

Five-Year Review Report

**Second Five-Year Review Report
For
Dover Gas Light Co. Superfund Site
Dover, Kent County, Delaware**

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List of Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
CAMU	Corrective Action Management Unit
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CVOC	Chlorinated Volatile Organic Compound
CUC	Chesapeake Utilities Corporation
EPA	United States Environmental Protection Agency
CFR	Code of Federal Regulations
DNAPL	Dense, Non-Aqueous Phase Liquid
DNREC	Delaware Department of Natural Resources and Environmental Control
ESD	Explanation of Significant Difference
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
NAPL	Non-Aqueous Phase Liquid
NCP	National Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
PAH	Polynuclear Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PCE	Perchloroethene (a.k.a. tetrachloroethene)
ppb	parts per billion
ppm	parts per million
PRP	Potentially Responsible Party
RA	Remedial Action
RAO	Remedial Action Objective
RD	Remedial Design
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SDWA	Safe Drinking Water Act
SVE	Soil Vapor Extraction
TCE	Trichloroethene
ug/L	micrograms per Liter (equivalent to parts per billion (ppb))
VOC	Volatile Organic Compound
VI	Vapor Intrusion

Executive Summary

The Remedial Action associated with the soil component of the remedy (Operable Unit 1 or "OU1") has been completed and is functioning as intended by the 1997 ROD Amendment. However the institutional controls concerning future development activities at the former coal gas plant called for in the ROD Amendment need to be implemented to ensure that this component of the remedy remains protective over the long term.

The 1994 ROD originally selected a groundwater component of the remedy (Operable Unit 2 or OU2). This component of the ROD has not been implemented as EPA continues to investigate an expanded scope of groundwater contamination in the vicinity of the Site. It should be noted that groundwater used as a source of drinking water in Dover has not been impacted by contamination from the Site.

During the ongoing ground water investigation, EPA has found a potential for vapor intrusion at the Site. Vapor intrusion (VI) is an exposure pathway by which volatile organic compounds (VOCs) in contaminated groundwater may migrate from ground water as a gas or vapor, and potentially enter and accumulate inside occupied spaces in structures (buildings) at or below ground level (e.g. basements). This potential pathway will be further evaluated during the continuing ground water investigation underway as part of OU2 (i.e. EPA's Supplementary Groundwater Remedial Investigation).

As such, the remedy for the Dover Gas Light site is considered protective in the short term, since there are no current exposures to contaminants in soils or groundwater. The remedy is not considered protective in the long term since the institutional controls and the remedy for the groundwater component of the Site have yet to be implemented.

GPRM Measure Review

As part of this Five Year Review the GPRM Measures have also been reviewed. The GPRM Measures and their status are provided as follows:

Environmental Indicators

Human Health: Current Human Exposure Controlled (HEUC)

Groundwater Migration: Insufficient Data to Determine Groundwater Migration Status (GMID)

Site-Wide RAU

The Site is not yet considered Site-Wide Ready for Anticipated Use (SWRAU) but is expected to achieve SWRAU status on September 30, 2011.

Five-Year Review Summary Form

SITE IDENTIFICATION
Site name: Dover Gas Light Superfund Site
EPA ID: DED980693550

Region: 3	State: DE	City/County: Dover/Kent
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SITE STATUS

NPL status: * Final <input type="checkbox"/> Deleted <input type="checkbox"/> Other (specify) _____	
Remediation Status (choose all that apply): <input type="checkbox"/> Under Construction <input type="checkbox"/> Operating <input checked="" type="checkbox"/> Complete OU1 only, OU2 is in the RI/FS stage.	
Multiple OUs?* <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Site Construction completion date: N/A
Has site been put into reuse? * YES <input type="checkbox"/> NO	

REVIEW STATUS

Lead agency: * EPA <input type="checkbox"/> State <input type="checkbox"/> Tribe <input type="checkbox"/> Other Federal Agency _____	
Author name: Frederick N. Mac Millan	
Author title: Remedial Project Manager	Author Affiliation: U.S. EPA - Region 3
Review period: 10/01/2008 to 07/23/2009	
Date(s) of site inspection: 03/18/2009	
Type of review: <input checked="" type="checkbox"/> Post-SARA <input type="checkbox"/> Pre-SARA <input type="checkbox"/> NPL-Removal only <input type="checkbox"/> Non-NPL Remedial Action Site <input type="checkbox"/> NPL State/Tribe-lead <input type="checkbox"/> Regional Discretion	
Review number: <input type="checkbox"/> 1 (first) <input checked="" type="checkbox"/> 2 (second) <input type="checkbox"/> 3 (third) <input type="checkbox"/> Other(specify) _____	
Triggering action: <input type="checkbox"/> Actual RA Onsite Construction at OU # 1 <input type="checkbox"/> Actual RA Start at OU# _____ <input type="checkbox"/> Construction Completion <input checked="" type="checkbox"/> Previous Five-Year Review Report <input type="checkbox"/> Other (specify) _____	
Triggering action date: 09/29/2004	
Due date (five years after triggering action date): 09/29/2009	

Five-Year Review Summary Form, cont'd.

Issues

- The Institutional Controls called for as part of the soils component of the selected remedy for OU1 have not yet been put in place.

Recommendations and Follow-up Actions:

- The Institutional Controls described in EPA's Preferred Alternative (Alternative #2) in the 1997 ROD Amendment should be implemented by the State of Delaware with appropriate EPA oversight. The potential for vapor intrusion at the Site should be further evaluated during the Remedial Investigation for OU2.

Protectiveness Statement:

- The remedy is considered protective in the short term. The remedy selected for the Dover Gas Light Site has only been partially implemented. The Remedial Action associated with the soil component of the remedy (OU1) has been completed and is functioning as intended by the 1997 ROD Amendment. However institutional controls called for in the ROD Amendment need to be implemented to ensure this component of the remedy remains protective over the long term.

The ROD also selected a groundwater remedy (OU2). This component of the ROD has not been implemented as EPA continues to investigate an expanded scope of groundwater contamination in the vicinity of the Site.

As such, the remedy for the Dover Gas Light site is considered protective in the short term, since there are no current exposures to contaminants in soils or groundwater. The remedy is not considered protective in the long term since the institutional controls and the remedy for the groundwater component of the Site have yet to be implemented.

Other Comments

- The 1994 ROD for the Dover Gas Light Site selected remedies for both Soil and Groundwater contamination. Subsequent to the ROD, this work was categorized as Operable Unit 1-Soils and Operable Unit 2-Groundwater. The Remedy for OU1-Soils was changed by the 1997 ROD Amendment. Work on the Remedial Design for OU2-Groundwater was suspended because an additional source of groundwater contamination is currently being investigated.

