

FINAL PLAN OF REMEDIAL ACTION



HARPER-THIEL SITE

*3201 Miller Road
Wilmington, Delaware*

DNREC Project No. DE-0197

This Final Plan of remedial action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) determination that the following remedial action will be required at the Harper-Thiel Site in Wilmington, Delaware.

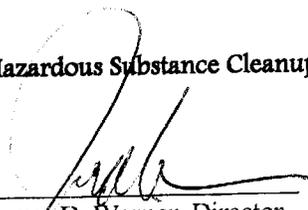
The following areas will require excavation and off-site disposal: (1) Additional areas of hexavalent chromium soils located in the vicinity of the former chromium plating tanks. (2) The soils beneath the wooden floor of the historic building that fronts on Miller Road that have been contaminated with both lead and polychlorinated biphenyls (PCBs). and (3) A vegetated portion of the site that contains surface soils contaminated with PCBs. All excavation of these soils, as well as the structural stabilization of the historic building, will be performed under a DNREC-approved work plan and contaminated materials management plan. During redevelopment of the site, after the excavation and disposal of the most contaminated soils, all construction work that disturbs the soil must comply with the contaminated materials management plan approved by DNREC. Following site construction, an operation and maintenance plan (O&M plan) for the site will be drafted to assure that any protective measures are properly maintained. Additionally, environmental covenants will be placed on the property limiting its reuse to industrial or commercial use only.

DNREC issued public notice of the Proposed Plan for the site on July 15, 2007 and opened a 20-day public comment period, with the comment period closing on August 6, 2007. The Proposed Plan recommending the above remedial action is attached. The Proposed Plan also includes the location of additional information found on the DNREC web page and in the DNREC office on Lukens Drive in New Castle.

There were no comments or questions from the public. Therefore, the Proposed Plan is adopted as the Final Plan.

Approval:

This Final Plan meets the requirements of the Hazardous Substance Cleanup Act.

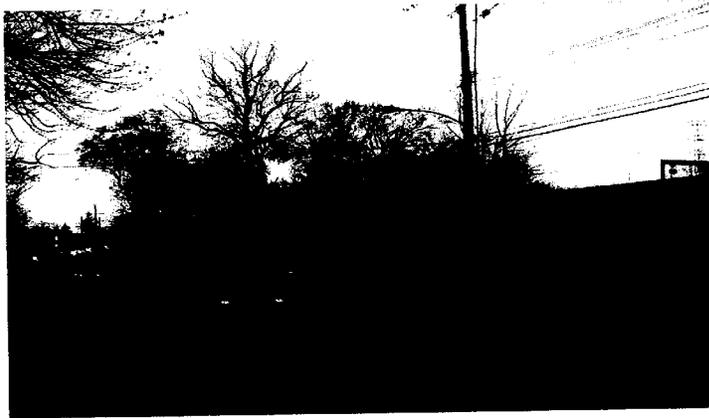

James D. Werner, Director
Division of Air and Waste Management

7 Aug 2007

APPENDIX 1

PROPOSED PLAN OF REMEDIAL ACTION

Harper-Thiel Site
Wilmington, DE
DNREC Project No. DE-197



July 2007

Delaware Department of Natural Resources and Environmental Control
Division of Air and Waste Management
Site Investigation & Restoration Branch
391 Lukens Drive
New Castle, Delaware 19720

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Harper-Thiel Site



What is the former Harper-Thiel Site? The site, located at 3201 Miller Road in Wilmington, is a former electroplating company, and is currently a vacant, Delaware certified Brownfield property, slated for commercial redevelopment (figure 1). The current owner of the site is the Wilmington UDAG Corporation (UDAG), and at this time, there are no specific redevelopment plans for the site.

Tax Parcel Numbers: 26-008.20.-001 and 26-008.20.-021
Address: 3201 Miller Road, Wilmington, DE 19804
Nearest major intersection: Miller Road and West 32nd Street
Area: 2.3 acres
Shallow groundwater at the site flows toward the South-South East, in the direction of Haynes Park, south of Miller Road.
Other surrounding land use is primarily a mix of residential and commercial.
The property has public water and sewer service supplied by the City of Wilmington.

What happened at the former Harper-Thiel Site? The previous owners used the property for the electroplating of chrome, nickel, cadmium and copper from 1946 until 2000. Major clients of Harper-Thiel included the DuPont Company and the U.S. Navy. The operations of the site as an electroplating company resulted in releases of hazardous substances into the soils and groundwater.

