



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF REMEDIATION PROGRAMS  
**FINAL DECISION AND RESPONSE TO COMMENTS**

Former DC Department of Corrections  
(Lorton Correctional Complex)  
Lorton, VA 22079  
EPA ID No. VAD980830988

## I. FINAL DECISION

The Virginia Department of Environmental Quality (DEQ) is issuing this Final Decision and Response to Comments (Final Decision) under the authority of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. Sections 6901 and 6992k, regarding the remedy for the Former DC Correctional Facility (Former Lorton Correctional Complex (Facility) located at 8515 Silverbrook Road, Lorton, Virginia.

On June 15, 2018, DEQ issued a Statement of Basis (SB) in which it described its proposed remedy for the Facility. The SB is hereby incorporated in this Final Decision by reference and is included in the enclosed.

## II. PUBLIC COMMENT PERIOD

On June 18, 2018, the public notice for the SB was published in the Lorton Connection newspaper and announced the commencement of a thirty (30)-day public comment period in which it requested comments from the public on the remedy proposed in the SB. In addition, DEQ placed the public notice and SB on its web page. The public comment period ended on July 20, 2018.

## III. RESPONSE TO COMMENTS

On June 18, 2018, DEQ received comments on its proposed remedy for the Facility. The comment came from the office of Fairfax County Supervisor Dan Storck, Mount Vernon District and consisted of a request for a copy of the Statement of Basis for a constituent. The comment is enclosed and does not change the proposed remedy. Consequently, DEQ's Final Remedy did not change from the remedy it proposed in the SB. All persons that submitted comments during the comment period will be provided a copy of the Final Decision and Response to Comments.

## IV. FINAL REMEDY

The Final Remedy, the components of which are explained in detail in the SB, requires the implementation of and maintenance with institutional and governmental controls in the form of land use controls.

## V. DECLARATION

Based on the Administrative Record compiled for Corrective Action at the Former DC Department of Corrections, DEQ has determined that the Final Remedy selected in this Final Decision and Response to Comments is protective of human health and the environment.



Chris M. Evans, Director  
Office of Remediation Programs  
Virginia Department of Environmental Quality



Date

Enclosure: Statement of Basis, June 2018  
Comments received June 18, 2018

COMMENTS RECEIVED

## Kurt Kochan

---

**From:** Speer, Camela  
**Sent:** Monday, June 18, 2018 11:35 AM  
**To:** kurt.kochan@deq.virginia.gov  
**Subject:** FW: Lorton remedy

Hello Kurt,

Can you please share the Statement of Basis and anything else I might need to know to understand what is being commented on during this comment period? Email below from constituent.

THANKS!  
Camela

**Camela E. Speer**  
**Director of Communications**

Supervisor Dan Storck  
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**From:** gbooth123@aol.com [mailto:gbooth123@aol.com]  
**Sent:** Saturday, June 16, 2018 7:26 PM  
**To:** Speer, Camela <Camela.Speer@fairfaxcounty.gov>  
**Subject:** Lorton remedy

Virginia Waste Management Board	
<b>Title:</b>	General Notice - Public Comment Opportunity - Former DC Department of Corrections (Lorton Correctional Complex) Statement of Basis
<b>Expires:</b>	7/16/18
<b>Notice:</b>	The Department of Environmental Quality (DEQ) has prepared a Statement of Basis (SB) on its proposed remedy for the former DC Corrections (Lorton Correctional Facility) (hereinafter referred to as the Site or the Facility) located at 8515 Silverbrook Road Lorton, Virginia.  The Facility ....

**Contact:** Kurt Kochan / [kurt.kochan@deq.virginia.gov](mailto:kurt.kochan@deq.virginia.gov) / (703)583-3825

DO you know this is about? Is Dan involved?

Glenda

## STATEMENT OF BASIS



VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY  
OFFICE OF REMEDIATION PROGRAMS  
**STATEMENT OF BASIS**

June 15, 2018

Former DC Department of Corrections  
(Lorton Correctional Complex)  
Lorton, VA 22079  
EPA ID No. VAD980830988

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Administrative Record – Index of Documents for Statement of Basis

Figure 1 - Site Map

Table 1 – Former Leaking Underground Storage Tanks

## **I. Introduction**

The Virginia Department of Environmental Quality (DEQ) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the former DC Corrections (Lorton Correctional Facility) (hereinafter referred to as the Site or the Facility) located at 8515 Silverbrook Road, Lorton, Virginia. DEQ's proposed remedy for the Facility consists of land use controls in the form of institutional controls. This SB highlights key information relied upon by DEQ in making its proposed decision.

