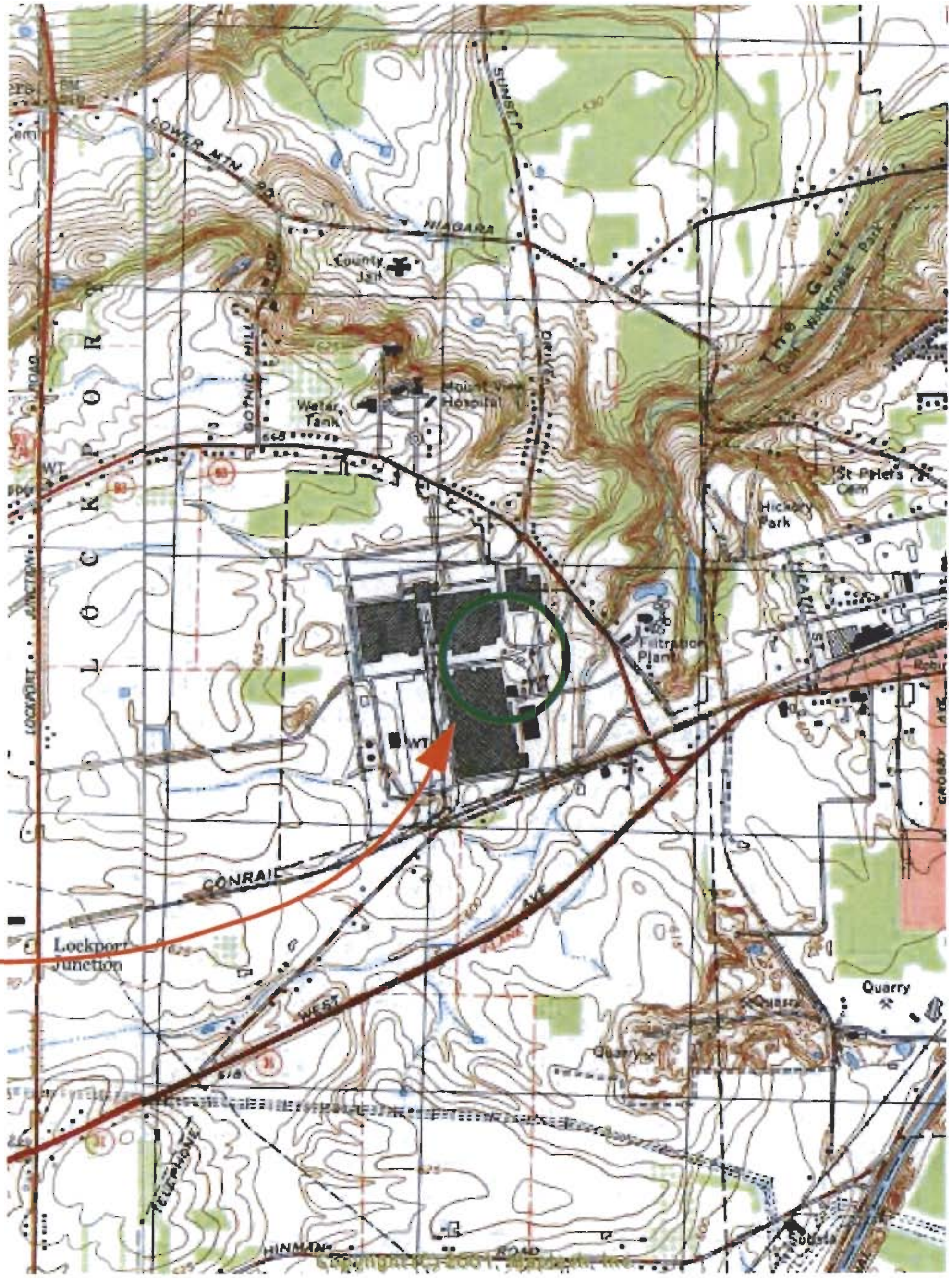
GROUNDWATER (ROCHESTER SHALE)	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Volatile Organic Compounds (VOCs)	Trichloroethene	ND	5.0	0 of 3
	1,2-Dichloroethene	ND	5.0	0 of 3
	Tetrachloroethene	ND	5.0	0 of 3
	Vinyl Chloride	ND	2.0	0 of 3
	Benzene	ND	1.0	0 of 2
	Toluene	ND	5.0	0 of 2
	Ethylbenzene	ND	5.0	0 of 2
	Total Xylenes	ND	5.0	0 of 2

[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;
ppmv = parts per million (vapor);
[b] SCG = standards, criteria, and guidance values;
[c]ND = Non-detectable (i.e. below detection limits);
[d]NS = no standard.