What is the problem at the former Harper-Thiel Site? Due to the operation of the property as an electroplating facility, surface and subsurface soils have become contaminated with the heavy metals hexavalent chromium and lead, as well as, polychlorinated biphenyls (PCBs). The groundwater in the area has also been contaminated with hexavalent chromium at levels exceeding the Maximum Contaminant Levels (MCLs) for drinking water. The groundwater in the area, however, is not being used for drinking water and legal restrictions prevent the future use of groundwater.

A DNREC certified consultant, Environmental Alliance, conducted a Remedial Investigation (RI) beginning in October 2002, with additional sampling activities occurring in March, October and December 2003 and February through April and June of 2004. The sampling program began with the soil and groundwater samples that were collected at the Harper-Thiel property (figure 2). Due to the contamination found on-site at the Harper-Thiel property, off-site sediment, surface water, shallow soil and groundwater samples were collected from Haynes Park, which is located across

Miller Road from the Harper-Thiel site. Additional groundwater samples were also collected in the surrounding residential area in the vicinity of Harrison Street and P.S. DuPont Middle School. As a result of the sampling, DNREC determined that surface and subsurface soils on the Harper-Thiel site were contaminated with the heavy metals, hexavalent chromium and lead, as well as PCBs, but there was no evidence of any off-site contamination, except groundwater. Unless the on-site contamination is remediated it could pose an unacceptable human health risk to people residing at the site or to construction workers who would perform redevelopment activities at the site.

The groundwater flowing beneath the site and towards Haynes Park is contaminated with hexavalent chromium. However, following the completion of the RI, DNREC determined there was no potential for exposure and therefore, there is no risk to the residents of the area or to visitors at Haynes Park because no one is consuming the groundwater, or coming into physical contact with the groundwater beneath the site. In addition, DNREC evaluated the possibility that contaminated groundwater might be shallow enough to intercept building basements, but found that it was too deep to pose any exposure risk. Furthermore, the groundwater is not discharging to the stream in Haynes Park or to the residential basements in the area (figure 3).

What does the owner want to do at the former Harper-Thiel Site? The property owner, UDAG, is planning to sell the property through a public request for proposal process to a potential brownfields developer for the development of a commercial business after excavation and proper off-site disposal of the most heavily contaminated soils has been completed, necessary for safe redevelopment of the site.

The plans for site redevelopment, following the environmental cleanup, will most likely include the demolition of most of the existing site structures, debris removal, re-grading, and then construction of the new site structures and landscaping. However, the City of Wilmington and DNREC have committed that during the remediation of the site, every effort will be made to preserve the historic building which fronts on Miller Road.

What clean-up actions have been taken at the former Harper-Thiel Site?

In order to remove the sources of contamination and mitigate any potential off-site contamination, as well as reduce on-site hazards, a series of interim actions have taken place at the site. In October 2002, in order to prevent potentially-contaminated surface water run-off, surface and subsurface soils were excavated in the vicinity of the old chrome plating tanks at the site. In October 2003, DNREC discovered remaining chemical waste and drums were discovered in several locked buildings and properly disposed of off-site.

What additional clean-up actions are needed at the former Harper-Thiel Site? DNREC's clean-up plans include the excavation and proper off-site disposal of additional surface and subsurface soils contaminated by hexavalent chromium, lead and PCBs (figure 4).

The following areas will require excavation and off-site disposal: (1) Additional areas of hexavalent chromium soils located in the vicinity of the former chromium plating tanks. (2) The soils beneath the wooden floor of the historic building that fronts on Miller Road that have been contaminated with both lead and PCBs. and (3) A vegetated portion of the site that contains surface soils contaminated with PCBs. All excavation of these soils, as well as the structural stabilization of the historic building, will be performed under a DNREC-approved work plan and contaminated materials management plan. During redevelopment of the site, after the excavation and disposal of the most contaminated soils, all construction work that disturbs the soil must comply with the contaminated materials management plan approved by DNREC. Following site construction, an operation and maintenance plan (O&M plan) for the site will be drafted to assure that any protective measures are properly maintained. Additionally, environmental covenants will be placed on the property limiting its reuse to industrial or commercial use only.

