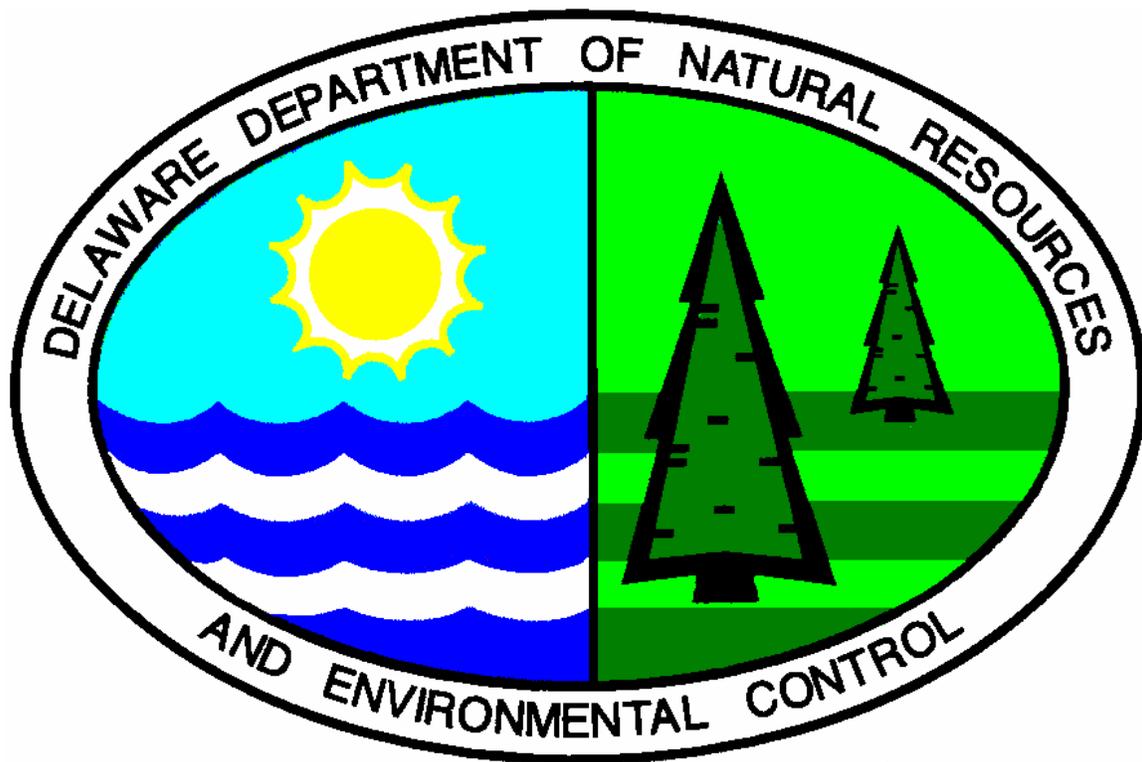


**FINAL PLAN OF REMEDIAL ACTION**  
**FORMER DELAWARE OLDSMOBILE SITE**  
**Wilmington, Delaware**

**DE 1289**



**August 2003**

**Department of Natural Resources and Environmental Control**  
**Division of Air and Waste Management**  
**Site Investigation and Restoration Branch**

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## **1.0 Introduction**

The Former Delaware Oldsmobile (site) is located at 4001 Governor Printz Boulevard between 35<sup>th</sup> Street and East Lea Boulevard in Wilmington, New Castle County, Delaware (Figure 1). In order to evaluate the environmental conditions prior to the development of the site, Banc One Building Corporation (BOBC) entered into the Department of Natural Resources and Environmental Control's (DNREC's or Department's) Voluntary Cleanup Program (VCP) under the provisions of the Delaware Hazardous Substance Cleanup Act (HSCA), 7 Del. C. Chapter 91. Through the above-referenced VCP Agreement, BOBC agreed to investigate the potential risks posed to public health, welfare and the environment at the site. BOBC contracted with Duffield Associates, Inc. (Duffield) and Groundwater and Environmental Services, Inc. (GES) to perform a remedial investigation/feasibility study (RI/FS) of the site pursuant to HSCA.

The purpose of the remedial investigation was to: 1) understand the nature and extent of any soil and/or groundwater contamination at the site, and 2) evaluate risks to public health, welfare and the environment associated with any identified contamination. In addition, BOBC agreed to perform, if necessary, a feasibility study that would identify and recommend a remedial action, if required by the Department. BOBC desires to obtain a Certification of Completion of Remedy from DNREC upon completion of any required remedial action.