Dover Gas Light Co. Superfund Site
Dover, Kent County, Delaware
Second Five-Year Review Report

I. Introduction

The purpose of the five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review reports identify issues found during the review, if any, and identify recommendations to address them.

The Agency is preparing this Five-Year Review report pursuant to CERCLA §121 and the National Contingency Plan (NCP). CERCLA §121 states:

If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.

The Agency interpreted this requirement further in the NCP; 40 CFR §300.430(f)(4)(ii) states:

If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.

This is the second five-year review for the Dover Site. The triggering action for this statutory review is the completion of the past (and first) five-year review on September 29, 2004. This second five-year review is required because the remedial actions taken so far at the Site allow hazardous substances, pollutants, or contaminants to remain at the Site above levels that allow for unlimited use and unrestricted exposure.

The United States Environmental Agency (EPA), Region III, conducted the second five-year review of the remedy implemented for Operable Unit 1, which addressed source area contamination at the Dover Gas Light Superfund Site in Dover, Kent County, Delaware. This review was conducted by the Remedial Project Manager for the Site from October 2008 through July 2009. This report documents the result of EPA's second five-year review, including changes that have taken place since the first five-year review was completed in 2004.

Operable Unit 2, which addresses groundwater contamination, is still in the Remedial Investigation/Feasibility Study (“RI/FS”) stage, but information obtained during the continuing groundwater investigation has informed portions of this second five-year review.

II. Site Chronology

Table 1 - Chronology of Site Events

Date	Event
10/1989	Site added to the NPL
7/1990	Consent Order signed by CUC to perform RI/FS
8/16/1994	ROD issued
5/17/1995	UAO issued
7/7/1995	Focused Feasibility Study (FFS) on additional soil remedies submitted to EPA by CUC
1996	Pre-Design Investigation
7/18/1997	SVE and NAPL Recovery Pilot Testing work plan submitted to EPA
8/1997	SVE and NAPL Recovery Well installation
8/29/1997	FFS and Plan to modify the ROD released to Public
9/1997	SVE and NAPL Recovery Pilot Testing Performed
11/21/1997	SVE and NAPL Recovery Pilot Testing Report Submitted to EPA
12/16/1997	ROD Amendment issued
1/9/1998	Pre-Final Gas Holder Remedial Plan Submitted to EPA
2/1998	SVE piping installation and manifold construction
2/25/1998	SVE system activation
3/20/1998	EPA provides comments on Pre-Final Gas Holder Remedial Plan
6/1998	Install upgraded SVE system; activate on 6/11/98
8/1998	Additional SVE Well installed (TW-8) to address High Pressure Tank Area
8/10/1998	Final Gas Holder Remedial Plan Submitted to EPA
8/25/1998	EPA approves Final Gas Holder Remedial Plan
9/1998	Mobilization for Gas Holder Remediation
9/1/1998	Gas Holders located and content characterization begins
9/14/1998	SVE system deactivated for duration of gas holder remediation
10/05/1998	Remedial Action work begins
12/7/1998	Gas Holder Pre-Final Inspection Performed
12/11/1998	SVE system re-started
12/14/1998	Gas Holder Final Inspection Performed
12/14/1998	SVE Intermediate Design Report Submitted to EPA
2/28/1999	Final Gas Holder Remedial Action Report submitted to EPA
12/11/1999	Final SVE Remedial Endpoint Demonstration Plan submitted to EPA
1/19/2000	SVE Remedial Endpoint Demonstration Plan approved by EPA

Date	Event
2/2000	SVE Remedial Endpoint sampling performed
5/2/2000	Initial Remedial Endpoint Report submitted to EPA
11/26/2000	Supplemental SVE Remedial Endpoint sampling performed
3/20/2001	EPA approves “No Further Action” for SVE activities
4/5/2001	SVE system deactivation
4/19/2001	SVE Remedial Completion Plan and Schedule submitted to EPA
5/2001	SVE wells and piping abandoned; SVE manifold removed; Site cleanup
6/6/2001	Sampling and profiling of spent carbon from SVE activities
7/5/2001	Spent carbon from SVE activities removed from Site
3/15/2002	Final Plans and Specifications for Parking Lot submitted to EPA
5/2/2002	Approval of the parking lot design obtained from all agencies
8/2002	Parking lot construction completed
8/12/02	Pre-Final Inspection for Parking Lot Construction
8/19/02	Final Inspection for Parking Lot Construction
9/30/2003	Remedial Action Completion Report (OU-1) issued
3/2/2004	OU2 Remedial Investigation fieldwork begins
9/29/2004	First Five-Year review completed by EPA
4/5/2005	EPA accepts final GW investigation report from FirstEnergy
7/11/2005	EPA begins “Supplementary GW Remedial Investigation” (GW RI)
4/20/2006	Final Site Management Plan (SMP) f/Phase 1 GW RI apvd by EPA.
4/24/2006	Phase 1 GW RI begins w/field sampling event
5/2/2006	Phase 1 GW RI sampling event ends
1/15/2007	Phase 1 Final Report (Technical Memorandum) received
5/2007	Final SMP f/Phase 2 GW RI approved by EPA
7/2007	Phase 2 GW RI begins w/field sampling event
9/2007	Phase 2 GW RI field sampling event ends
4/2008	Phase 2 Final Technical Memorandum received
4/7-11/2008	Initial Vapor Intrusion (VI) screening by EPA ERT (TAGA Bus)
5/14/2008	Final Report on initial VI screening received from EPA ERT
5/16/2008	Scoping f/Phase 3 GW RI begins
9/12/2008	Change in scope for Phase 3 GW investigation made by EPA
2/6/2009	Final SMP f/Phase 3 GW investigation approved
3/18/2009	Site Inspection for 2nd FYR (OU1 remedy) conducted by EPA
3/18/2009	Community Interviews for 2nd FYR conducted by EPA
6/30/2009	Phase 3 GW RI Site mobilization for field sampling event

III. Background

Physical Characteristics

The Dover Gas Light Co. Site is located in Kent County, Delaware, within the City of Dover (Figure 1). It occupies the western half of the city block bounded by New Street, Bank Lane, North Street and Governors Avenue (See Figure 2). The size of the former coal gas plant is approximately one acre while the size of the Superfund Site is approximately 23 acres due to the spread of contamination in the ground water.

Land and Resource Use

The historic land use of the site involved a coal tar gasification plant. Coal tar gas was used as a fuel for cooking and lighting in many homes in the late 19th and early 20th century. As the demand for coal tar gas was replaced by more modern natural gas and electricity, demand for the product waned and the plant was closed in 1948.

Today, the former Dover Gas Light plant has been replaced with a paved parking lot that services the Victrola Museum adjacent to the Site.

