FINAL PLAN OF REMEDIAL ACTION

Eagle Run

600 Eagle Run Road
Newark, Delaware

September 22, 2010
DNREC Project No. DE-1039

This Final Plan of Remedial Action (Final Plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) requirements to address environmental contamination at the Eagle Run site (Site).

DNREC issued public notice of the Proposed Plan of Remedial Action (Proposed Plan) for the Site on August 18, 2010 and opened a 20-day public comment period. The Proposed Plan is attached. There were no comments or questions from the public. Therefore, the Proposed Plan is adopted as the Final Plan.

Final Plan will consist of the following requirements:

- Biological treatment of the soil and groundwater to breakdown the contamination with the goal of making the site suitable for residential use.
- The soil will be sampled and the groundwater will be monitored to determine the effectiveness of the treatment of the soil and groundwater.

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

9/23/10
Kathleen Stiller, Program Manager II
Site Investigation and Restoration Branch

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PROPOSED PLAN OF REMEDIAL ACTION

Eagle Run
600 Eagle Run Road
Newark, Delaware
DNREC Project No. DE-1039

August 2010

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

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PROPOSED PLAN OF REMEDIAL ACTION

Eagle Run
600 Eagle Run Road
Newark, Delaware
DNREC Project No. DE-1039

Approval:

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

Approved by:

Marjorie A. Crofts, Director
Division of Waste Management

8.11.10
Date

Eagle Run Site

What is the Eagle Run Site?

The Eagle Run site is located in Newark, Delaware and consists of one (1) tax parcel (Figure 1). The Site includes a warehouse/office facility and is currently known as the Sears Appliance Outlet. The area of contamination is located outside the northeast corner of the warehouse/office building (Figure 2). Paved parking lots are located to the northeast and southwest of the building.

The Site is bordered on the west-northwest by Interstate Route 95 and on the northeast and southwest by two unnamed streams that flow to the southeast and discharge into the Christina River. The site is bordered on the east-southeast by Delmarva Power and Light Offices and service facility.

Tax Parcel Numbers: 0903000001
Address: 600 Eagle Run Road in Newark, Delaware.
Nearest major intersection: Eagle Run Road and Route 273
Area: ± 45.63 acres
Surrounding Property: Surrounding land use is commercial
Zoning: Commercial Regional
Site Utilities: Water, sewage, gas, electric utilities
Surface water: Unnamed feeder stream for the Christina River is located onsite approximately 800 feet from the known area of contamination.
Topography: generally flat with elevations ranging from 75 to 65 feet (NAVD88).
Groundwater: There are two groundwater zones. Shallow Zone (Columbia Aquifer) is shallow and ranged from approximately 4 to 10 feet below ground surface (bgs). Groundwater elevations indicate that groundwater flow is to the southwest. Deep Zone (Potomac Aquifer) groundwater ranged from approximately 25 to 27 feet bgs with flow to the southeast.

What happened at the Eagle Run Site?

The Site was originally developed by the Ronson Company in 1962 for the manufacture of small appliances. Operations at the Site included metalworking, degreasing, painting and coating. DuPont purchased the Site in 1978 to produce medical diagnostic equipment. Operations included instrument assembly, and limited painting. DuPont ceased all operations in 1992 and sold the Site to Sears Roebuck and Company (Sears) in October 1995. Sears currently operates the facility as a regional garment distribution center and local outlet center for furniture and appliances.

Prior to sale of the Site in 1995, a Phase I and II Environmental Site Assessment of the property was conducted. The investigations indicated that chlorinated solvents from the former solvent above ground storage tank (AST), located outside the northeast corner of the building, had impacted the soil and groundwater.

What were the environmental problems at the Eagle Run Site?

The soils in the area of the former AST were above the DNREC residential standards for 1,2-Dichloroethene, 1,1,1-Trichloroethane, 1,1-Dichloroethene, and methylene chloride.