The Department issued the proposed plan of remedial action (proposed plan) which contained the Department's chosen remedial action alternative for the site on July 18, 2003, with the public notice of the proposed plan starting on July 21, 2003, and ended at close of business (4:30p.m.) on August 11, 2003. No comments were received by the Department during the public comment period.

This document is the Department's final plan of remedial action (final plan) which contains the Department's chosen remedial alternative for the site.

## **2.0 Organization and Contents of the Final Plan**

DNREC-SIRB issues this final plan under the provisions of HSCA and the Regulations Governing Hazardous Substance Cleanup (Regulations). The final plan presents DNREC-SIRB's assessment of the health and environmental risks posed by the site and plans for limited further action.

In accordance with HSCA, DNREC-SIRB provided notice to the public and an opportunity for the public to comment on the proposed plan. At the comment period's conclusion, DNREC-SIRB did not receive any comments to the proposed plan. Therefore, DNREC-SIRB issues this final plan of remedial action. The final plan designates the selected remedy for the site. All prior investigations of the site, the proposed plan, the comments received from the public, DNREC-SIRB's responses to those comments, and the final plan constitute the remedial decision record.

The final plan contains a description of the following site information:

- A summary of the procedures, analytical results, and conclusions of the remedial investigation,
- A discussion of objectives,

- A summary of the risk assessment results, and
- A final plan for the site's future.

### **3.0 Site Description**

The site is located at 4001 Governor Printz Boulevard, between 35<sup>th</sup> Street and East Lea Boulevard in a medium-density, commercial area of the City of Wilmington, New Castle County, Delaware. The site consists of approximately 16.91 acres in one (1) tax assessment parcel (New Castle County Tax Parcel ID number 0614900002).

The site is located in the Piedmont Physiographic Province, approximately one-half mile north of the Fall Line that separates the Upland Piedmont Region from the Atlantic Coastal Plain. The site is characterized by the rolling hills of the Piedmont with exposed crystalline bedrock with a thick weathered mantle. Fracture orientation and frequency control groundwater flow in this area. Well yields are generally low, with the average residential well yielding about one gallon per minute in this formation. Depth to groundwater ranges from four to sixteen feet below top of ground with groundwater elevations descending from a high at the northwest portion to the southeast portion of the site. However, public water and sewer serves both the surrounding buildings and the site.

Site surface elevations range from approximately 60 feet above Mean Sea Level (MSL) in northern section of the site to approximately 25 feet MSL along the most eastern section of the site.

Soil survey information for New Castle County, Delaware describes the on-site soils as well-drained soils of the Neshaminy-Talleyville-Urban land complex with approximately 16 to 25 feet thickness above weathered bedrock.

Surface drainage from the site flows in an easterly to northeasterly direction toward Shellpot Creek, however, some surface water is diverted to the City of Wilmington storm water collection system prior to reaching Shellpot Creek.

There are no mapped tidal or non-tidal wetland areas present on the site. There are no wetland plants or hydrology present on the site. Based on the review of the applicable FEMA Flood Insurance Rate Map, the site is located in an area that is outside of the 100-year floodplain, with the 100-year flood plain identified as touching upon the southeastern corner of the site in the vicinity of Shellpot Creek.

The site does not lie within a water resource protection area as depicted on the map entitled "Water Resources Protection Areas for the City of Newark, City of Wilmington, New Castle County, Delaware" dated 2001. In addition, the site does not lie within a critical natural resource area.

### **4.0 Site History**

The site was previously used as an automobile dealership and contained a series of commercial buildings (offices, showrooms, vehicle storage, maintenance areas, and parts storage) and a number of aboveground and underground storage tanks, with parking lots surrounding the original buildings. These structures have been in place and utilized from 1948 until Delaware Oldsmobile sold the property in 1999. Delaware Collision Center (a former site tenant) utilized

portions of the site under lease from the City of Wilmington (a former site owner) until 2003. The current owner of the site is BOBC.

The historical review indicates that the southern portion of the site appears to have been developed since 1948. Regarding the northern portion of the site, the historical review indicates that no development was located on this portion. The chain of title indicates that the site was once owned by a railroad company; however, there were no indications that railroad tracks were located on the site.