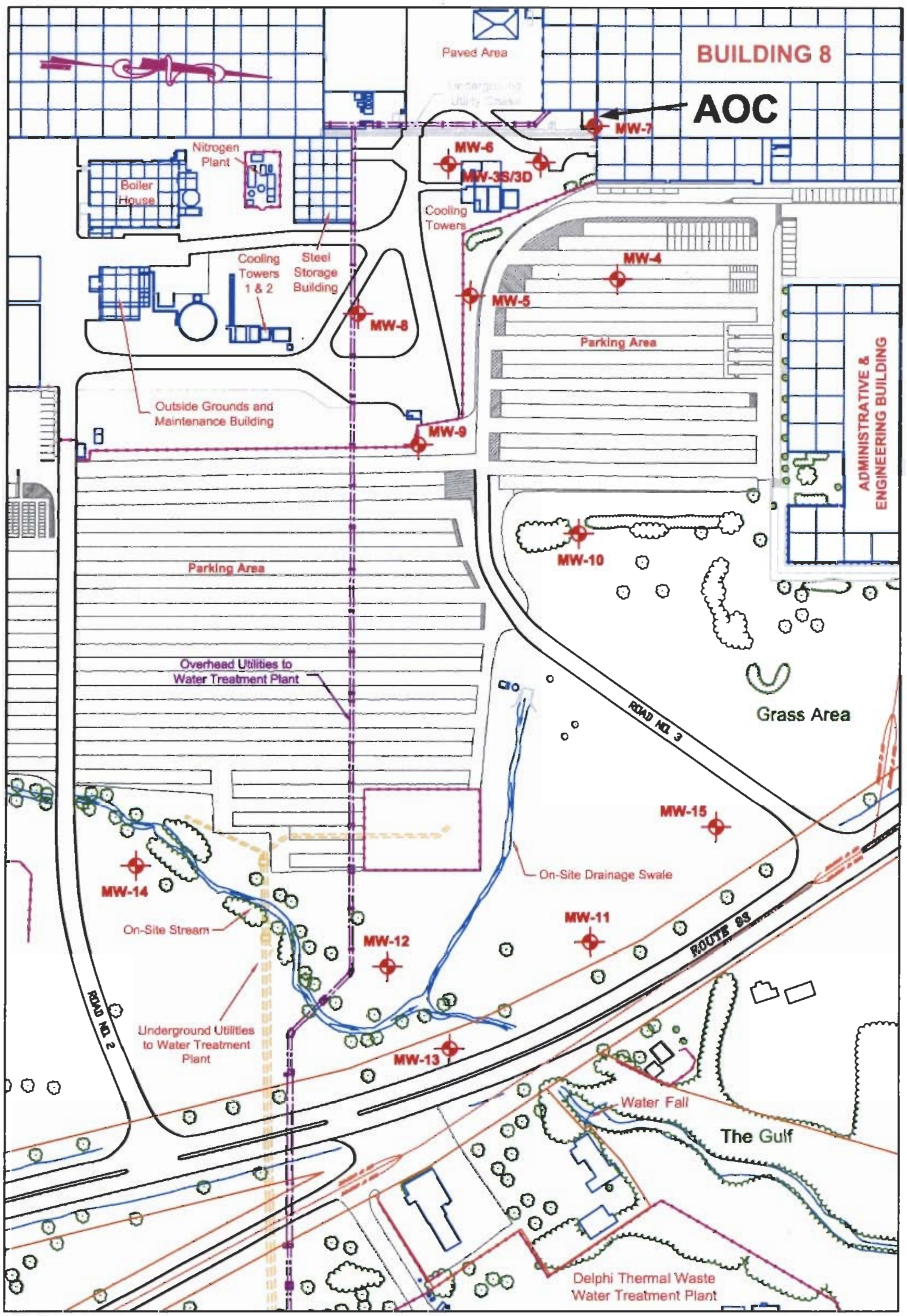
TABLE 2
Remedial Alternative Costs

Remedial Alternative	Capital Cost	Annual OM&M	Total Present Worth
Alt. 1: No Action	$0	$0	$0
Alt. 2: Monitored Natural Attenuation	$0	$16,600	$255,000
Alt. 3: Chemical Oxidation of Source Area DNAPL + MNA	$45,000	$17,500	$315,000
Alt. 4: Extraction of Source Area DNAPL with Dissolved Phase Extraction and Treatment	$285,000	$93,000	$1,715,000

Delphi Harrison Thermal Systems Site



Cambria & Lockport Quadrangles	SITE LOCATION MAP	
	DIVISION OF ENVIRONMENTAL REMEDIATION	
	DATE: 12/23/04	DRAWING: Delphi Location Map.dwg
Scale Depends on Final Plotted Size	SITE: DELPHI HARRISON THERMAL SYSTEMS	FIGURE 1