The site has two groundwater zones- Columbia (Shallow) and Potomac (Deep Zone) Aquifers. These aquifers are separated by a 10-20 foot thick clay layer at the site. Groundwater in the Columbia aquifer has been impacted by 1,1,1-tricloroethane, 1,1-dichloroethene, methylene chloride, trichloroethene (TCE), and tetrachloroethene (PCE). The Potomac aquifer has been impacted by 1,1-dichloroethene (DCE), 1,2-DCE, methylene chloride, and TCE at one well, likely as a result of cross-contamination during the drilling of this monitoring well.

In 1997, DuPont Environmental Remediation Services completed a Remedial Investigation Report that included sampling of the soil and groundwater at the property. The Remedial Investigation (RI) identified that the former AST storage area had impacted an estimated volume of 40 feet by 80 feet by 14 feet deep. The maximum TCE concentration was 1.4 parts per million (ppm) which was above residential DNREC subsurface soil standards.

In November 2009, URS Corporation completed a Supplementary Hydrogeological Investigation and Focused Feasibility Study. The highest Columbia Aquifer concentration was TCE at 460 milligrams per liter (mg/l). The downgradient concentration of TCE in the Columbia was 0.071 mg/L. TCE was detected in only one well (P-10) in the Potomac Aquifer as a concentration of 92 mg/L. The nearest down-gradient Potomac aquifer monitoring well has no volatile organic chemicals detected.

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

As an interim action, DNREC conditionally approved semi-annual (twice yearly) groundwater sampling for two years (2001 and 2002), and annually after 2002. A total of 15 groundwater sampling events have been conducted. The sampling has been conducted in three shallow (Columbia) monitoring wells and four deep (Potomac) monitoring wells. The results indicate that although the contamination in groundwater has not significantly degraded, it has not migrated from the area.

What does the owner want to do at the Eagle Run Site?

The current owner of the property is maintaining the property as a commercial facility.

What additional clean-up actions are needed at Eagle Run Site?

It was determined that groundwater contamination at the Site is not decreasing through natural processes and active remedial actions are proposed.

The proposed remedy will be to mix biological material into the shallow and deep soil and groundwater.

DNREC proposes the following remedy for the site which needs to be completed before a Certificate of Completion of Remedy (COCR) can be issued:

1. Mechanically aerate the shallow soil, inject bio-augmented bacteria into the shallow soil, and groundwater.
2. Inject bio-augment bacteria into well P-10 and then properly abandon the well.
3. Establish a Long Term Stewardship Plan (LTS plan) for the site subject to DNREC approval. The LTS plan will include a soil and groundwater sampling plan to confirm that soil and groundwater contamination is decreasing. The LTS plan will address any additional remedial actions that may be necessary if monitoring does not confirm that concentrations are decreasing.

What are the long term plans for the Eagle Run Site after the cleanup?

The site will continue in its current use. After remediation begins, a plan to confirm soil cleanup and to monitor groundwater progress will be required by DNREC. Groundwater monitoring will continue until the goals are met or DNREC determines that another remedial strategy is required.

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

The complete file on the site including the Remedial Investigation Report and the Hydrogeological Investigation and Focused Feasibility Study 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 August 18, 2010 and ends at close of business (4:30 pm) on September 8, 2010. Please send written comments to the DNREC office (391 Lukens Drive, New Castle 19720) or call Rick Galloway, Project Manager, at: 302-395-2600.