The Facility is subject to the Corrective Action program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. §§ 6901 et seq. (Corrective Action Program). The Corrective Action Program is designed to ensure that certain facilities subject to RCRA have investigated and cleaned up any releases of hazardous waste and hazardous constituents that have occurred at their respective facilities. For this Facility, the DEQ retains primary authority in Virginia for the Corrective Action Program. DEQ has prepared this SB in cooperation with the United States Environmental Protection Agency (EPA).

The Administrative Record (AR) for the Facility contains all documents, including the data and quality assurance information, on which DEQ's proposed decision is based. See Section IX, Public Participation, for information on how you may review the AR.

## **II. Facility Background**

The Facility is located on approximately 2,700 acres of residential, improved land in southern Fairfax County, Virginia. The former Facility has been subdivided and is owned by a combination of government entities, developers, and private homeowners. The majority of the former Facility has been redeveloped into single and multi-family residential dwellings. In May 2009, the U.S. Environmental Protection Agency (EPA) contracted a RCRA Site Visit Report (Report) for the Facility. The purpose of the Report was to consolidate relevant information and redevelopment activities that have occurred at the Facility. The Facility and surrounding areas are shown in Figure 1.

The Lorton Correctional Complex was established circa 1911 and included dormitories, cell blocks, residences, maintenance facilities, a large oil and coal-fired boiler house (steam plants), industrial facilities such as furniture manufacturing and repair facilities, vehicle repair centers, a hog farm, a dairy farm, a water treatment plant, and wastewater treatment plants. The correctional Complex consisted of several facilities including the following: Central Facility, Maximum Security Facility, Modular Facility, Occoquan Facility, Minimum Security Facility, Youth Facility, and Medium Security Facility. The following table summarizes these facilities.

Facility	Date	Location	Buildings	Size	Inmates
Central	1920	Silverbrook Road	83	647,028 ft <sup>2</sup>	1,429
Maximum	1936	Silverbrook Road	20	143,894 ft <sup>2</sup>	646
Modular	1986	Silverbrook Road	5	103,290 ft <sup>2</sup>	800
Occoquan	1925-1930	Ox Road & Lorton Road	65	335,361 ft <sup>2</sup>	1,099
Youth	1960	Furnace Road	29	242,394 ft <sup>2</sup>	406
Medium	No information available				
Minimum	1955	Furnace Road & Hooes Road	16	124,585 ft <sup>2</sup>	1,012

Industrial operations primarily took place in the Central Facility, including wood furniture and upholstery furniture manufacturing and repair, printing operations, metal working and fabrication, clothing manufacturing, vehicle maintenance and repair, auto body work, an industrial laundry operation, and a large industrial boiler or steam plant for heating the Central Facility.

Within the Occoquan Facility, operations included landscaping, plumbing, carpentry, tractor repair, and blacksmithing. The Youth Facility also included shoe and metal fabrication. With the exception of the Modular Facility, various buildings within each inmate facility contained administrative offices, chapels, kitchens, laundry, health clinics, gymnasiums, educational centers, and boiler plants. The DC Department of Corrections Industries began the shutdown operations in July 2001; the Furniture Shop, Metal Works, and Print Shops closed in September 2001. The Vehicle Maintenance Division and the entire prison facility shut down in December 2001. The following facilities also existed at the Site.

### **Nike Missile Battery**

A Nike Missile Battery and Nike Missile Control Center operated at two separate locations at the site between 1954 and 1974. The former Nike Missile Battery was later used as a Minimum Security Complex at the Lorton facility. The Nike Missile Battery was the location of the former underground missile silos, Nike missiles, and support facilities. The former Nike Missile Control Center was located approximately one mile from the Nike Missile Battery. The site was closed and decommissioned by the Department of Defense (DoD) in 1974.

### **Landfill**

In 1972, a major landfill was established at the site. This landfill was commonly referred to as the I-95 Landfill.

### **Energy/Resource Recovery Facility (E/RRF)**

The E/ERF was built adjoining the I-95 landfill and began operations in 1990. It consists of several inter-connected buildings that housed refuse pits, furnaces, boilers, cooling towers, and residue ash pits to process municipal solid waste into energy. It is designed and operated in a similar manner to a typical power plant. Steam is produced from the combustion of MSW, and is used to spin turbine-generators that produce over 80MW of electricity. The facility is regulated by the DEQ air emissions program.