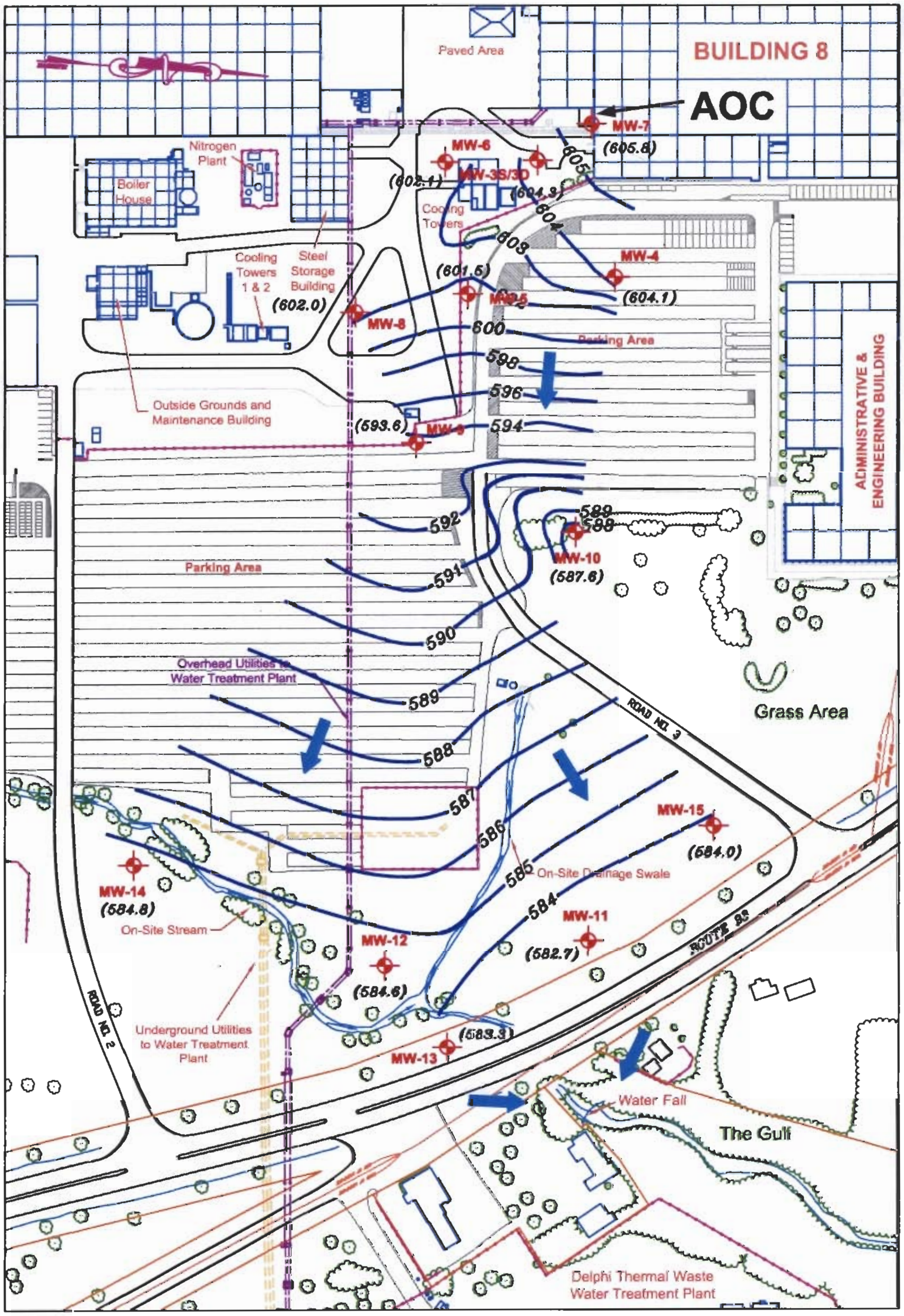


LEGEND:

- EXISTING WELL
- **AOC** AREA OF CONCERN (FORMER TCE TANK)

0 200' 400'
SCALE IN FEET

SITE PLAN & MONITORING WELL LOCATION MAP	
DIVISION OF ENVIRONMENTAL REMEDIATION	
DATE: 01/04/04	DRAWING: Site Map.dwg
SITE: DELPHI HARRISON THERMAL SYSTEMS	FIGURE 2