The pertinent groundwater system underlying the Site that is associated with the Superfund Site contamination is comprised of three layers, they are:

- “A Layer” - 0 to ~25ft below ground surface (“bgs”), containing a thin confining layer which may be continuous. This is the upper part of the Columbia aquifer. This layer is not being used as a source of potable drink water.
- “B Layer” - ~26 to 60 ft bgs, bounded at the bottom by a substantial confining layer (~15 ft thick clay). This is the lower part of the Columbia aquifer. This layer is likewise not being used as a source of potable drinking water.
- “C Layer” - ~75 to 85ft bgs, bounded at its bottom by a substantial confining layer (>50 ft thick clay). This is the Frederica aquifer, which also is not being used as a source of potable drinking water.

The Columbia Aquifer is the water table aquifer immediately underlying the site and EPA has further defined this aquifer into the A and B Layers during the RI. A clay layer exists below the Columbia Aquifer that is about 15 feet thick and immediately overlies the Frederica Aquifer, which for purposes of the RI is referred to as the C Layer. There is a clay confining unit that is in excess of 50 feet thick immediately underlying the Frederica Aquifer and separating the next aquifer down, the Cheswold Aquifer. The Cheswold Aquifer extends from 150 to 240 feet below ground surface and is referred to as the D Layer in the RI. This is the shallowest aquifer that is currently used as a source of drinking water by the City of Dover.

History of Contamination

Operations at the Site began in 1859. From 1859 to 1948 the Site was used for the production of gas from coal through the process known as coal gasification. The gas was used primarily for lighting and cooking purposes. During this time, various buildings, gas holders, and storage areas used in the gasification process were located on the Site. When the plant was closed in 1948, all of its structures, except for one, were demolished. A fire destroyed the remaining building in 1982.

Two distinct contamination types are present at the Dover Gas Light Superfund Site:

- **Manufactured Gas Plant Residuals** - These are primarily coal tar and aromatic compounds, including benzene, toluene, ethylbenzene and xylenes, collectively known as BTEX compounds in soil and groundwater in the vicinity of the former gas plant. The soil source of these compounds was remediated in 2001 and is the subject of this five-year review.
- **Dry Cleaning Solvents** - Primarily tetrachloroethene or perchloroethene (PCE) and trichloroethene (TCE) from the former Capitol Cleaners Dry Cleaning Site, originally located approximately 300 feet southeast of the former Coal Tar Plant.

The PCE and TCE contamination at the Site is suspected to have originated from the operations at, and/or from the fire which destroyed the former Capitol Cleaners dry cleaning facility on South Governor's Avenue in 1989. Both of these volatile organic compounds (VOCs) are solvents commonly used in the dry cleaning industry.

The PCE contamination was the primary focus of an ongoing Remedial Investigation and Feasibility Study (RI/FS), further complicated by the comingling of what were two separate areas of distinct subsurface groundwater contamination, known as plumes, and the recently recognized potential for vapor intrusion.

Initial Response

Contamination was first discovered at the Site in 1984 when the State of Delaware was installing geotechnical borings for the anticipated construction of a court building. The Family Court Building was subsequently constructed on an alternate piece of property. Remains of the coal gas plant were encountered during the geotechnical drilling, and the State of Delaware installed several clusters of monitoring wells to determine the impact at different lateral and vertical locations.

EPA conducted a preliminary assessment of the Site in December of 1984, followed by a Hydrogeological Investigation and Environmental Assessment by the State of Delaware Department of Natural Resources and Environmental Control (DNREC) in December 1985. On the basis of these investigations, the Dover Gas Light Site was proposed to the EPA's National Priorities List (NPL) in January 1987 and finalized on the NPL in October 1989. The EPA identified Chesapeake Utilities Corporation (CUC), General Public Utilities (GPU) now First

Energy, and the State of Delaware as potentially responsible parties.

In July 1990, CUC entered into an Administrative Order on Consent with EPA and DNREC to conduct a RI/FS at the Site. The purpose of the RI/FS was to determine the nature and extent of contamination at the Site, and to screen, develop and evaluate potential cleanup actions.

Basis for Taking Action

The RI determined the former coal gas plant soils were contaminated with BTEX at concentrations as high as 4,890 ppm, and with polynuclear aromatic hydrocarbons (PAHs) at concentrations as high as 26,000 ppm. During the soil borings, drill cuttings were observed to have black streaks with coal tar odors and oily substances with fuel odors. Soil contamination extended approximately 800 feet from the former plant to the east and southeast. The contamination that was discovered in soils in the vicinity of the former coal gas plant has been designated as Operable Unit 1 (OU1).

The RI also determined that the groundwater had been impacted by the same classes of contaminants as the soil (BTEX and PAHs). The BTEX and PAH contamination were found to be highest in the area which includes the former plant and extended to the east and southeast approximately 1,600 feet. The levels of BTEX were as high as 3,310 ppb and the levels of PAHs were as high as 4,611 ppb in groundwater at the former plant location. Away from the former plant, the levels of BTEX were as high as 8,350 ppb and levels of PAHs as high as 8,330 ppb.

The investigation of contaminants associated with the former gas plant also uncovered widespread contamination of another class of compounds called chlorinated volatile organic compounds (CVOCs) such as PCE, TCE, 1,1-dichloroethene, and 1,2-dichloroethene. It was determined that the former coal gas plant was not the source of this contamination and the likely source was the former Capitol Cleaners dry cleaning facility located at 411 South Governor's Avenue. The PCE contamination became the focus of an ongoing RI/FS but was not addressed in either the 1994 ROD or the 1997 ROD Amendment. The groundwater contamination from PCE and TCE, as well as the groundwater contamination resulting from the coal gas plant has resulted in mixed or 'commingled' contaminant plumes and are now designated Operable Unit 2 (OU2).

IV. Remedial Actions

Remedy Selection

EPA separated the Dover Gas Light Co. Site into two Operable Units. OU1 which is the focus of this five-year review is comprised of the soil contamination associated with the former coal tar gasification plant operations. OU2 is focused on groundwater contamination. The original 1994 ROD does address groundwater contamination from the operations associated with the coal tar plant. However, due to the greater scope of the contamination resulting from the comingling of the PCE/TCE and coal tar plumes, the groundwater remedy chosen in 1994 has not been implemented and the final remedy decision for OU2, addressing both plumes, will be detailed in a forthcoming ROD after the completion of another RI/FS. That work began in 2005

and is currently underway.

The first ROD for this Site was issued on August 16, 1994. The original ROD called for excavation and off-site thermal treatment of soils in the former coal tar gas plant area, recovery of non-aqueous phase liquids (NAPLs), recovery and treatment of groundwater from the area containing NAPLs, monitoring of the groundwater containing only dissolved contamination and Institutional Controls to prevent unacceptable exposure to contaminated soils and groundwater.