The area immediately to the north is developed by a park and wooded land, Occoquan Regional Park and the Occoquan River border the south, I-95 interstate borders the east and residential dwellings are located to the west.

Potable water for the area surrounding the Facility is provided by the Fairfax County Water Authority and is delivered to users via a municipal public water supply distribution system. Sanitary and storm sewer lines transect the Facility. All sanitary waste water is discharged to the public sanitary sewer system. As of 2018, there were no drinking water wells in the vicinity of the Facility or any plans for proposed drinking water wells. Any future development within the immediate vicinity will be served by the municipal water system.

## **II.a Operations**

No operations currently exist at the Facility. A portion of the property currently remains in public ownership by Fairfax County and is planned to be developed for recreational and open space, educational and cultural facilities, and historic preservation. A significant portion of the original Facility has been sold and developed into residential, single-family detached housing. A portion of the former prison buildings has been repurposed as apartments. Approximately 116 acres of the have been developed into public schools. The I-95 Landfill Complex, a permitted solid waste landfill, and Covanta Fairfax, a waste to energy facility, are located on the southeast portion of the former Facility.

## **II.b Regional Geology and Hydrogeology**

This facility is located at the boundary of the Coastal Plain and the Piedmont geologic provinces. The majority of hilltops and upper slopes are underlain by the Cretaceous Potomac Formation of the Coastal Plains Province. This unit is characterized by silty to gravelly sand. In the vicinity of the former Central Facility, Maximum Security Facility, and Occoquan Facility, the underlying geology consists of sand and gravel of Tertiary or Quaternary Age with maximum thicknesses of approximately 30 feet. The valley bottoms are underlain by Occoquan Granite, Chopawamsic Formation (mostly gneiss), and Quantico Formation (mostly slate and phyllite).

According to the soil survey of Fairfax County, the Former Lorton Correctional Complex is underlain primarily by the Louisburg-Appling-Wosham and the Fairfax-Beltsville-Appling associations. The Louisburg-Appling-Wosham association consists of well-drained, excessively drained, and poorly-drained coarse-textured soils over granite gneiss. The Fairfax-Beltsville-Appling association is well-drained to moderately well-drained soils on high coastal plain terraces that have formed from fluvial material and from granite gneiss.

## **II.c Local Topography, Lithology, and Hydrogeology**

Several surface water bodies are present in close proximity to the Former Lorton Correctional Complex. To the northeast are Rocky Branch, South Run, and Pohick Creek; in the center is Giles Run; and Mills Run is to the south. Surface runoff is generally to these water features, which all ultimately discharge to the Occoquan River just to the south of the Facility. The average depth

to groundwater across the Facility is between 20 and 40 feet below ground surface (bgs). Groundwater encountered at depths shallower than that are perched or areas of groundwater discharge.

The National Wetlands Inventory shows no mapped wetlands at the site. However, small areas of wetlands may be present in the low-lying portions of the Facility and specifically along streams and ponds.

### III. Summary of Environmental Investigations

Based on a review of files maintained by the DEQ and EPA Region 3, the Facility in consultation with EPA identified a number of solid waste management units (SWMU) and areas of concern (AOC) at the Former Lorton Correctional Complex. Environmental investigations were conducted on SWMUs identified at the Facility and investigation and cleanup activities focused on the following:

Unit	Description	Waste or COC	Closure Status
<b>SWMU No. 1 – Facilities Management Complex Storage Area and the Industries</b>	Less than 90-day Hazardous Waste Accumulation Areas		No evidence of a spill or release was found during the visit or in the files reviewed at the DEQ or USEPA Region III offices.
<b>SWMU No. 2 - Satellite Accumulation Areas</b>	Satellite Accumulation Area #1 (Metal Shop) Satellite Accumulation Area #2 (Metal Shop) Satellite Accumulation Area #3 (Furniture Shop) Satellite Accumulation Area #4 (Furniture Shop) Satellite Accumulation Area #5 (Furniture Shop) Satellite Accumulation Area #6 (Furniture Shop) Satellite Accumulation Area #7 (Body Shop)	(D001/D035/F003/ F005)  (F003/F005)  (D001/D035/F003/F005) (D001/D035/F003/F005)  /F002/F003  (D001/ F002/F003)  (D001/D035/F003/ F005)	No evidence of a spill or release was found during the visit or in the files reviewed at the DEQ or USEPA Region III offices.
<b>SWMU No. 3 – Former Laundry Wastewater Clarifier (also known as Ink Pit)</b>	20,000-gallon laundry wastewater clarifier	F002/F003/F005	This SWMU was certified “clean-closed” for both soils and groundwater by DEQ on May 6, 2002.
<b>SWMU No. 4 – Former Underground Storage Tanks</b>	Se Appendix X for list	Diesel/gasoline/#2 & 4 Fuel oil/Used oil	Addressed and closed under the DEQ Petroleum Storage Tank program.
<b>SWMU No. 6 – Former Lorton Dairy</b>	Dispenser and Fuel oil UST	Fuel Oil	Addressed and closed under the DEQ Petroleum Storage Tank program.