LEGEND:

MW-3S (604.7) LOCATION AND DESIGNATION OF EXISTING MONITORING WELL

GROUNDWATER ELEVATION MEASURED ON AUGUST 22, 2001

AOC AREA OF CONCERN (FORMER TCE TANK)

0 200' 400'

SCALE IN FEET

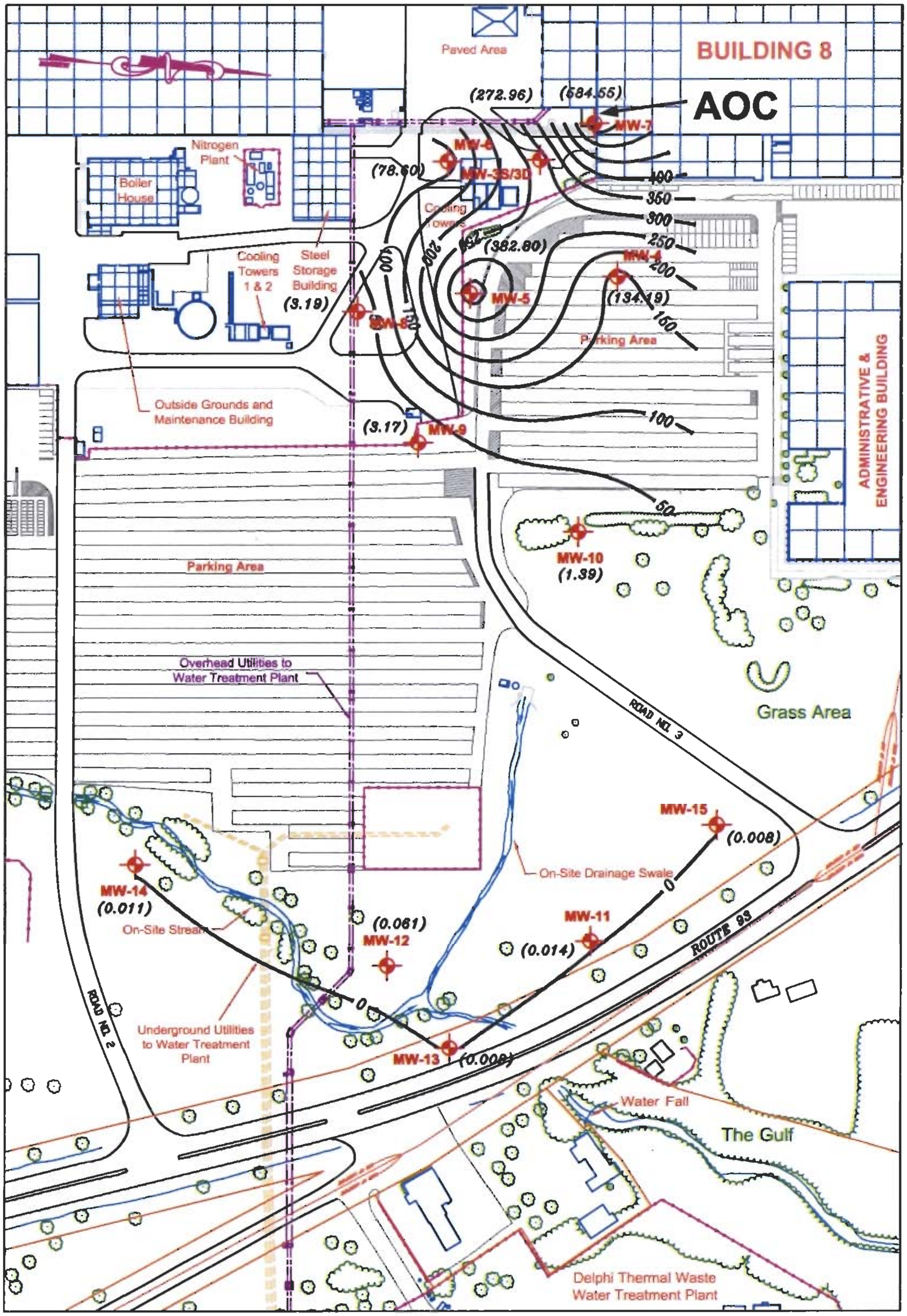
GROUNDWATER CONTOUR MAP (AUGUST 22, 2001)