Remedial Action Objectives (RAOs) were developed as a result of data collected during the Remedial Investigation to aid in the development and screening of remedial alternatives to be considered for the ROD. The first five RAOs contained in the 1994 ROD addressed groundwater; the sixth and last RAO in the 1994 ROD was associated with contaminated soil. The remediation of soil for the protection of groundwater, insofar as soil would no longer be a continuing source of contaminants, was a significant remedial consideration in the 1994 ROD, and reads as follows:

6. *To return the soil at the former coal gas plant to a condition where (1) it can be used consistently with its "Institutional & Office" zoning designation with no other restrictions or it can be used for the museum expansion, (2) construction can safely take place, and (3) it no longer is a continuing source of unacceptable levels of contamination to the groundwater.*

On July 7, 1995, CUC submitted a Focused Feasibility Study (FFS) for Onsite Soil to EPA that explored additional soil cleanup approaches which also proffered the use of institutional controls to prohibit certain land uses that could result in exposure to contaminants remaining in the subsurface. In 1997, the soil component of the ROD was amended due to the fact that the amount of NAPL material in the soil was substantially less than originally estimated. The major components of the revised remedy selected in the December 16, 1997 ROD Amendment include the following:

- Excavation and off-site thermal destruction of the contaminated soils inside the former subsurface gas holders;
- Soil-vapor extraction (SVE) to treat the contaminated soils in-situ in several areas outside of the former gas holders;
- Paving of the parking lot, and
- Institutional Controls requiring the recording of a notice of the former use of the Site and referring to the contractual limitations prohibiting the further development of the parking lot area.

Remedy Implementation

Following issuance of the ROD in August of 1994, a Unilateral Administrative Order (UAO) EPA Docket No. III-95-44-DC, was issued to Chesapeake Utilities Corporation (CUC) and General Public Utilities (GPU, now FirstEnergy) on May 17, 1995 to implement the selected remedy. Only CUC complied with the UAO, and all work performed to implement the Remedial Design/Remedial Action (RD/RA), as described in this document, was performed by CUC.

While gathering information for the Remedial Design of the groundwater component of the selected remedy, it became apparent that the degree of PCE contamination from the nearby Capitol Cleaners Site was much greater than originally thought and would have a major impact on any effort to clean up groundwater in the area.

During the same period, EPA initiated a proceeding against FirstEnergy for failing to comply with the UAO for RD/RA. Chesapeake Utilities also filed a lawsuit against FirstEnergy to recover their past costs. Settlement negotiations followed which resulted in the successful resolution of these matters in 2003 and a new approach for groundwater contamination in this area.

Under the terms of the settlement agreements, FirstEnergy agreed to conduct a groundwater investigation to characterize the nature and extent of the PCE contamination. This work began in 2003. EPA then planned to reevaluate alternatives with respect to the groundwater risks posed by both the Dover Gas Light Site and the PCE contamination and select a new remedy for groundwater. Thus, no remedial action with respect to the groundwater component of the remedy (OU2) as described in the 1994 ROD has yet been implemented. There has been progress since the last five-year review regarding groundwater. This is described in Section V. of this Report.

This five-year review focuses on 1) the soils component (OU1) of the selected remedy and 2) the continuing groundwater investigation (OU2) to the extent that it may affect the remedy in place for the soils.

Soil Vapor Extraction

SVE is a remediation technique which removes gasoline, solvents and similar VOCs from soil by inducing an air flow through the soil. The basic process involves a vapor extraction well, which extends from the ground surface down to a depth where the soil is contaminated. This is coupled with blowers or vacuum pumps, which draw air through the contaminated soil up to the surface via the extraction well, carrying the contaminants out of the soil as vapors up with it. The contaminant vapors can then be captured via carbon filtration or some other suitable method.

SVE was utilized at the Site to remediate VOC-contaminated soils outside the subsurface former gas holders. The SVE wells were installed in August 1997 and SVE pilot testing using these wells was performed in September 1997. A report titled SVE and NAPL Recovery Pilot Testing Preliminary Results by Ruth Associates Inc. dated November 21, 1997 provides

additional detail. Based on this pilot testing, the SVE system was designed and installed in February 1998.

From February 1998 to April 2001, the SVE system operated to address residual contamination in the onsite soils, with only minor interruptions. The SVE system was temporarily deactivated on September 14, 1998 for the duration of the gas holder excavation (detailed below). The gas holder excavation was completed in December 1998 and the SVE system was reactivated on December 11, 1998. During the operational period, several steps were taken to formalize the design of the SVE system and to demonstrate the effectiveness of the SVE operations.

On January 19, 2000 EPA approved the Final Remedial Endpoint Demonstration Plan. The Plan designated three different target areas onsite for contaminated soils: the (Gas) Holder area, the High Pressure Area and the B-19 area. The plan stated that the endpoint for the SVE system will be determined from a comparison of the concentrations in the soil leachate to the quality of the shallow, onsite groundwater. If the leachate concentrations were less than the respective concentrations in the shallow groundwater, then it could be inferred that the soil is not a potential source of groundwater contamination.

SVE activities continued at the Site until the above referenced standard was achieved. EPA approved "No Further Action" on the B-19 area on May 26, 2000. EPA also approved "No Further Action" for the High Pressure Tank Area and the Holder Area on January 22, 2001 and March 20, 2001 respectively.

On April 5, 2001, the SVE system was deactivated and permanent decommissioning of the system was initiated. In May 2001, the SVE wells and associated buried piping were abandoned. Above ground piping was removed and power to the SVE system was disconnected. Spent carbon from the SVE operations was profiled in June 2001 and disposed of in July 2001. The SVE compound fencing and trailer were removed in July 2002.

Gas Holder Remediation

The Gas Holder remediation was performed to remove remaining source material from the three former subsurface gas holders remaining onsite. In January 1998, a Pre-final Gas Holder Remedial Plan was submitted to the EPA for review and comment. With EPA comments addressed, the Final Gas Holder Remedial plan was approved by EPA on August 25, 1998. Gas holder remediation activities are more completely documented in the Gas Holder Remedial Action Report, submitted to EPA on February 11, 1999. The following is a summary of these remediation activities.

On September 1, 1998, each of the three (3) gas holders was located by identifying four reference points for each holder, so that the approximate dimensions could be estimated. A sample was also collected from one of the holders for a treatability study. The results of this study indicated that mixing holder contents with wood ash was the best means of stabilization.

Gas holder remediation activities consisted of digging a pit inside (Gas) Holder A, and dewatering it to the extent possible. It was determined that the installation of a well in the center of Holders B and C would allow for more efficient dewatering. The wells were also connected to the SVE system to help dry the contents of the holders. These activities were performed, and all extracted water was stored on-site, characterized and disposed of properly. Each of the holders was exposed one at a time and the contents mixed in place with wood ash. The contaminated material was sampled, characterized and rendered non-hazardous prior to sending it to Clean Earth of New Castle, DE for treatment and recycling as a component of asphalt. Each of the holders was emptied, and subsequently backfilled with concrete fill to within a few feet of grade. The remaining few feet was filled with clean compactable fill to grade.