<b>Unit</b>	<b>Description</b>	<b>Waste or COC</b>	<b>Closure Status</b>
<b>SWMU No. 7 – Former Tear Gas Impact Sites</b>	Old Chemical Training Area	Metals	Low levels of metals consistent with background concentrations. No further investigation is required.
<b>SWMU No. 8 – Former Non-Permitted Landfill</b>	20-acre storage with possible disposal of vehicles and equipment	Antimony, Chromium, and Lead	No Further Action is required.
<b>SWMU No. 9 – Former Drum Dumping Area</b>	Unpermitted Drum Dumping Area	Antimony, Chromium, Mercury, and Lead	No Further Action is required.
<b>SWMU No. 10 – Former Buried Drum Area – Pulte Homes Area</b>	Unpermitted Drum Disposal Area	Lead, xylenes, toluene, and naphthalene.	No Further Action is required.
<b>SWMU No. 11 – Former Occoquan Blacksmith / Tractor Repair Shop</b>		Lead and TPH	No Further Action is required.
<b>SWMU No. 12 – Central Facilities Industries Shops</b>	furniture manufacturing and repair, printing, metal fabrication, and auto body work	Copper, lead and Zinc	Based on actions performed to date through redevelopment of the property, No Further Action is required.
<b>SWMU No. 13 – Former Vehicle Maintenance Facilities Central Facility</b>	Vehicle Maintenance Facility	VOCs/SVOCs	No Further Action is required.
<b>SWMU No. 15 – Former Agricultural Areas (Herbicides/Pesticides Area)</b>	Farmland	pesticides and/or herbicides	No Further Action is required.
<b>SWMU No. 16 – Former Facilities Management PCB Storage Shed</b>	PCB Storage Shed	PCBs	No Further Action is required.
<b>SWMU No. 17 – Former NIKE Missile Complex</b>	Missile Storage facility	TCE	Referred to FUDS
<b>SWMU No. 18 – Former Miscellaneous Dumping Areas</b>			No Further Action is required.
<b>SWMU No. 19 – Former Central Facilities Boiler House and Occoquan Facilities Boiler House and Coal Piles</b>	Boiler house	Diesel/Fuel Oil	No Further Action is required.
<b>SWMU No. 20 – Former Wastewater and Water Treatment Plants</b>	WWTP		No Further Action is required.
<b>SWMU No. 21 – Former Occoquan Greenhouse Storage</b>		BTEX/TPH-GRO	No Further Action is required.
<b>SWMU No. 22 – Former Old Line Shop, Facilities Management Buildings N-7 and N-8</b>	Storage facility	Pesticides and herbicides	No Further Action is required.

Unit	Description	Waste or COC	Closure Status
SWMU No. 23 – Former Chicken Coop Area	Storage facility	herbicides	No Further Action is required.
SWMU No. 24 – Former Minimum Security Facility, Dormitory #4		PCBs	No Further Action is required.
SWMU No. 25 – Former I-95 Landfill	Permitted municipal waste landfill		Area is currently under a permit and managed in accordance with the VSWM program.
SWMU No. 26 – Energy / Resource Recovery Facility	Small Power Production Facility		No Further Action is required.

The facility generated and managed hazardous waste from the various manufacturing and industrial related activities including wood/upholstery furniture manufacturing/repair, printing operations, metal working and fabrication, vehicle maintenance and repair, and auto body work. The industrial laundry facility was also associated with the management and treatment of hazardous wastes. Hazardous wastes generated at the site primarily included ignitable wastes, halogenated solvents, non-halogenated solvents (D001, F001, F002, F003, and F005).

Environmental investigations and cleanup activities at the Facility performed were mainly initiated due to redevelopment of the Site. A summary of the investigations and remediation of these SWMU's are as provided below.