What are the long term plans for the Site after the cleanup? The long term plans, or requirements by DNREC for this property will include commercial redevelopment, with the site reuse limited through the use of an environmental covenant to restrict the property to industrial or commercial reuse. Additionally, an O&M plan will be prepared, and submitted to DNREC for approval, in order to maintain the integrity of the remedy at the site and the safety of the future site redevelopment. Current and future owners of the property will be responsible for the implementation of all aspects and costs of the approved remedy, including all requirements of the final plan of remedial action, the DNREC approved contaminated materials management plan and the O&M plan, and the adherence to the requirements and conditions established in the uniform environmental covenants for the site.

DNREC plans to issue a Certificate of Completion of Remedy for the site after the completion of clean-up, the redevelopment of the property, and the implementation of the uniform environmental covenants at the site.

How can I find additional information or comment on the Proposed Plan?

The complete file on the site including the Brownfields Investigation and Interim Action Report are available at the DNREC office, 391 Lukens Drive in New Castle. Most documents are also found on:

<http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/>

The 20-day public comment period begins on July 15, 2007 and ends on August 6, 2007. Please send written comments to the DNREC office or call Kristen Thornton, Project Manager, at:

302-395-2600.

PROPOSED PLAN OF REMEDIAL ACTION

Harper-Thiel Site
Wilmington, DE

DNREC Project No. DE-197



July 11, 2007

Approval:

This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

James D. Werner, Director
Division of Air and Waste Management

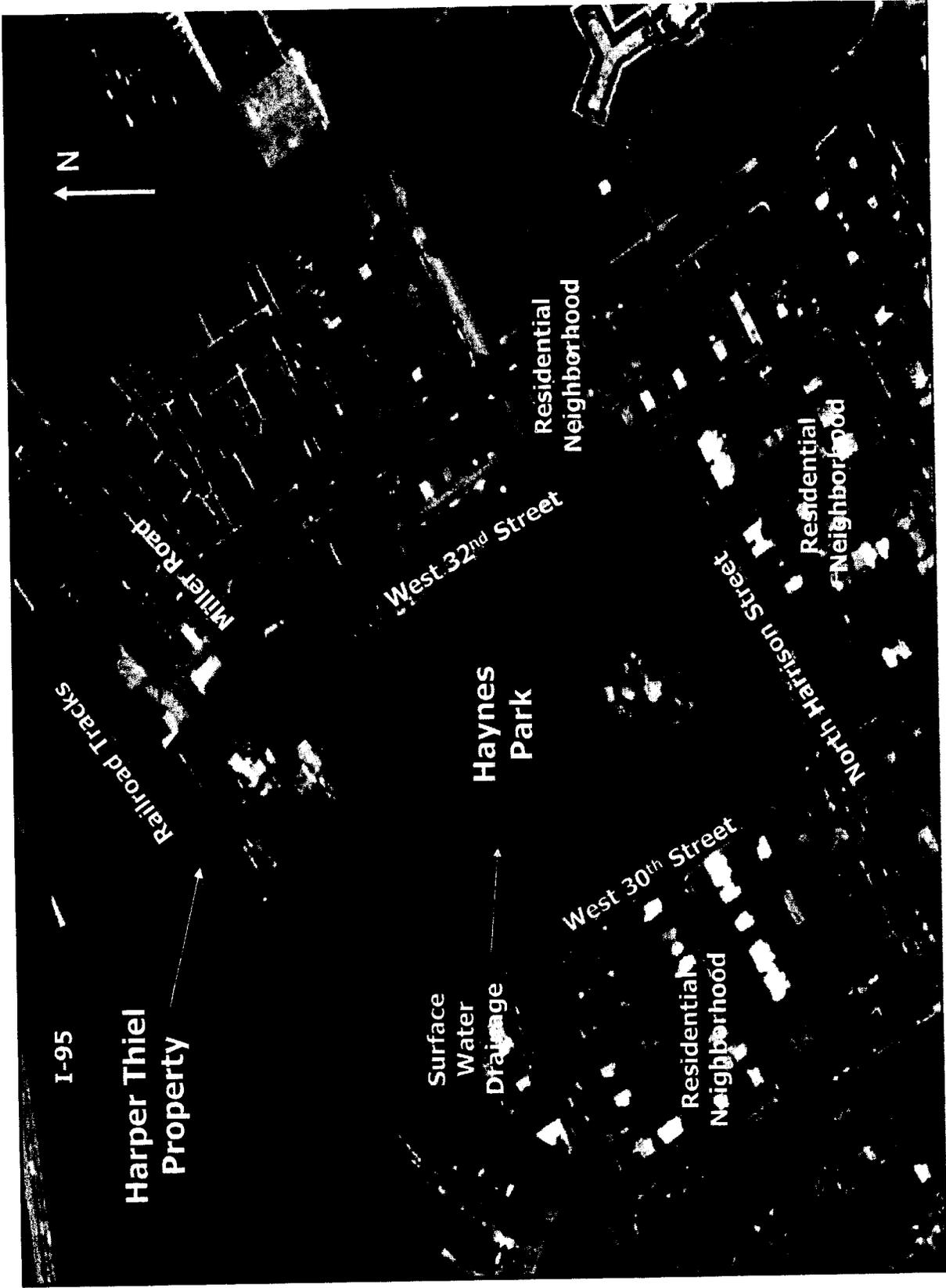


Figure 1

POTENTIAL EXPOSURE PATHWAYS TO VISITORS OF HAYNES PARK

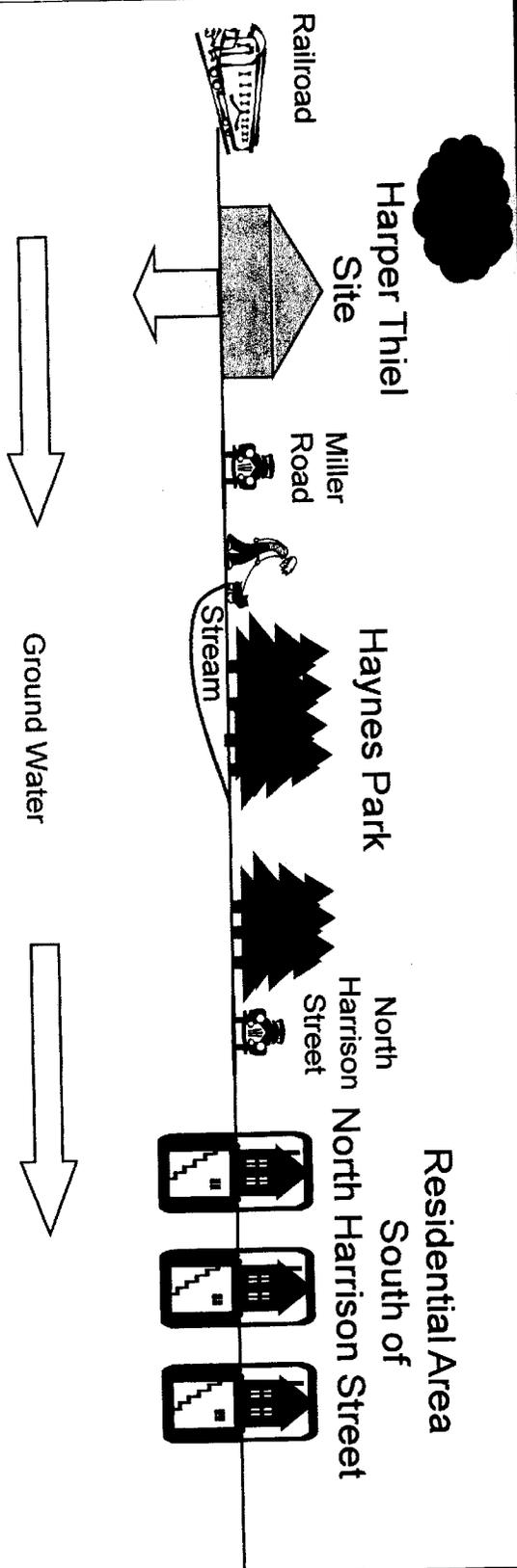


Figure 3

Glossary of Terms

Used in this Proposed Plan

Brownfield	Property that is vacant or underutilized because of the perception or presence of an environmental problem
Brownfield Investigation	An environmental study of a site including sampling of soils, groundwater, surface water, sediment and/or wastes on the property
Certified Brownfield	A brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program
Contamination	The introduction of harmful or hazardous matter into the environment
Certificate of Completion of Remedy (COCR)	A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.
Exposure	Coming into contact with a substance through inhalation, ingestion, or direct contact with the skin; may be acute or chronic
Final Plan of Remedial Action	DNREC's plan for cleaning up a hazardous site after it has been reviewed by the public
Former Harper Thiel Site	The 2.3-acre parcel of land, once operated as an electroplating facility that is the subject of this Plan that will be redeveloped in the future by a Brownfields developer.
Hazardous Substance Cleanup Act (HSCA)	Delaware Code Title 7, Chapter 91. The law that enables DNREC to identify parties responsible for hazardous substances releases and requires cleanup with oversight of the Department.
Interim Action	An Interim Action means the containment, cleanup, or removal of a release or imminent threat of release of hazardous substances from a facility, or the taking of other actions, prior to the selection of a remedial action, as may be necessary to prevent, minimize, or mitigate threat to public health, welfare, or the environment.
Proposed Plan of Remedial Action	A plan for cleaning up a hazardous site submitted by DNREC and subject to public comments
Risk	Likelihood or probability of injury, disease, or death
Site Specific Assessment	Field sampling and evaluation of a site financed by a grant to DNREC from the US EPA
Target Analyte List/Total Compound List (TAL/TCL)	The laboratory analysis of approximately 150 compounds and contaminants, including volatile and semivolatile organic compounds (VOCs and SVOCs), pesticides, polychlorinated biphenyls (PCBs), and heavy metals.