The Pre-final Holder Inspection was conducted on December 7, 1998 and the final inspection was conducted on December 14, 1998. In a letter from EPA dated April 26, 1999, EPA certified that all performance standards had been met for the gas holder portion of the Remedial Action.

Parking Lot Construction

A pre-construction meeting for the parking lot was held on April 17, 2002, and construction began in May 2002. Construction activities consisted primarily of paving a large portion of the Site with asphalt, installing curbing, sidewalks and installing a stormwater collection system at the parking lot exits for collecting and filtering parking lot runoff.

Construction of the parking lot also required that two utility poles along New Street be relocated. During this process, some of the utility companies with lines on the poles expressed the wish to have their lines installed below ground. The parking lot construction activities therefore included the installation of buried conduit along the western boundary next to New Street and along the northern boundary next to North Street. These activities resulted in the exposure of subsurface soils, some apparently containing residual coal tar materials. These soils were characterized as non-hazardous, but were still disposed of off-site at a facility licensed to handle hazardous waste.

Top soil was used for the final grading beyond the area where the concrete curbing, sidewalks and asphalt paving were installed. Except for a few landscaping areas that were designed for the museum, the remainder of the area was hydroseeded with grass. The final inspection of the parking lot took place on August 19, 2002 and the State of Delaware and EPA approved the parking lot construction.

System Operation and Maintenance

There are no on-going operation and maintenance activities for the soil component of the remedy. However, as part of the Consent Decree between the State of Delaware and EPA, the State of Delaware Department of State, Delaware State Museums will be responsible for landscaping and parking lot maintenance, including annual maintenance of the sand filters. The filters are used for filtering runoff from the asphalt portion of the parking lot.

V. Progress Since the Last Five-Year Review

Groundwater Investigations (OU-2)

The remedial investigation for OU-2 is not yet complete. For this reason, a full review of OU-2 activities is not part of this report. However, initial screening for potential vapor intrusion associated with contaminated groundwater was conducted in 2008 during the ongoing groundwater investigation.

Vapor Intrusion is the migration of gaseous chemicals from a subsurface source, including contaminated groundwater, into overlying buildings. These vapors can move up into the indoor air spaces of buildings at or below ground surface (e.g. basements) where people may be exposed to them. Long-term exposure by inhalation to some of these gaseous (volatile) compounds, such as PCE and TCE, can have health effects including an increased risk of certain types of cancer.

During the week of April 7-11, 2008 EPA Emergency Response Team sampled subsurface soil gas beneath 18 buildings in Dover, DE to screen for vapor intrusion. EPA concluded that either no risk or no immediate risk was found based on test results and land use at that time. EPA plans to sample other properties, plus re-sample several of these properties in the future as the remedial investigation proceeds.

Soils (OU1) Remedy

The soil (OU1) remedy was completed on September 30, 2003 with the issuance of the Remedial Action Completion Report (RACR). The RACR detailed the completion of contaminated soil removal from the former gas holders, completion of soil vapor extraction, paving (with asphalt) a large portion of the Site to prevent stormwater infiltration, and installing a stormwater collection system at the parking lot exits for collecting and filtering parking lot runoff. The paved parking lot currently services the Johnson Victrola Museum in Dover, DE.

There are no on-going operation and maintenance activities for the soil component of the remedy. However, as part of the Consent Decree between the State of Delaware and EPA requires Delaware State Museums to be responsible for landscaping and parking lot maintenance, including annual maintenance of the sand filters used for filtering runoff from the asphalt portion of the parking lot.

VI. Five Year Review Process

Administrative Components

DNREC was notified of the initiation of the five-year review in October of 2008. The Dover Gas Light Five-Year Review team was led by Frederick N. Mac Millan, EPA Remedial Project Manager for the Site and included members of the Region 3 Technical Advisory staff with expertise in hydrology and risk assessment. Steven Johnson, the Site Manager for DNREC assisted in the review as the representative for the support agency.

Community Involvement

EPA Region 3 published ads in the Dover Post and Delaware State News on January 14, 2009 that informed the Dover, DE community about the upcoming five-year review and included information on where documents could be reviewed and how EPA representatives could be contacted.

Document Review

The five-year review consisted of a review of relevant documents including the first Five Year Review Report, the Gas Holder Remedial Action Report, the Soil Remedy Remedial Action Report (both authored by Ruth Associates on behalf of CUC), the EPA Remedial Action Report as well as the 1994 ROD and the 1997 ROD Amendment. Tabulated in Table 2, is the list of performance standards that relate to the soil component of the remedy at the Site. These performance standards are presented in their entirety in the 1997 ROD Amendment.

Data Review

The RPM reviewed the 1994 Record of Decision, the 1995 Focused Feasibility Study, the Remedial Action Report for the Soil Vapor Extraction System, the RA for the Soil Remedy and the RA for the Gas Holder Removal. As documented in the Remedial Action Closeout Report, the soil contamination has been successfully remediated to a point where it is no longer a continuing source of groundwater contamination. For further information about the individual constructed remedies, please see the above referenced reports.

The RPM also reviewed the 2005 Capitol Cleaners PCE Spill Study Report, a groundwater study by FirstEnergy, and the Final Technical Memoranda for Phase 1 and Phase 2 of the Supplementary Groundwater Remedial Investigation completed by EPA in 2007 and 2008, respectively.

Site Inspection

The RPM, Frederick N. Mac Millan along with the CIC, William Hudson, inspected the Site on March 18, 2009. Steven Johnson, Site Manager with the DNREC Site Investigation and Restoration Branch (DNREC-SIRB) and Robert Newsome, Community Affairs Specialist with DNREC also were present during the Site inspection. EPA and DNREC found no problems during this inspection. The asphalt surface continues to be protective as there are no broken or damaged areas that would present a direct contact risk with underlying soils. The decorative fencing that was placed around the Museum property remains intact as does the parking lot landscaping. The sand filtration system for runoff from the asphalt parking surface continues to operate properly and appears to have been properly maintained. When it was inspected during the Site visit, the filter media showed some discoloration, but no evidence of excessive amounts of debris or clogging that would impede its operation. A representative of the Division of Historical and Cultural Affairs, part of the State of Delaware Department of State that manages Delaware State Museums, and the State authority responsible for maintaining this portion of the

Site, was present and reported no known problems with the remedy.

Interviews

On March 18, 2009, the EPA RPM and CIC conducted several interviews with Dover business owners, residents and State officials concerning their knowledge and perceptions of EPA's activities at OU1 since the remedial action, as well as the upcoming groundwater investigation work.