DIVISION OF ENVIRONMENTAL REMEDIATION

DATE: 01/04/04	DRAWING: Site Map.dwg

SITE: **DELPHI HARRISON THERMAL SYSTEMS**

FIGURE 3



LEGEND:

MW-3S (78.60) LOCATION AND DESIGNATION OF EXISTING MONITORING WELL

TOTAL VOC CONCENTRATION IN PPM FOR OCTOBER 7, 1999

AOC AREA OF CONCERN (FORMER TCE TANK)

0 200' 400'
SCALE IN FEET

TOTAL GROUNDWATER VOC CONCENTRATION CONTOUR MAP

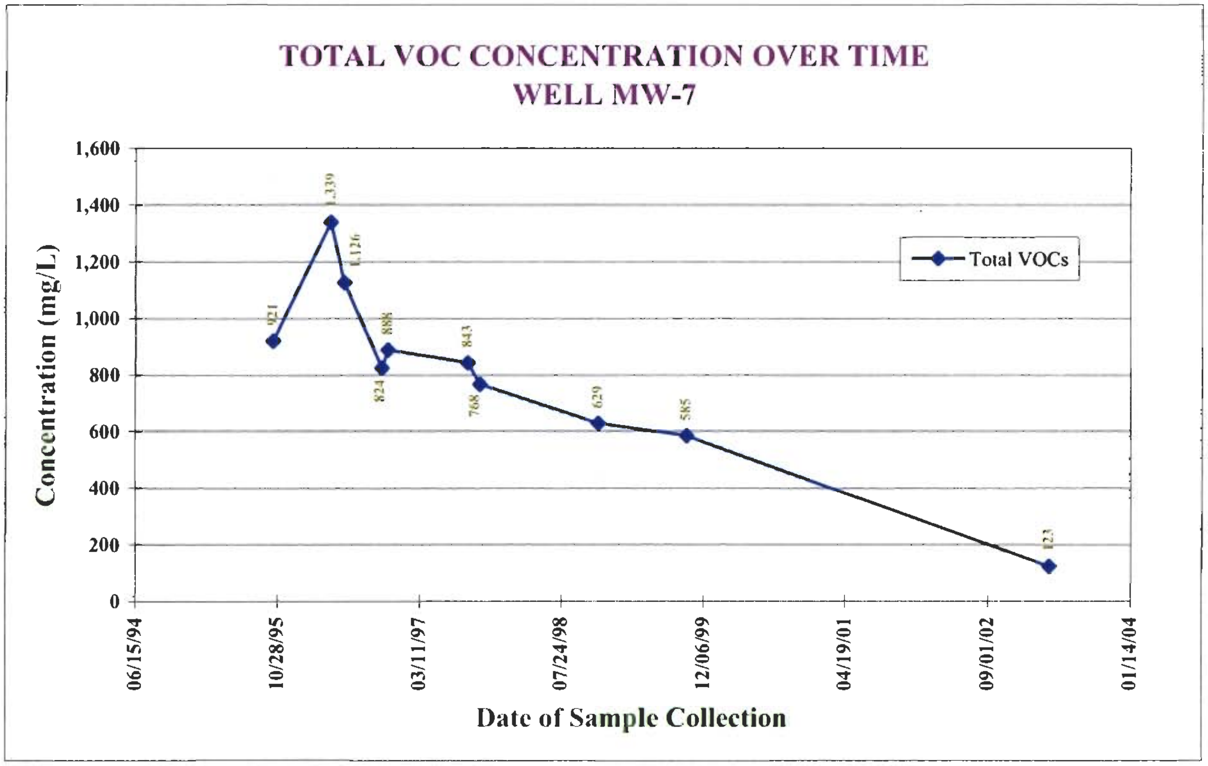
DIVISION OF ENVIRONMENTAL REMEDIATION

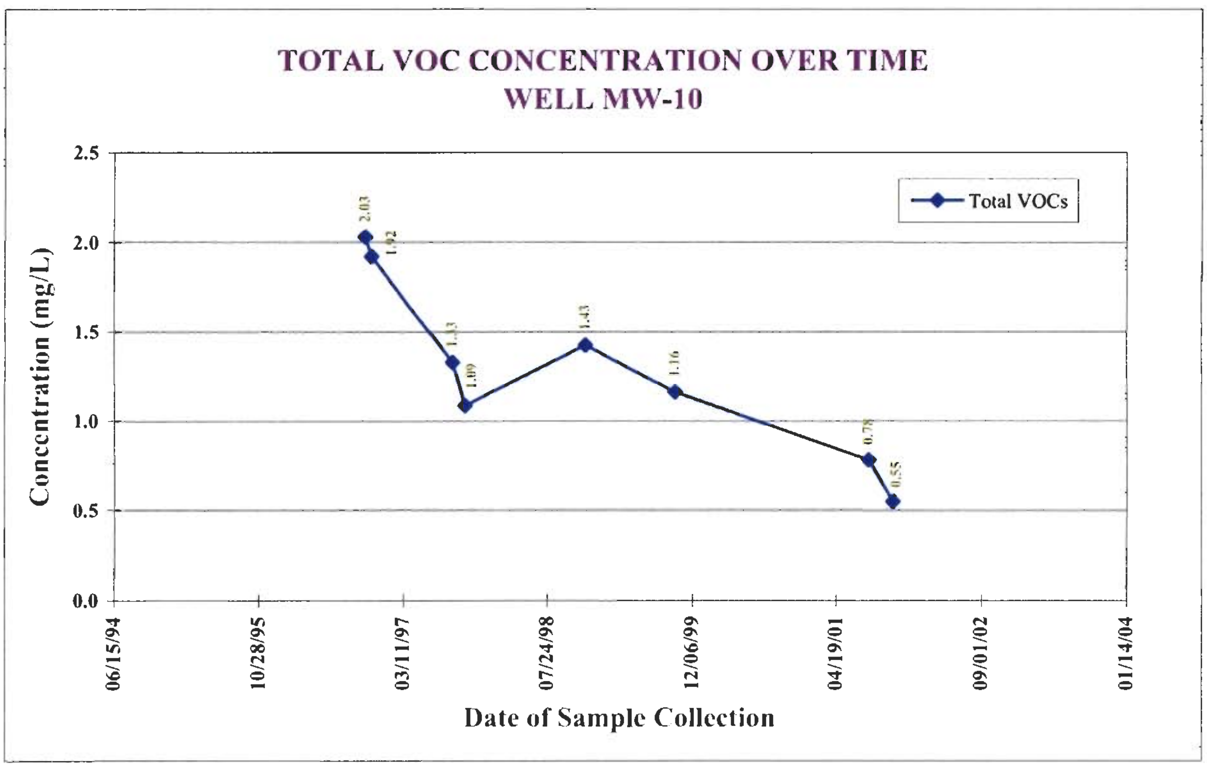
DATE: 01/04/04 DRAWING: Site Map.dwg

SITE: DELPHI HARRISON THERMAL SYSTEMS

FIGURE 4

Figure 5. Total VOC concentration over time for select monitoring wells.





APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Delphi Harrison Thermal Systems Site
Lockport, Niagara County, New York
Site No. 9-32-113

The Proposed Remedial Action Plan (PRAP) for the Delphi Harrison Thermal Systems 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 March 1, 2005. The PRAP outlined the remedial measure proposed for the contaminated upper bedrock groundwater at the Delphi Harrison Thermal Systems site.

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

A public meeting was held on March 15, 2005, which included a presentation of the Remedial Investigation (RI) and the Feasibility Study (FS) as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on March 30, 2005.

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

COMMENT 1: What caused the spike in the total VOC concentration in well MW-7 (Figure 5 of PRAP)?