What is a *Proposed Plan*?

A Proposed Plan of Remedial Action (Proposed Plan) is a summary of how DNREC plans to clean up a contaminated site. A Final Plan of Remedial Action (Final Plan) is the adoption of the Proposed Plan, after all comments made by the public within the comment period of twenty days have been considered and addressed by DNREC.

The Delaware State Legislature passed the Hazardous Substance Cleanup Act (HSCA) in 1990. The Legislature made sure that members of the public would be informed about environmental problems in their own neighborhoods and have a chance to express their opinion concerning the clean up of those environmental problems before DNREC takes action.

After DNREC studies a site, it summarizes the problems there and proposes one or more possible solutions in a Proposed Plan. The Proposed Plan contains enough information to allow lay persons to understand the site. More detailed information can be found in the reports and documents approved by DNREC. The Proposed Plan is not intended to be a reiteration of all the investigations and findings that have been gathered at the property. All of the documents and reports created by DNREC or consultants during the course of the investigation of the site are available to the public at the offices of DNREC-SIRB or at DNREC's website:

<http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/sirb/sitefiles.asp> .

DNREC issues the Proposed Plan by advertising it in at least one newspaper in the county where the site is located. The legal notices for the Proposed Plans and the Final Plans usually run on Wednesdays or Sundays in the legal classified section of the *News Journal* and/or the *Delaware State News*. The public comment period begins on the day (Wednesday), or the day after (Sunday) the newspaper publishes the legal notice for the Proposed Plan.

DNREC holds public meetings during the comment period, generally upon request. Those meetings are usually held near the site in the evening. Citizens can request a public meeting if DNREC did not already schedule one.

Comments are collected at the public meetings, by phone or in writing. DNREC considers all comments and questions from the public before the Proposed Plan is finalized and adopted as a Final Plan.