In general, the public interviewed was very satisfied with the project and thinks EPA has done and continues to do a "good job". The respondents were very happy about the major increase in available secure parking in the area as a result of the remedial action. As to issues that received the most attention, respondents primarily cited parking and the drinking water quality (i.e. taste, odor and appearance--it is important to note here that drinking water in Dover is provided by a municipal water treatment and distribution system).

Sensitivity of the local area to environmental issues ran the gamut where almost every possibility between one (low) and ten (high) was picked, but community interest or concern about the site was weighted toward "none." Generally people felt well informed about the Site itself, with half having seen outreach material or media coverage and half having seen none. The Dover Post and Delaware State News were cited as places where information on the Site might be found along with newsletters, mailings and fact sheets. Half said there were no effects on the surrounding community from the Site work, others cited improved parking and that the public had been made "more aware" of environmental issues.

VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

EPA determined in the Remedial Action Report dated September 30, 2003 that the performance standards for OU1 (soils) had been met and the remedy continues to be operational and functional. Based on its recent inspection, EPA continues to believe that the soil component of the selected remedy is functioning as intended except for the fact that institutional controls called for in the ROD Amendment have yet to be implemented. These institutional controls are expected to take the form of a notice to the deed to the property to prohibit future subsurface construction and the potential for exposure to site-related contaminants in soil and/or groundwater.

Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

The exposure assumptions used in the 1997 ROD Amendment explicitly addressed the use of the Site as a museum and a parking facility. Care was taken during the Remedial Action to ensure that site workers were protected from possible exposure. All of the conditions mentioned in the 1997 ROD Amendment exist at the Site today and there has been no change to the actual or planned use of the Site.

The RAOs selected in the 1997 Record of Decision Amendment are valid today and continue to be protective of human health and the environment. The RAOs are designed to protect museum visitors and workers.

Changes in Standards and To Be Considereds

None

Changes in Exposure Pathways, Toxicity and Other Contaminant Characteristics.

Vapor Intrusion is the migration of gaseous chemicals from the subsurface into overlying buildings. When certain chemicals, especially volatile organic compounds (VOCs), are present in contaminated groundwater and soil, they may migrate through subsurface soils as gases or 'vapors.' These vapors can enter indoor air spaces of buildings above where people may be exposed to them. Long-term exposure to some of these gaseous (volatile) compounds, such as PCE and TCE, by inhalation can have health effects including an increased risk of certain types of cancer. Known groundwater contaminants and aquifer characteristics make vapor intrusion a potential exposure pathway at the Site.

During the second phase of EPA's Supplementary Groundwater Investigation in 2008, the RPM enlisted the EPA Environmental Response Team (EPA ERT) and their Trace Atmospheric Gas Analyzer (TAGA) Bus to perform an initial screening for possible vapor intrusion into buildings at the Site. During the week of April 7-11, 2008 EPA ERT installed subsurface soil gas probes in 18 buildings in Dover, DE and took soil gas and air samples to screen for possible vapor intrusion. EPA ERT processed many of these samples onsite in their Trace Atmospheric Gas Analyzer (TAGA) Bus, a self-contained, mobile laboratory specifically designed for this kind of work. Same-day grab samples were made with an air pump drawing soil gas from beneath the tested buildings into a Tedlar (tm) gas sample bag, which were later processed at the TAGA Bus. In addition, EPA ERT took 24-hour soil gas samples with Summa (tm) canisters for comparison, which were sent to a contract laboratory. On May 14, 2008 EPA ERT submitted a report of this initial vapor intrusion screening effort at the Dover Gas Light Site. In each case, either no risk or no immediate risk was found based on test results and land use at that time.

EPA's vapor intrusion investigation, like its groundwater remedial investigation, is not yet complete. EPA plans to continue to address this potential exposure pathway with further vapor intrusion sampling in the future as the groundwater remedial investigation proceeds.

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No

Technical Assessment Summary

The soils component of the remedy for the Dover Gas Light Site was designed to remove the historical source area of coal tar below the Site as well as prevent any direct contact with residual contamination below the Site. The source area was removed and the soils were capped by an asphalt parking lot. The parking lot surface is intact and in excellent condition preventing any direct contact between contamination and museum visitors or workers. The soils component of the selected remedy is functioning as intended by the 1997 ROD Amendment. However, the institutional controls called for in the ROD Amendment still need to be implemented to ensure that this component of the remedy remains protective over the long term.

VIII. Issues

The Institutional Controls called for as part of the soils component of the selected remedy have not yet been put in place. Although this does not currently affect the short-term protectiveness of the remedy, it does affect the long term protectiveness of the remedy. This property is under the exclusive control of the Department of State of the State of Delaware, which would preclude any sale or other disposition of the property without State government involvement. However, the institutional controls called for in the ROD Amendment still need to be implemented to ensure that this component of the remedy remains protective over the long term. These institutional controls should take the form of a notice to the deed to the property to prohibit future subsurface construction and the potential for exposure to site-related contaminants in soil and/or groundwater. This may require action by the Delaware Department of State, the State Attorney General's Office and possibly the State Legislature and should be explored with EPA's Office of Regional Counsel.

IX. Recommendations and Follow-Ups

The Institutional Controls contained in Section 2.5.4 of the Selected Remedy: Performance Standards of the 1997 ROD Amendment should be implemented by the State of Delaware with appropriate EPA oversight. The notice provisions of these Institutional Controls should be in place by September 30, 2010.

X. Protectiveness Statement

The remedy is considered protective in the short-term. The remedy selected for the Dover Gas Light Site has only been partially implemented. The Remedial Action associated with the soil component of the remedy (OU1) has been completed and is functioning as intended by the 1997 ROD Amendment. However the institutional controls called for in the ROD Amendment need to be implemented to ensure that this component of the remedy remains protective over the long term.

The ROD also selected a groundwater remedy (OU2). This component of the ROD has not been implemented as EPA continues to investigate an expanded scope of groundwater contamination in the vicinity of the Site. As such, the remedy for the Dover Gas Light site is considered protective in the short term, since there are no current exposures to contaminated

soils or groundwater. The remedy is not considered protective in the long term since the institutional controls and the remedy for the groundwater component at the Site have yet to be implemented.

XI. Next Review

The next five-year review for the Dover Gas Light Superfund Site is required five years from the signature date of this review.