RESPONSE 1: The total VOC concentration plot for well MW-7 was generated using analytical data from two wells installed in the area of the former TCE storage tank. The original well installed in this area (well MW-1) was removed in December 1995 and replaced by well MW-7 in April 1996. The spike observed in the plot corresponds to the first analytical result from the new well. This suggests that well MW-7 is located closer to residual TCE in bedrock than former well MW-1 was. What is important is that the concentrations of total VOCs have decreased steadily since April 1996.

COMMENT 2: How large is the groundwater plume?

RESPONSE 2: The contaminated groundwater plume is approximately 850 feet wide at its widest point and approximately 1,360 feet long.

COMMENT 3: The last time the wells were tested was in 2001?

RESPONSE 3: No. The last time the most downgradient wells were sampled during the Remedial Investigation was 2001. During completion of the Feasibility Study, the wells near the former TCE storage tank were sampled in 2003 to evaluate the continued degradation of contaminant concentrations. When preparing the PRAP, the NYSDEC asked Delphi to sample the most downgradient wells to determine the current levels of contamination in those wells. This sampling was completed on January 12, 2005, with the results submitted to the NYSDEC on February 7, 2005. These data showed a further reduction in contaminant concentrations since the wells were sampled in 2001. See the response to Comment 5 for additional detail.

COMMENT 4: Isn't a 3 year gap in testing a long time?