The site was previously utilized as a sales, maintenance and repair facility for automobiles from 1949 until 1998. The northern portion and extreme southern portions of the site consisted of woods and undeveloped areas. The remainder of the site was paved asphalt and gravel parking lots with three buildings as indicated below:

- Former Main Showroom Building – comprised of offices, a car showroom, and a vehicle storage and maintenance area. The building was reported vacated by Delaware Oldsmobile in 1998.
- Former Body/Paint Shop Building – comprised of offices, four vehicle storage bays, and a paint area, formerly used by Delaware Oldsmobile until 1998 and then used by Delaware Collision Center for repairing and painting damaged cars until March 2003. This building actually consisted of two smaller buildings, which included a paint shop and body shop.
- Former Parts Garage – comprised of one room for parts storage, formerly used by Delaware Oldsmobile until 1998 and then used by Delaware Collision Center for parts storage from 1998 until March 2003.

Demolition and proper off-site disposal of all buildings commenced on April 23, 2003, and was completed on May 15, 2003. No pre-existing original structures remained on the site after May 15, 2003.

The original buildings had been constructed with asbestos containing materials. All asbestos containing materials were abated properly from the buildings prior to demolition. The asbestos abatements were performed by a Delaware certified asbestos abatement contractor, under the review of a Delaware certified asbestos consultant. DNREC, Division of Air and Waste Management, Air Quality Management Section, was properly notified of all the abatements.

Six underground storage tanks (USTs) were identified on site. Of the six USTs, four were previously removed, leaving two previously abandoned USTs for removal and proper disposal. These two USTs were emptied and cleaned properly by Active Environmental Technologies, Inc. (Active), a Delaware certified tank removal contractor. All impacted soils from the UST areas were removed and disposed of properly off-site at the Soil Safe facility in Salem, New Jersey. The USTs were handled properly by Service Disposal and disposed of as scrap metal. The DNREC, Division of Air and Waste Management, Tank Management Branch, was notified of all tank removal actions.

Six above ground storage tanks (ASTs) were identified on-site in the former UST area. These six ASTs were emptied and cleaned properly by Active. The petroleum-impacted soils in the former AST and UST areas were disposed of properly off-site at the Soil Safe facility in Salem, New Jersey. The ASTs were handled properly by Service Disposal and disposed of as scrap

metal. The DNREC Division of Air and Waste Management, Tank Management Branch, was notified of all tank removal actions.

The site is currently owned and under construction by the BOBC, and is slated for redevelopment as an office type structure for a core data center for use by the Bank One Corporation, as detailed in New Castle County Application No. 2003-0005(S), as shown on the Record Major Land Development Plan for Bank One Core Data Center #2, dated March 10, 2003, last revised June 3, 2003, and recorded at the New Castle County Recorder of Deeds Office at Instrument No. 200306260076765 and zoned Commercial Regional. The BOBC entered into a voluntary agreement with DNREC-SIRB to conduct an investigation, feasibility study, and cleanup of the site as part of the overall construction of the Site's core data center.

## **5.0 Remedial Investigation Procedures**

DNREC-SIRB conducted an extensive review of past investigations that have been conducted at the site. After review of the past investigations and other work, DNREC-SIRB worked with Duffield Associates, Inc. (Duffield) and Groundwater and Environmental Services, Inc. (GES), the consultants for Banc One Building Corporation, to develop a Work Plan to address the following:

- Determine the presence or absence of contaminants in the site soils and fill materials, and if present, determine the contaminant fate and transport, and
- Determine the presence or absence of sources of contamination in the underlying soils and structures, and if present, to remove the sources.

The Work Plan called for Duffield and GES to conduct the following tasks:

- Collect additional samples and confirmatory samples;
- Analyze the site soils and fill materials;
- Develop a profile of the volume of material impacted;
- A risk assessment, if necessary, for both human health and/or ecological concerns, and
- A feasibility study, if the site poses an unacceptable risk to human health or the environment, to identify appropriated remedial alternatives to correct these risks.

## **6.0 Remedial Investigation Results**

DNREC-SIRB considers the data and information generated in the previous investigations of the Site to meet the criteria of a RI/FS. The following is a brief summary of the results of the investigations for the site.

### **6.1 Site Soils**

Subsurface evaluation of the site's soil revealed buried debris, fill, releases of petroleum hydrocarbons into subsurface native soils from ASTs and USTs, as well as elevated concentrations of a metal, arsenic, which was above the DNREC URS value and the background concentration. Petroleum hydrocarbons were detected in soils along, and under the

foundations of original structures as well as in the AST and UST areas located at the site. All arsenic impacted soils that were above the background concentration were addressed through excavation and proper off-site disposal during the Interim Response Action. All site soils of concern were addressed during the Interim Response Action.