Table 2
Performance Standards for Soils Components of the Selected Remedy

Performance Standard	Brief Description	Notes
2.1	Soil Excavation	
2.1.3	The excavation shall be performed in such a manner as to minimize the release of contaminants to the atmosphere.	Implemented by maintaining a blanket of ash on top of the open excavation at all times, plus monitoring.
2.1.4	Steps shall be taken to avoid structural or other damage to the museum, the streets, the cemetery, or the church property during excavation.	Completed by taking care during construction, and minimizing disturbance in the sensitive areas.
2.1.8	The soil inside the three buried gas holder bottoms (see Figure 2) shall be excavated. The gas holder bottoms themselves shall remain in the ground. The gas holders shall be considered “clean” when use of a garden shovel (with a 3-6 foot handle, as opposed to a trowel), or equivalent, can no longer be used to remove contaminated soil or debris from the bricks that make up the gas holder bottoms. The top two feet of soil from the holders may be stockpiled at the Site and used as backfill in the holders.	Completed 9/98 to 12/98
2.2	Soil Handling and Disposal	
2.2.4	Contaminated debris shall either be cleaned at the Site or treated in the same manner as the soil. Decontaminated debris may be backfilled at the Site. Any on-site debris cleaning shall be performed in such a way as to prevent unacceptable discharge of contaminants from the Superfund Site. Residue or waste from any debris cleaning operation shall be disposed of off-site in accordance with all appropriate Federal and State regulations.	Completed using methods approved by the EPA. Larger debris was cleaned and used as backfill in the holders. Smaller debris treated as soil.
2.2.5	Excavated soil shall be treated off-site by thermal destruction. Thermal destruction includes, but is not limited to, incineration at a hazardous waste incinerator, destruction at a resource recovery unit such as a cement kiln or utility boiler, and low temperature thermal desorption with off-gas incineration. The choice of treatment facility is subject to EPA approval. Soil that must be excavated but is not a RCRA-hazardous waste and is only slightly contaminated, may be landfilled at an acceptable disposal facility subject to EPA approval. The contaminant levels below which soil may be landfilled shall be determined during remedial design and subject to EPA approval.	All excavated soils were rendered non-hazardous in-place within the holders, and shipped to Clean Earth of New Castle, where it was thermally treated by recycling it through an asphalt plant where it became a constituent of asphalt.
2.3	Cultural Resource Recovery	
2.3.2	Prior to any excavation and removal of contaminated soil and installation of the SVE system, steps shall be taken to ensure compliance with the substantive requirements of the National Historic Preservation Act, as amended. The steps may include, but not be limited to, a data recovery step at the gas holders, consideration of piping locations to avoid adverse impacts to cultural resources, consideration of the aesthetics of the SVE treatment equipment, and consideration of cultural resources in the design of the parking lot.	Completed. Archaeological oversight was used for Holder Remediation and SVE trenching. See details in MAAR Associates report “Investigation of Archaeological Resources at the Former Dover Gas Light Property” dated 3/99

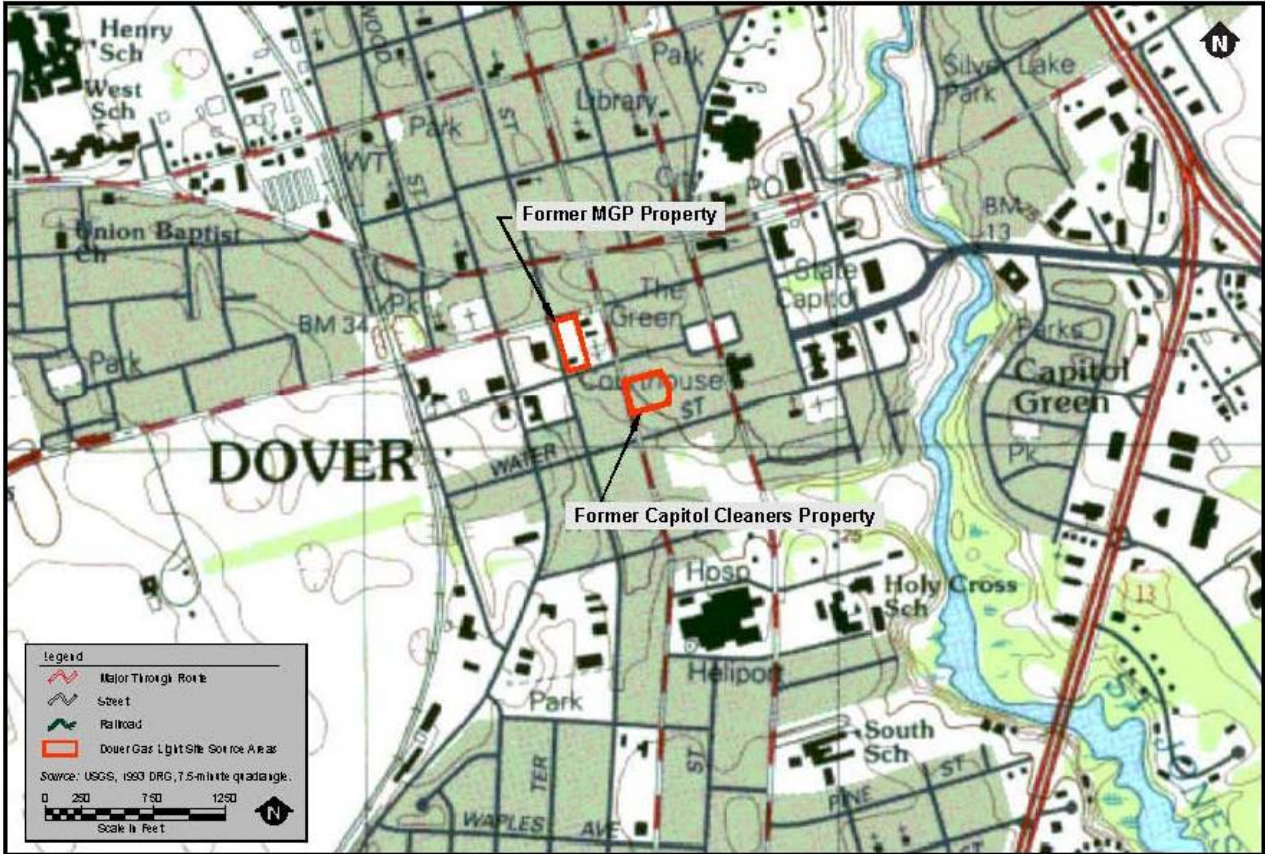
Performance Standard	Brief Description	Notes
2.5	Institutional Controls	
2.5.4	The deed(s) of property that requires excavation as part of this ROD Amendment shall be modified to give notice to the public of past land disposal and of the fact that releases and threats of releases of hazardous substances have affected the respective parcel(s). Notice shall also be placed on the deed(s) that states that there exists a contract between the current owner (State of Delaware) and Chesapeake Utilities Corporation that prohibits development of the parking area of the Delaware State Museum. If uses of the location of the former coal gas plant other than as a parking lot are contemplated in the future, a human health risk assessment must be submitted by the Site owner. The risk assessment, subject to EPA's approval, must show that the planned uses provide for the overall protection of human health and the environment or state additional remedial actions which shall be undertaken prior to a change in land use which would provide for the overall protection of human health and the environment.	Still to be implemented by the State of Delaware.
2.6	Soil Vapor Extraction System	
2.6.1	Soil vapor extraction shall be applied to the areas of the location of the former coal gas plant shown in Figure 2, Alternative #2. (<i>See ROD Amendment for figure.</i>) Note that six SVE wells for the largest area have already been installed.	SVE system operated 2/98 to 4/01.
2.6.2	The SVE system shall be operated in such a manner as to ensure that there are no untreated zones within the areas depicted in Figure 2, Alternative #2. (<i>See ROD Amendment for figure.</i>)	3/20/01 EPA letter indicated that all zones have been addressed adequately.
2.6.3	The SVE wells and any piping (between the wells or between the emissions control equipment and the wells) shall be installed underground in such a manner as to allow a parking lot to be constructed on top. Vaults shall be installed around the wells, flush with the ground or pavement surface, to protect the wells and any piping and instrumentation from vehicular traffic.	Completed between 2/98 and 8/98.
2.6.4	The emissions from the SVE systems shall be treated with granulated activated carbon (GAC) to prevent, to the maximum extent practicable, the transfer of contaminants to the air. The design and operation of the system shall include monitoring, and/or other features, to demonstrate the successful control of the SVE emissions.	SVE system operated 2/98 to 4/01 with discharged vapors treated and monitored.