RESPONSE 4: Not necessarily. In the area of the former TCE storage tank, groundwater concentrations are extremely high, so it will take a longer time before natural attenuation processes decreased contaminant concentrations to levels approaching groundwater standards. As a result, these wells do not need to be sampled as frequently. In contrast, the wells along Route 93, which are farthest from the former TCE storage tank, need to be sampled more frequently to confirm that contaminated groundwater is not leaving the site. During implementation of the selected remedy, these wells will be sampled annually.

COMMENT 5: Is the contamination breaking down or is it evaporating and becoming airborne?

RESPONSE 5: The contaminants are breaking down because we see the byproducts associated with the natural attenuation process. In the environment, trichloroethene (TCE) breaks down into dichloroethene (DCE), which further breaks down into vinyl chloride (VC). Vinyl chloride breaks down into ethene, which further breaks down into ethane and then into carbon dioxide and water. Tetrachloroethene (PCE) breaks down into TCE, which then follows the break down path described above.

An evaluation of the groundwater analytical data from the Delphi Site reveals the presence of TCE and its break down products. Concentrations of TCE are highest at the location of the former storage tank, and decrease significantly downgradient toward Route 93. The highest concentrations of DCE are found in wells immediately downgradient of the former storage tank, indicating that TCE is breaking down into DCE. VC is elevated in one of these wells, indicating that DCE is breaking down rapidly at this location. Further downgradient, the concentrations of both DCE and VC decrease, indicating that both contaminants are being degraded. In the three wells closest to Route 93, TCE, DCE and VC were not detected.