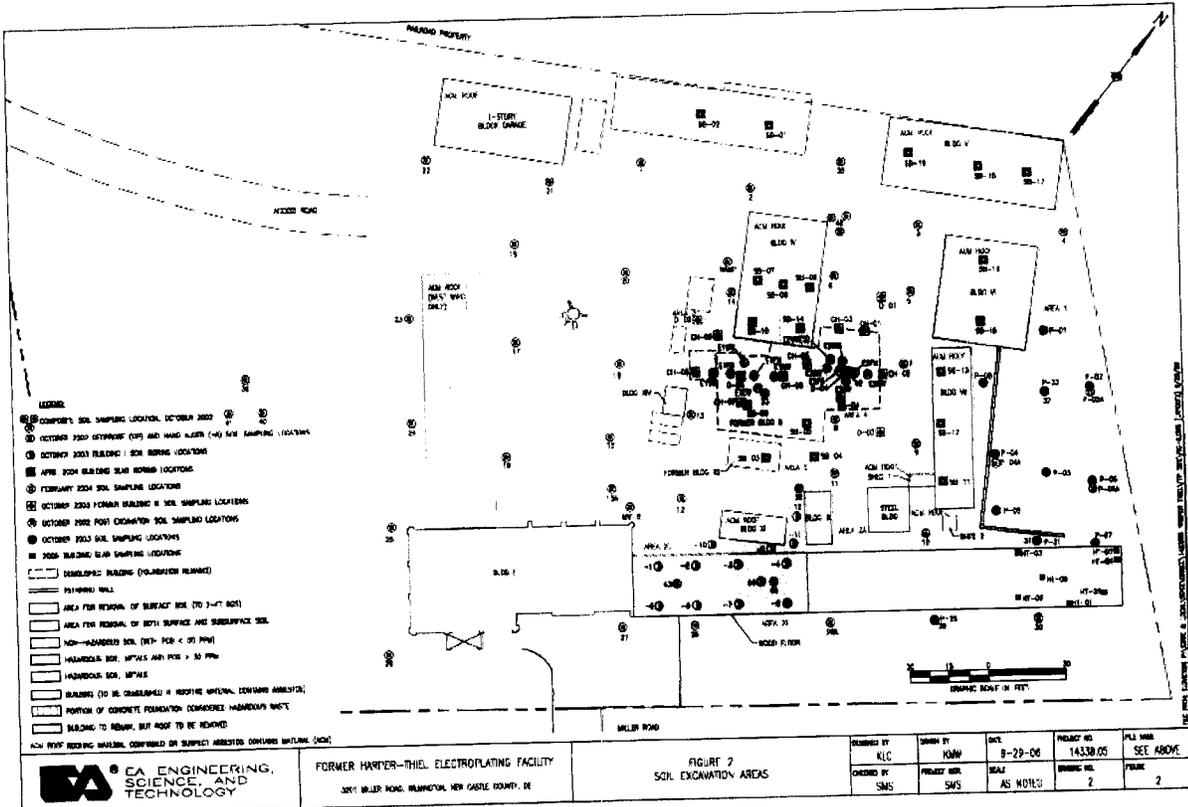


Figure 4

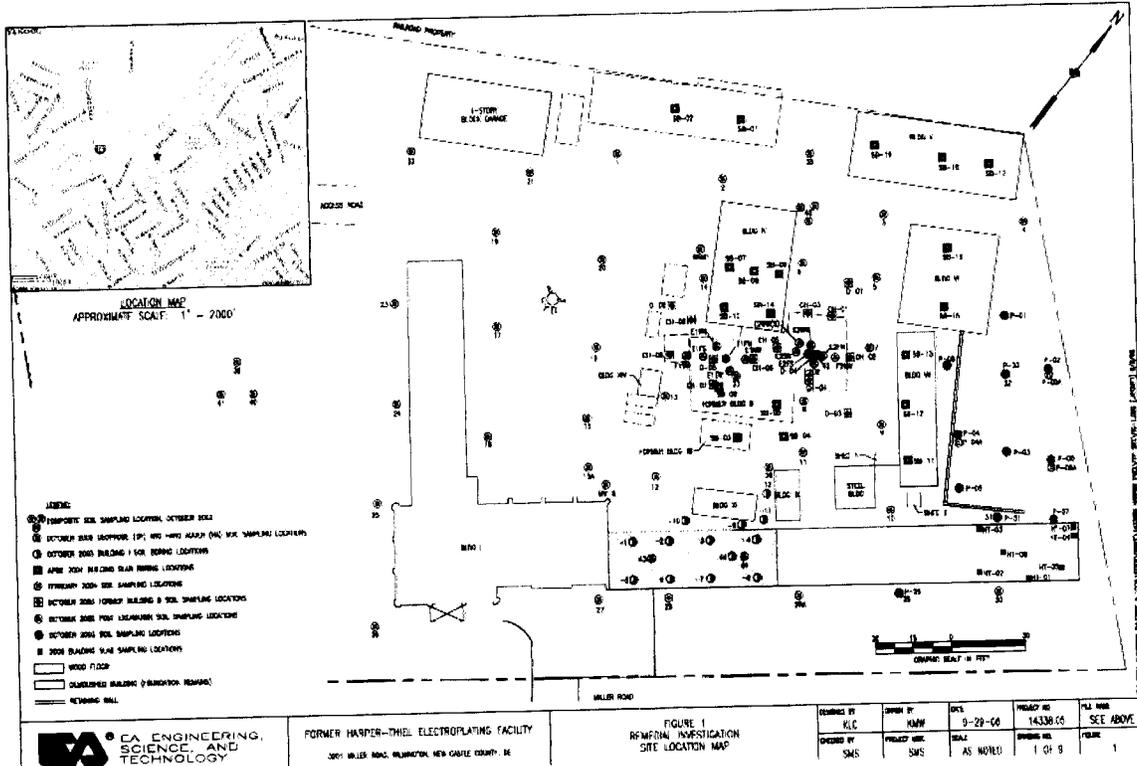


Figure 2