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File# 1431 B7

FINAL PLAN OF REMEDIAL ACTION

ICS PROPERTY SITE
AKA 1020 CHRISTIANA AVENUE SITE

Wilmington, Delaware *DNREC Project No. DE-1431*

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 ICS Property Site, located at 1020 Christiana Avenue Site.

1) Maintain the capped areas and the remaining landscaped/vegetated areas as per a DNREC-approved O&M Plan.
2) Placement of an Environmental Covenant (EC), consistent with the Uniform Environmental Covenants Act (UECA) that will restrict the site for commercial use.
3) If intrusive activities are proposed in the future, the property owner shall implement an environmental oversight program, including a DNREC-approved Contaminated Materials and Water Management Work Plan (CMWMWP), during redevelopment to protect workers and properly dispose of excavated soil.

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for the site on February 22, 2009 and opened a 20-day public comment period, with the comment period closing on March 16, 2009. 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.

Kathleen M Stiller 3/18/09
Kathleen Stiller, Program Manager II
Division of Air and Waste Management

KLT:vdc; KLT09006.doc; DE-1193 II B-9

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File# 1431 B8

PROPOSED PLAN OF REMEDIAL ACTION

ICS Property
1020 Christiana Avenue
Wilmington, Delaware
DNREC Project No. DE-1431

February 2009

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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PROPOSED PLAN OF REMEDIAL ACTION

ICS Property
1020 Christiana Avenue
Wilmington, Delaware
DNREC Project No. DE-1431

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

Approved by:

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

13 Feb 2009
Date

What is the ICS Property Site?

The ICS Property located at 1020 Christiana Avenue in Wilmington, Delaware (Site) is an approximate 13.6-acre site. The site is currently used to warehouse materials such as iron sulfate, sodium nitrate, lithium crystallate, potassium nitrate, and soda ash. Historically, the site has operated as warehouses, a cork distributor, and a bakery. Adjacent properties appeared to have been maintained as industrial properties, including large holding tanks on the southwest abutting property. The Site is depicted on Figures 1 and 2.

Tax Parcel Numbers: 26-066.00-004
Address: 1020 Christiana Avenue, Wilmington, DE
Nearest major intersection: I-495 (at exit 2) and Terminal Avenue
Area: 13.6 acres
Surrounding Property: Surrounding land use is industrial
Zoning: M-2 Heavy Industrial
Site Utilities: The City of Wilmington provides water and sewer service. Delmarva Power provides electric and natural gas service.
Surface water: A drainage ditch runs north to south near the middle of the site. Otherwise, the Lobdell Canal, a small arm of the Christina River, is the nearest surface water body to the site and is located approximately 500 feet north/northeast from the site. The Christina River itself is located approximately 2,000 feet northeast from the site.
Topography: The Site surface is relatively flat, is mostly paved or covered with buildings, and is approximately 10 feet above sea-level.
Groundwater: Groundwater was encountered at depths ranging from approximately 5.5 to 7.7 feet below ground surface. No sheen was observed on the groundwater. Based on groundwater elevation measurements, groundwater beneath the site flows east/northeast toward the Delaware and Christina Rivers.

What happened at the ICS Property?

The Site historically operated as warehouses, a cork distributor, and a bakery. The property is located in the Port of Wilmington, Lobdell Canal area which is known to be environmentally impacted from the nature of the material historically used to fill in the Port. Numerous facilities in this area are DNREC Brownfields and/or Voluntary Cleanup sites. The Site was filled during the same time frame as similar properties in the area and was used for the bulk storage of lithium crystallate, sodium nitrate, potassium nitrate, iron sulfate, and soda ash. A Phase II Site Investigation (Phase II) and a Brownfield Investigation (BI) of the property revealed levels of

arsenic in soils covered by pavement and buildings on the site above the Delaware background of 11 parts per million.

What is the environmental problem at the ICS Property?

The contaminant of concern at the Site in the soil is arsenic for restricted use (commercial). The contaminants for concern in the groundwater are manganese and lead (lead was identified as a contaminant for concern in groundwater in the vicinity of MW04 only).

The Phase II and the BI were completed in November 2007 and November 2008, respectively, to evaluate the soil and groundwater conditions on the site. During the investigations a total of 23 soil borings were advanced, 46 soil samples were collected, and 3 monitoring wells were installed and sampled. 23 of the 46 soil samples were selected to be analyzed at TestAmerica Laboratory in Edison, New Jersey.