Performance Standard	Brief Description	Notes
2.6.5	The SVE system shall continue to operate until NAPL recovery operations are completed and until the monitoring of extracted vapors (both contaminants and carbon dioxide) indicate that the SVE system is both removing only insignificant amounts of contaminants and no longer aiding in subsurface biodegradation. The remedial design, subject to EPA approval, shall outline the specific compounds to be monitored to determine when the SVE system can be turned off and shall specifically outline the vapor levels at which the system can be turned off. Due to the fact that vapor levels typically increase if the system is not operated for a period of time, the system must be restarted after sitting idle for one winter. If the system continues to meet the criteria established during the remedial design to allow the system to be turned off, the system can be taken out of service. If the vapor levels rebound, the system must again be operated (until the vapors meet the criteria established during the remedial design to allow the system to be turned off) and then allowed to sit through one winter. This process will continue until such a time as the vapors due not exceed the criteria after restarting the system.	3/20/01 EPA letter indicated that “No Further Action” is required for SVE operations.
2.6.6	Once the SVE system has been shut down for the last time, the SVE wells shall be abandoned according to DNREC regulations to prevent them from being a conduit of contamination to the subsurface.	Completed 5/23/01 and 5/24/01.
2.7	Parking Lot	
2.7.1	A parking lot, paved with asphalt, shall be constructed at the location of the former coal gas manufacturing plant. The parking lot shall cover the approximate area shown in Figure 2, Alternative #2. (<i>See ROD Amendment for figure</i>)	Completed 4/02 – 8/02
2.7.2	The parking lot shall be designed in accordance with local regulations and standard design parameters for paving and traffic control. The parking lot shall also be designed in compliance, as necessary, with the National Historic Preservation Act. The parking lot designer shall discuss the design parameters with the property owner prior to initiation of the design. The property owner shall be allowed to review and comment on the design at appropriate times as determined by EPA. The design is subject to EPA's approval. Since the City of Dover has expressed a desire to potentially lease a portion of this parking lot from the property owner, efforts shall be made during the design to reach agreement on this issue with the City of Dover and the property owner. However, these efforts shall not result in increased parking lot construction costs (unless mutually agreed to by all parties involved in the design) and shall not cause a delay in the construction schedule.	Completed. Design approved by EPA on 4/11/02. State and local approvals and permits obtained.

Performance Standard	Brief Description	Notes
3.2	Erosion Control Plan	
3.2.1	An erosion control plan shall be developed and implemented which outlines procedures to be used to control transport of soil and sediment due to erosion, to the maximum extent practicable and in accordance with the ARARs in Table 2 (<i>see ROD Amendment</i>), for all activities which present the potential for transporting soils or sediments. This plan shall also include procedures to be used to properly control and discharge stormwater from the construction areas.	Submitted for Holder Remediation and for Parking Lot Construction
3.2.2	This plan shall be developed in accordance with State and local regulations and shall be submitted to EPA for approval.	Plans approved by appropriate agencies.
3.3	Particulate Air Emissions	
3.3.1	All remedial work shall be done in such a manner as to minimize transport of airborne particulate emissions.	Completed using methods approved by EPA.
3.3.2	As part of the remedial action health and safety plan, levels of particulate considered to pose an unacceptable health risk shall be developed along with monitoring requirements to measure particulate counts.	Completed and approved by EPA.
3.3.3	Air monitoring shall be done at appropriate times to ensure protectiveness of human health.	Completed, as appropriate, during excavations.
3.3.4	If the air monitoring results indicate that particulate counts are high enough that EPA concludes that unacceptable health risks are posed to people on-site or off-site, appropriate measures shall be taken to reduce the particulate count to safe levels off-site, and either to reduce the particulate count to safe levels on-site or to protect the workers through personal protective equipment.	No exceedances.
3.4	Waste Management Plan	
3.4.1	A waste management plan shall be developed, submitted to EPA for approval, and implemented to handle any other wastes generated during remedial design or remedial action that have not previously had waste management performance standards set. The plan shall outline how all Federal, State, and local regulations will be complied with.	The only unanticipated waste was a compressed cylinder encountered during Holder Remediation. Due to possible danger, immediate action was taken, and cylinder decommissioned by specialist.
3.5	ARARS	
3.5.1	The selected remedy shall attain, at a minimum, all chemical, location, and action specific ARARs listed in Table 2 (<i>see the ROD Amendment</i>) unless a statutory waiver is invoked by EPA.	Completed. See ROD and ROD Amendment for list of ARARs.

Performance Standard	Brief Description	Notes
3.6	Utility Worker Risk Assessment	
3.6.1	A risk assessment shall be prepared to determine if utility workers would be at risk from installation and/or repair work to underground utilities at the location of the former coal gas plant in areas where the soil contamination is not being addressed by other parts of the selected remedy. The risk assessment in the remedial investigation shall be used as a guide for this risk assessment. The risk assessment shall be submitted to EPA for approval.	Provided to EPA 9/25/98. Stated that there was no risk to utility workers.
3.6.2	If the above risk assessment shows that the workers would be at risk, the proper utility companies shall be notified to take additional precautions to ensure the safety of their workers. EPA shall also determine at that time if other remedial measures are necessary to protect any utility workers. This could involve extra SVE wells or excavation.	Even though no adverse risk was identified in the risk assessment, EPA notified utility companies in 1/31/02 letter of Site conditions as a precaution.

Figure 1



Dover Gas Light Superfund Site
Dover, Delaware

Figure 2



Dover Gas Light Superfund Site
Dover, Delaware