COMMENT 6: Is there any air monitoring along the edge of the site?

RESPONSE 6: Not in relation to the former TCE storage tank and groundwater plume. Air monitoring, however, is conducted at the Delphi plant as required by the company's air discharge permits with the NYSDEC's Division of Air Resources.

COMMENT 7: How deep did Delphi excavate in the area of the former TCE storage tank? Did they get all of the contamination?

RESPONSE 7: As part of the initial discovery of the TCE release, soils in a 27 x 22 foot area were excavated to the top of bedrock, which in this area was encountered at a depth of about 7.5 feet. All of the contaminated soil could not be removed due to the irregular nature of the bedrock surface which made excavation difficult. The analytical data from the contaminated soil that remains, however, does not indicate the presence of a remaining significant source in the former storage tank area.

COMMENT 8: Were there any complaints about organic vapors in Building 8 or around there?

RESPONSE 8: The NYSDEC and NYSDOH have not received any complaints regarding organic vapors in Building 8. However, in June 2004 the NYSDEC and NYSDOH suggested that Delphi screen the storm sewer manhole inside Building 8 near the area of concern for organic vapors as organic vapors in this manhole have the potential to impact the building. Delphi completed this evaluation on June 22, 2004 with a Photo-ionization Detector (PID). This screening identified low levels of vapors (0.6 ppm above background levels) in the manhole, but no vapors above background levels at the manhole rim when the manhole was closed.

APPENDIX B

Administrative Record

Administrative Record

Delphi Harrison Thermal Systems Site
Site No. 9-32-113

1. Proposed Remedial Action Plan for the Delphi Harrison Thermal site, dated February 2005, prepared by the NYSDEC.

2. Order on Consent, Index No. B9-0553-99-06, between NYSDEC and Delphi Harrison Thermal Systems, executed on July 31, 2001.

3. "Sampling and Analysis Plan, Phase III Extent of Contamination Study", August 1995, prepared by GZA GeoEnvironmental of New York.

4. "Addendum to Sampling and Analysis Plan, Phase III Extent of Contamination Study", February 1996, prepared by GZA GeoEnvironmental of New York.

5. "Phase III Extent of Contamination Study", September 1996, prepared by GZA GeoEnvironmental of New York.

6. "Supplemental Phase III Extent of Contamination Studies and Evaluation of Alternatives", February 1997, prepared by GZA GeoEnvironmental of New York.

7. "Supplemental Phase III Extent of Contamination Studies Data Report (December 1998 Sample Round)", May 1999, prepared by GZA GeoEnvironmental of New York.

8. Fact Sheet announcing the listing of the site in the Registry as Class 3 and summarizing the ongoing investigative activities by Delphi, May 1999, prepared by the NYSDEC.

9. "Supplemental Phase III Extent of Contamination Studies Data Report (October 1999 Sample Round)", August 2000, prepared by GZA GeoEnvironmental of New York.

10. "Focused Remedial Investigation and Focused Feasibility Study Work Plan", April 2001, prepared by GZA GeoEnvironmental of New York.

11. Fact Sheet announcing that Delphi has signed an Order on Consent with the Department to implement an RI/FS at the site, July 2001, prepared by Delphi Harrison Thermal Systems.

12. "Supplemental Groundwater Sampling Data Report (August 2001 Sample Round)", October 2001, prepared by GZA GeoEnvironmental of New York.

13. "Supplemental Groundwater Sampling Data Report (October 2001 Sample Round)", December 2001, prepared by GZA GeoEnvironmental of New York.

14. “Focused Remedial Investigation”, April 2002, prepared by GZA GeoEnvironmental of New York.

15. “Focused Feasibility Study”, December 2003, prepared by GZA GeoEnvironmental of New York.

16. Fact Sheet summarizing the results of the RI and describing the PRAP, February 2005, prepared by the NYSDEC.

17. Meeting Notice announcing the public meeting on the PRAP, February 28, 2005, prepared by the NYSDEC.