Arsenic was detected in site soil in excess of the default Delaware background concentration of 11 mg/kg. Manganese was detected in groundwater samples collected under the property above the DNREC standard. Lead was detected in one groundwater sample above the DNREC standard.

A human health risk assessment showed that exposure to site surface soil may pose an unacceptable carcinogenic risk under a restricted use (commercial) scenario for outdoor workers. Surface and subsurface soil analytical data was used to evaluate the risk to future construction workers performing intrusive activities at the ICS Site under current site conditions. Neither the cumulative carcinogenic nor the cumulative non-carcinogenic risk for the site exceeded DNREC guidelines.

The risk assessment showed that routinely ingesting shallow groundwater at the Site does not pose an unacceptable carcinogenic risk in an industrial setting, but does pose an unacceptable non-carcinogenic risk in an industrial setting. Groundwater at the site is not used for drinking water, and the site is located within the City of Wilmington Groundwater Management Zone (GMZ) where the use of groundwater is controlled by DNREC. There is no evidence that the presence of these metals in the groundwater is attributable to site activities.

What clean-up actions have been taken at the ICS Site?

No clean-up work has been performed at the Site.

What clean-up actions are needed at the ICS Property?

The Site is currently capped by concrete, asphalt, and/or buildings which cover the vast majority of the site. DNREC's Proposed Plan includes maintaining the capped areas and the remaining landscaped/vegetated areas as will be outlined in a DNREC-approved Operations and Maintenance (O&M) Plan, the placement of an environmental covenant restricting the site to commercial use only, and the prevention of future groundwater use through the City of Wilmington's GMZ. In addition, the property owner will be required to notify DNREC prior to

excavation or moving of site soil. If redevelopment is proposed, a Contaminated Materials and Water Management Work Plan (CMWMWP), describing the approach for containing impacted areas of the site, will be prepared and submitted to DNREC-SIRB for approval.

Based on the aforementioned, DNREC recommends the following remedial actions take place:

1) Maintain the capped areas and the remaining landscaped/vegetated areas as per a DNREC-approved O&M Plan.
2) Placement of an Environmental Covenant (EC), consistent with the Uniform Environmental Covenants Act (UECA) that will restrict the site for commercial use.
3) If intrusive activities are proposed in the future, the property owner shall implement an environmental oversight program, including a DNREC-approved Contaminated Materials and Water Management Work Plan (CMWMWP), during redevelopment to protect workers and properly dispose of excavated soil.

What are the long term plans for the ICS Property after the cleanup?

Port Properties plans to continue use of the Site as a major Port of Wilmington commercial terminal.

DNREC plans to issue a Certificate of Completion of Remedy for the site after the completion of the proposed remedial actions at the site.

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

The complete file on the site, including the Brownfield Remedial Investigation, is 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 February 22, 2009 and ends at close of business (4:30 pm) on March 16, 2009. Please send written comments to the DNREC office or call Kristen Thornton, Project Manager, at: 302-395-2600.

KLT:tlw; KLT09003.doc; DE 1431 II B 8

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.
Contaminant of Concern (COC)	These are potentially harmful substances at concentrations above acceptable levels (eg metals and PAH).
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.
Final Plan of Remedial Action	DNREC's proposal for cleaning up a hazardous site after it has been reviewed by the public and finalized.
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.
Human Health Risk Assessment (HHRA)	An assessment done to characterize the potential human health risk associated with exposure* to site related chemicals.
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 (SSA) and Site Inspection (SI)	Environmental studies of a site including sampling of soils, groundwater, surface water, sediment and/or wastes on the property.

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. 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 frequently holds public meetings during the comment period. 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.