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Figure

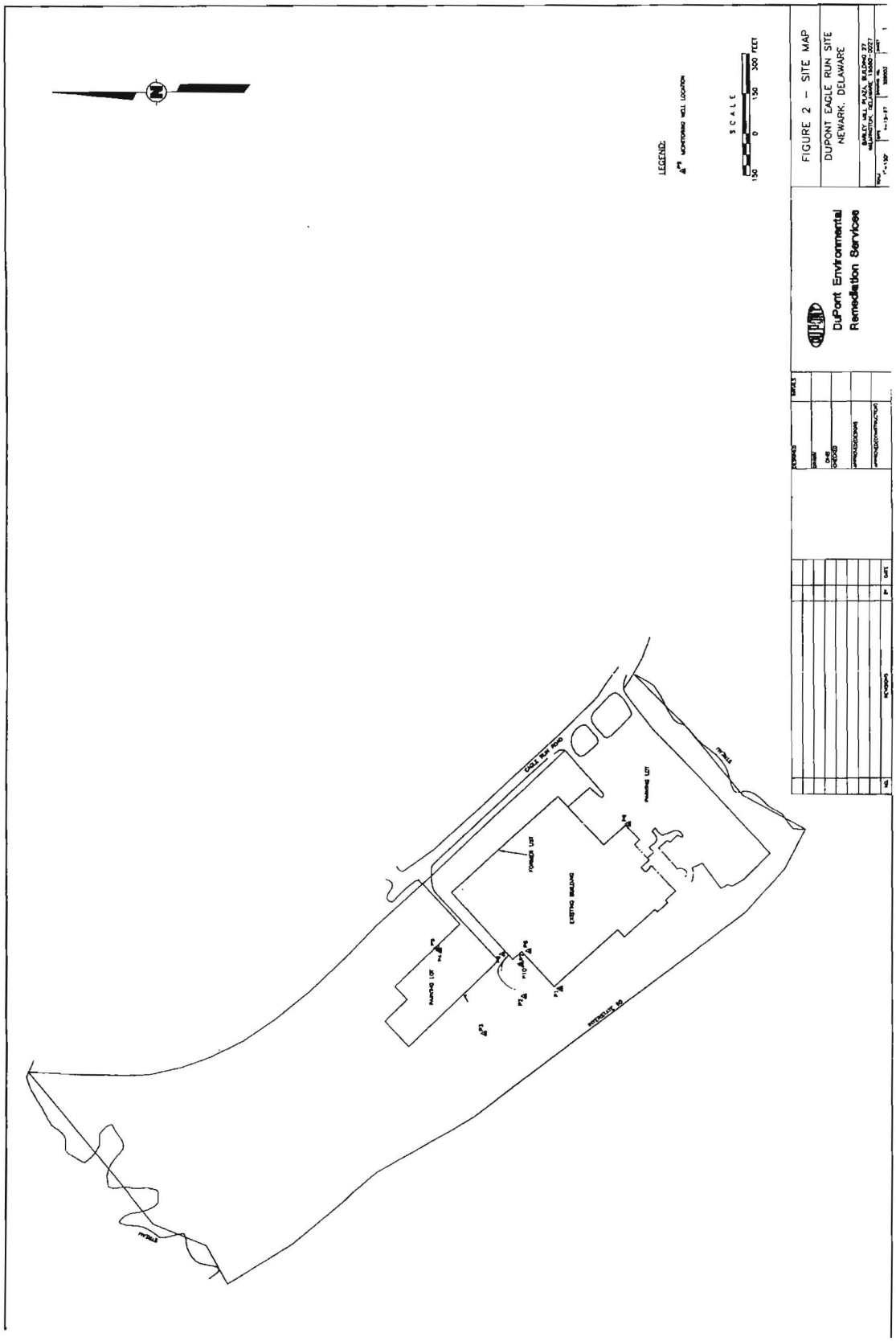
LEGEND:
MONITORING WELL LOCATION
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FIGURE 2 - SITE MAP
DUPONT EAGLE RUN SITE
NEWARK, DELAWARE
DuPont Environmental
Remediation Services
EAGLE RUN ROAD
FORMER LOT
EXISTING BUILDING
PARKING LOT
PARKING LOT
INTERSTATE 95
STREAM
STREAM

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	A comprehensive study of environmental media at a certified brownfield site to determine the nature and extent of contamination present
Certified Brownfield	A brownfield that DNREC has determined is eligible for partial funding through the Delaware Brownfields Program.
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 provides the regulatory framework for the Department's site cleanup programs.
Operable Unit	The cleanup of a site can be divided into a number of operable units, depending on the complexity of the problems associated with a site. Operable units may address geographical portions of a site, specific site problems, or initial phases of an action, or may consist of any set of actions performed over time or any actions that are concurrent but located in different parts of a site.
Proposed Plan of Remedial Action	A plan for cleaning up a hazardous site submitted by DNREC and subject to public comments.
US EPA	United States Environmental Protection Agency
Restricted Use	Commercial or Industrial setting
SIRB	Site Investigation Restoration Branch of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies.

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.