## **6.2 Site Groundwater**

A groundwater investigation of the site indicated petroleum related constituents that appeared to be following the migrational path along the utility lines from beneath the building foundations in a down gradient direction. The concentrations of petroleum related constituents are indicative of a trailing edge of a migrating plume. Conclusions regarding additional compounds (including but not limited to organic compounds, chloroform, DEHP and metals, including but not limited to aluminum, antimony, arsenic, barium, iron, manganese, sodium) detected on site, above DNREC Uniform Risk-Based Standards (URS) appear to be indicative of releases from the City of Wilmington Reservoir located off-site in the up gradient direction. The dissolved metal concentrations may be indicative of highly-absorbed metal concentrations, which may be naturally occurring or migrating from an off-site source.

Streams in the area receive groundwater. Stream sampling results did not exceed the surface water quality standards.

Monitoring wells located within the footprint of the building demolition were abandoned properly prior to the demolition of all original buildings on the site. The site, and all buildings and structures surrounding the site are currently connected to public water and wastewater systems.

## **6.3 Summary**

The results of the study for surface and subsurface soils indicated that the site contained elevated metals and petroleum related contaminant concentrations in the soils which exceeded the SIRB URS values for unrestricted use in a non-critical water resource area. Petroleum related compounds were present in the soils beneath the eastern portion of the site which also exceeded the URS values for unrestricted use prior to the implementation of the Interim Response Actions.

The results of the study for groundwater indicated that the site contains elevated concentrations of metals and petroleum related constituents in groundwater, which exceeded the DNREC SIRB URS groundwater values.

## **7.0 Interim Response Action**

BOBC agreed to excavate and properly dispose off-site any contamination found during the investigation that was above background concentrations or the unrestricted use URS values as an interim response action for the site.

The following remedial Interim Response Actions were performed at the site:

- **ASTs, USTs and Impacted Soils in the Vicinity of the AST and USTs:** The ASTs, USTs and impacted soils were removed and disposed of properly off-site as per the approved Site-Specific Interim Response Action Plan (as amended) and the applicable regulations.
- **Asbestos:** The asbestos containing materials were removed and disposed of properly off-site as per the applicable regulations.
- **Regulated Substances (freon, polychlorinated bi-phenyls, mercury, halon, lead acid batteries, and tires):** The regulated substances were removed and disposed of properly off-site as per the approved Site-Specific Interim Response Action Plan (as amended) and the applicable regulations.
- **Liquid Phase Hydrocarbon (LPH) Recovery from MW-14** -- During the Remedial Investigation activities on February 21, 2003, approximately 0.01' of LPH was detected in MW-14. LPH and impacted water was periodically bailed from MW-14 over the course of several weeks; all recovered LPH and impacted water was properly managed and disposed of off-site. Bank One has continued to monitor MW-14 for measurable LPH; however, LPH has not been detected in MW-14 since March 4, 2003.
- **Hydraulic Lift Tanks and Impacted Soils:** The hydraulic lift tanks and impacted soils were removed and disposed of properly off-site as per the approved Site-Specific Interim Response Action Plan (as amended) and the applicable regulations.
- **Floor Drains and Impacted Soils:** The floor drains and impacted soils were removed and disposed of properly off-site as per the approved Site-Specific Interim Response Action Plan (as amended) and the applicable regulations.
- **Concrete Sump and Oil Water Separator and Impacted Soils:** The concrete sump and oil water separator and impacted soils were removed and disposed of properly off-site as per the approved Site Specific Interim Response Action Plan (as amended) and the applicable regulations.
- **Concrete Block with Lead-Based Paint:** The concrete block with lead-based paint was analyzed for TCLP and was deemed acceptable for recycling and was taken to a concrete recycling facility for final disposal as per the applicable regulations.
- **Removal of Regulated Arsenic Impacted Soils:** Soils that exceeded the arsenic background standard for soils were removed and disposed of properly as per the applicable regulations.

After completion of all removal and proper disposal actions for regulated materials and impacted soil as outlined in the Interim Response Actions described above, a soil sampling confirmation

grid was prepared using “Visual Sampling Plan Software, Version 2.0” developed by the United States Department of Energy. High-density grids were utilized at the former building locations, which were the original areas of concern. Lower density grids were utilized in areas outside of the original areas of concern. Over a hundred confirmatory samples were collected for laboratory analysis for site-specific chemicals of concern. These soil samples confirmed that the Interim Response Actions completed above resulted in the site meeting the unrestricted non-critical water resource area URS value for soil for all contaminants of concern at the site.