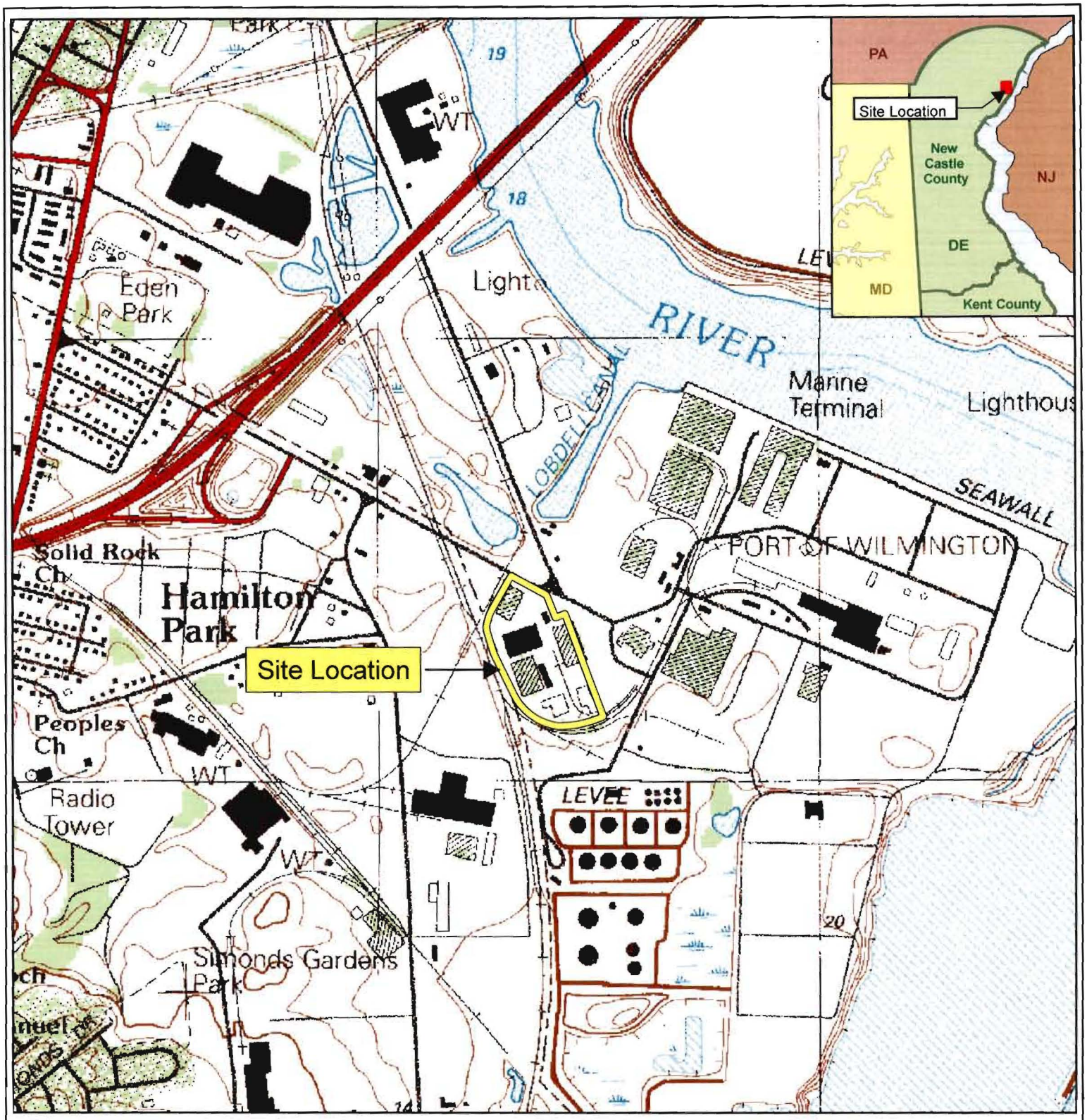


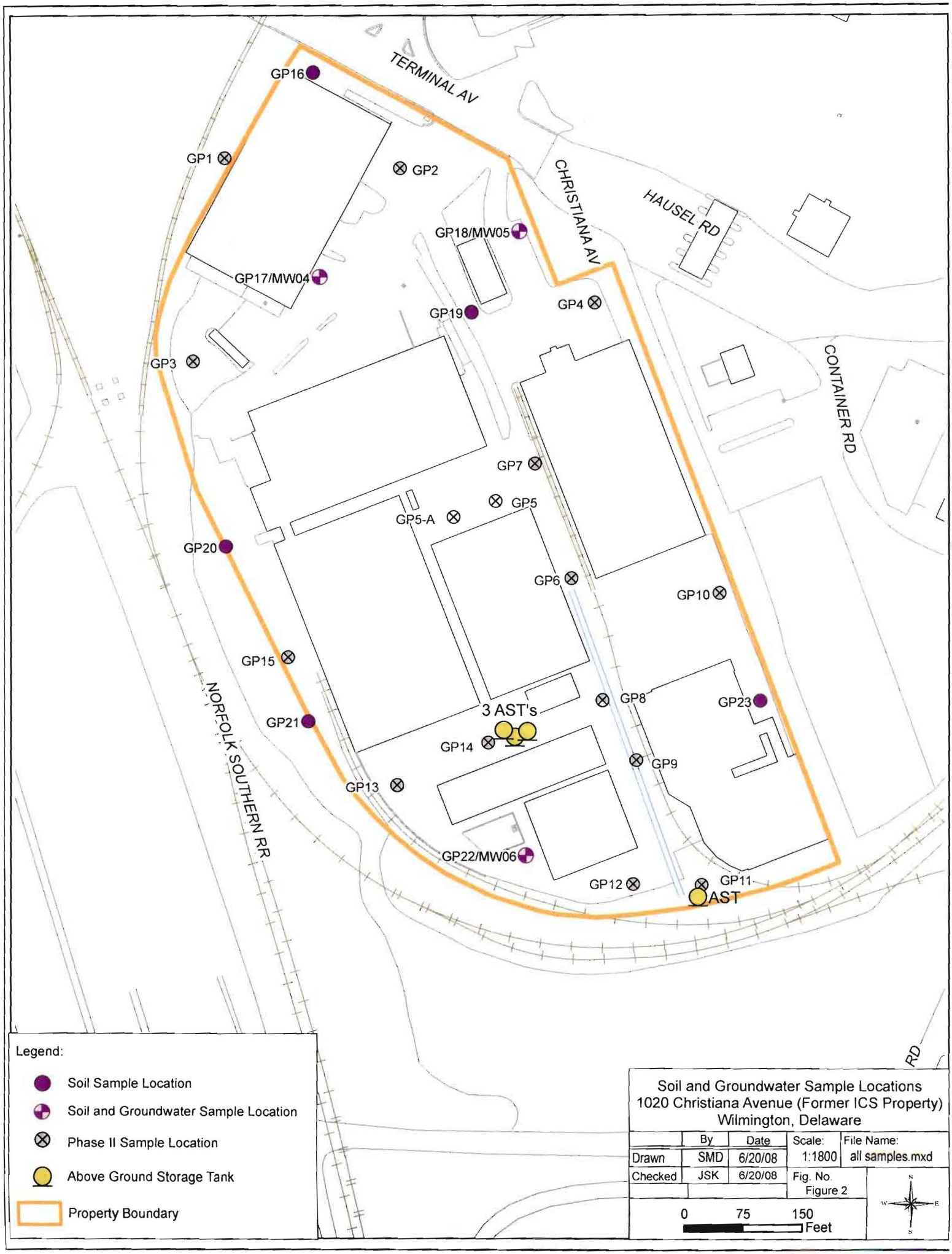
FIGURE 1
Topographic Map
USGS Topographic Quadrangle, Wilmington South, DE, 1993

1020 Christiana Avenue (Former ICS Property)

Wilmington, Delaware

N
W E
S

1,000 500 0 1,000 Feet


TERMINAL AV
CHRISTIANA AV
HAUSEL RD
CONTAINER RD
NORFOLK SOUTHERN RR
RD
GP16
GP1
GP2
GP18/MW05
GP17/MW04
GP19
GP4
GP3
GP7
GP5
GP5-A
GP20
GP6
GP10
GP15
GP8
GP23
3 AST's
GP21
GP14
GP9
GP13
GP22/MW06
GP12
GP11
AST
Legend:
Soil Sample Location
Soil and Groundwater Sample Location
Phase II Sample Location
Above Ground Storage Tank
Property Boundary
Soil and Groundwater Sample Locations
1020 Christiana Avenue (Former ICS Property)
Wilmington, Delaware
By
Date
Scale:
File Name:
Drawn
SMD
6/20/08
1:1800
all samples.mxd
Checked
JSK
6/20/08
Fig. No.
Figure 2
0
75
150
Feet
N
W
E
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PHOTOGRAPH 1

Exterior of Building #1 used as office space.

PHOTOGRAPH 2

Geoprobe rig and operator drilling GP19

PHOTOGRAPH 3

On-site stormwater drain (discharges to the Port of Wilmington)

PHOTOGRAPH 4

Iron Sulfate storage in Building #27 used by Siemens Water Technology.

PHOTOGRAPH 5

BrightFields soil sampling at GP22/MW06

PHOTOGRAPH 6

Packing machinery in Building #45.