As a precautionary measure regarding groundwater, Banc One Building Corporation has included a design specification for the placement of a ten (10)-millimeter vapor barrier liner to be placed beneath the proposed building slab at the site. However, based on the preliminary calculations for groundwater vapor to indoor air exposure pathway, it does not appear that the vapor barrier is needed for the protection of human health welfare and the environment.

## **8.0 Remedial Action Objectives**

The Regulations provide that DNREC-SIRB sets objectives for land use, resource use, and cleanup levels that are protective of human health and the environment. The following qualitative objectives are determined to be appropriate for the site:

- Allow unrestricted exposure to site soils,
- Restrict use of site groundwater for all potable uses,
- Continue the use of public water for all potable uses at the site and the surrounding community, and
- Continue the use of public sewer service to the site and the surrounding community.

The quantitative objectives for the site are the respective unrestricted use URS for a non-critical water resource area.

These objectives are consistent with the planned development of the site and the surrounding land and development plans for New Castle County, zoning policies, state regulations governing water supply, and worker health and safety.

## **9.0 Risk Evaluation Summary**

A risk assessment to evaluate the possible effects on human health from the use of the site consistent with the objectives discussed above was performed using the DNREC-SIRB Background Standards for metals and the non-critical water resource area, unrestricted use URS Tables.

The risk assessment evaluated whether there was a possible health risk and/or environmental impacts from the release of hazardous substances at the site. Given that the Interim Response Actions removed all soil contamination and other potential impacts (such as asbestos, etc.), there is not a completed pathway for soil exposure for any potential ecological or human receptor in the area.

The risk assessment evaluated whether there was an imminent threat to risk to human health welfare and the environment from groundwater from releases from the site. Given that all the

residents in the immediate area are connected to municipal water supply, no imminent threat was identified. However, DNREC-SIRB and BOBC will continue to monitor to confirm this evaluation.

Streams in the area receive groundwater. Stream sampling results did not exceed surface water quality standards; however, site topography has changed; therefore, BOBC will continue to monitor the surface water to confirm that surface water remains within applicable water quality standards.

## **10.0 Final Plan of Remedial Action**

Based on the results of the RI/FS and the Interim Response Action at the site, the remedy for soils, consisting of removal of soils impacted above the applicable URS values for unrestricted non-critical water resource area use, has been completed. The Interim Response Action for soil has been accepted as the final remedy required for the soil interval at the site. DNREC-SIRB concludes that the risks at the site from soil contamination are acceptable for an unrestricted use non-critical water resource area. Therefore, the remedy for the site soils is no further action.

Based on the results of the RI and the Interim Response Action at the site, DNREC-SIRB proposes the following remedy for the site groundwater:

- The groundwater for the site will be restricted to prohibit potable use with a Groundwater Management Zone (GMZ) to be put in place by DNREC;
- The groundwater will be restricted by the owner by the placement of a deed restriction noting that the site is located within a GMZ to prevent future use of the groundwater beneath the site without prior approval of DNREC, with DNREC's approval groundwater may be used for certain non-potable uses, such as fire protection, life safety, HVAC systems, cooling towers, and other similar uses;
- Development of a DNREC-SIRB approved Groundwater Quality Management Plan for the site, within 180 days, which will include provisions for continued groundwater monitoring and evaluation. Depending on the results of the groundwater monitoring and evaluation, additional groundwater treatment may be required; and
- The development and implementation of an Operations and Maintenance (O&M) Plan for the groundwater remedy, as needed.

## **11.0 Public Participation**

DNREC-SIRB actively solicited public comments or suggestions on the proposed plan. No comments were received by the Department. The public comment period for this proposed plan began on July 21, 2003, and ended at the close of business (4:30 p.m.) on August 11, 2003. The administrative record for the site can be viewed at the Department's office at: DNREC-SIRB, 391 Lukens Drive, New Castle, Delaware 19720.

## 12.0 Declaration

This final plan of remedial action for the Former Delaware Oldsmobile site is protective of human health, welfare and the environment and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.

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John Blevins, Director  
Division of Air and Waste Management

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Date of Final Plan

## Figure 1 - Site Location