**Tear Gas Impact sites (SWMU#7)**

As part of the Phase II Environmental Site Assessment (ESA), the two Tear Gas Impact sites (SWMU#7) were assessed for potential impacts to soil and groundwater. Surface and subsurface soil samples were collected from the Old Chemical Training Area and Tear Gas Training Site No. 2. Attempts to obtain groundwater samples were unsuccessful in these areas. The soil samples were analyzed for Semi-Volatile Organic Compounds (SVOCs) and priority pollutant metals. Analytical results from both areas were non-detect for SVOCs. Low level detections of chromium, copper, lead, nickel, and zinc were reported. However, the reported concentrations were consistent with reasonably expected background levels for soil in the northern Virginia area. Based on these results, it was concluded that operations in these areas had not adversely impacted soil or groundwater.

According to information provided during the RCRA site visit in October 2008, the area of Tear Gas Training Site No. 2 was located within the footprint of the Golf Course that has been developed at the former Lorton site. The Golf Course comprises approximately 275 to 300 acres of the site.

**Non-Permitted Landfill - SWMU#8**

As part of the Phase II ESA, the Non-Permitted Landfill (SWMU#8) was investigated to determine if buried metallic and non-metallic waste was present in the fill areas. The investigative work also focused on whether hazardous chemicals were leaching from the area.

A geophysical survey was conducted on three portions of the Non-Permitted Landfill with the following summary findings:

- Area I is an irregular grid approximately 400 feet in the east-west direction and 800 feet in the north-south direction and was investigated because of the reported burying of equipment. This area was found to have large, buried metallic objects in a 3,000-ft<sup>2</sup> area. It was believed that some objects may be buried at depths of 20 to 30 feet, which exceeds the capabilities of the detection techniques employed. The center portion of Area I was addressed in 1992 and was found to be free of anomalies during the 1999 Phase II ESA.
- Area II is approximately 300 feet to the east of Area I and was characterized by historic changes in topography. It is 350 feet in the east-west direction and 400 feet in the north-south direction. The geophysical survey identified a significant quantity of metallic and non-metallic objects in an approximate crescent shape. The most significant burial activities were noted in a 100,000 ft<sup>2</sup> portion of Area II. Similar to Area I; it was believed that some objects may be buried at depths of 20 to 30 feet.
- Area III is immediately northwest of Area I and is a small, rectangular area approximately 60 feet by 250 feet. The geophysical survey identified an elongated variance, typically of buried utilities, across this area. In addition, several small variances were noted that potentially indicate small buried, metallic objects.

Based on the extent and significance of geophysical anomalies in Area II, the Phase II ESA included soil and groundwater sampling downgradient of the Non-Permitted Landfill to assess contaminant migration from this area. Samples were analyzed for Volatile Organic Compounds (VOCs), SVOCs, and priority pollutant metals. In addition, one groundwater sample was analyzed for pesticides and herbicides.

Soil results	Detected Concentrations	Average Concentration in United States Soil <sup>1</sup>
Antimony	1,700 mg/kg	1.0 mg/kg to 8.8 mg/kg
Chromium	17,000 mg/kg	1.0 mg/kg to 2,000 mg/kg
Lead	84,000 mg/kg	10 mg/kg to 700 mg/kg

<sup>1</sup> Elemental Concentrations in Soils and other Surficial Materials of the Conterminous United States, Schacklette & Boerngen, USGS, 1984

Groundwater samples were collected from four locations. Similar to the soil results, VOCs and SVOCs were below detection limits. Two of the four groundwater samples also exhibited elevated metals detections. One of these samples, GW-01, was collected from the same location as SB-01. The following table summarizes the elevated detections in these samples and the drinking water standards.

Chemical	Detected Concentrations		Drinking Water Standard
	GW-01	GW-04	
Antimony	170 µg/l	< 5 µg/l	6 µg/l
Lead	530 µg/l	100 µg/l	15 µg/l

Based on the soil and groundwater samples collected as part of the 1999 Phase II ESA, the Non-Permitted Landfill had adversely impacted soil and groundwater at the site. Subsequent to the Phase II ESA, a Site Characterization was undertaken as part of divestiture of the Lorton Correctional Complex. The purpose of the investigation was to facilitate the development of a remedial approach for this area. Cleanup criteria selection was based on land use planning for low-density and medium-density single family housing in the landfill areas. The following excavations were planned:

- **Area I:** Two areas of excavation are present in Area I, with depths ranging from 8 to 12 feet bgs. The first area was present in the northern portion of the Area I grid system and comprised 32,500 ft<sup>2</sup>. The second excavation is located in the southern portion and covers an area of 62,500 ft<sup>2</sup>. Within these areas, soils were impacted by metals above background concentrations. In addition, miscellaneous debris (i.e., brick, concrete, metallic objects, wood) were anticipated in these excavation areas.
- **Area II:** This area is approximately 125,000 ft<sup>2</sup> and excavation was planned to depths of 5 to 40 feet bgs. Soils with metal concentrations above background concentrations are present throughout Area II. Black ash was also located throughout the excavation area, reaching a thickness of approximately 30 feet in the east-northeastern portion of the site. Soils contaminated with petroleum products were present in the center of Area II. Excavation was to be to a depth of 40 feet bgs in this area to remove free product as well as the impacted soil. Miscellaneous debris was also anticipated in Area II.

Remediation of the Non-Permitted Landfill was completed between July 18, 2000, and September 10, 2001. Confirmatory samples were collected to document that remaining residuals and soils concentrations were below actionable levels. A total of 187,435 tons of material was transported off-site for disposal in a RCRA Subtitle D facility. In addition, a total of 23,864 tons of this material required disposal as a hazardous waste in a RCRA Subtitle C TSD facility. A summary of the excavations follows:

- Area I: A total of 4,466 tons of non-hazardous material was removed. The majority of waste was removed from 5 to 15 feet bgs.
- Area II: This was the largest area of excavation with a total of 121,393 tons of material removed. Approximately 18 percent of this material was considered hazardous waste.
- Area III: No material was removed from this area.
- Area IV: A total of 5,178 tons of material was removed. The majority of waste was considered non-hazardous miscellaneous solid waste and construction debris. A total of 26 tons of hazardous lead-based paint contaminated soil was removed from this area.
- Area V: A total of 52,620 tons of material was removed. The majority of the waste was considered non-hazardous petroleum-contaminated soil. The remainder of the waste was hazardous (80 tons) and non-hazardous (1,957 tons) black ash.
- Area VI: A total of 1,941 tons of lead-based paint contaminated soil was removed. Approximately 70 percent of this soil was classified as hazardous waste.

Following removal of waste from the Non-Permitted Landfill, four quarters of post-closure groundwater monitoring was completed. Quarterly Monitoring Report #4, Final Monitoring Event was submitted on July 12, 2002, and recommended no groundwater remediation and discontinuation of the groundwater monitoring.

**Drum Dumping Area - SWMU#9**

The Drum Dumping Area (SWMU#9) was evaluated as part of the Phase II ESA in 1999. This assessment focused on potential impacts to soil and groundwater from leaking drums. Samples of the sediment/sludge and surface water were collected. Samples were analyzed for VOCs, SVOCs, and priority pollutant metals.

Soil results were generally found to be below detection limits for VOCs and SVOCs or at concentrations for metals consistent with background levels expected in the soils of Northern Virginia. However, the soil/sludge samples reported high concentrations for antimony, chromium, lead, and mercury. The following table summarizes the elevated detections in this sample and the average concentrations found in the United States.

Chemical	Detected Concentrations		Average Concentration in United States Soil <sup>1</sup>
	A-10-DW-01	A-10-DW-02	
Antimony	550 mg/kg	560 mg/kg	1.0 mg/kg to 8.8 mg/kg
Chromium	20,000 mg/kg	22,000 mg/kg	1.0 mg/kg to 2,000 mg/kg
Lead	85,000 mg/kg	94,000 mg/kg	10 mg/kg to 700 mg/kg
Mercury	24 mg/kg	25 mg/kg	0.01 mg/kg to 4.6 mg/kg

<sup>1</sup>Elemental Concentrations in Soils and other Surficial Materials of the Conterminous United States, Schacklette & Boerngen, USGS, 1984

In the surface water sample, the only chemical detected above applicable water quality and/or drinking standards was lead. The detected concentration in the stream was 44 mg/l, which exceeds the 15 mg/l drinking water standard. Based on the sediment/sludge and surface water samples collected as part of the 1999 Phase II ESA, the Drum Dumping Area had adversely impacted this stream.

Subsequent to the Phase II ESA, a Site Characterization was undertaken as part of divesture of the Lorton Correctional Complex. This investigation was conducted between November 1999 and January 2000 and included hand auger and direct-push soil samples; Membrane Interface Probe (MIP) work; and groundwater monitoring at the Drum Dumping Area. The results of this investigation were documented in the March 2000 Comprehensive Site Characterization and Remedial Action Work Plan for the Non-Permitted Landfill Areas. The purpose of the investigation was to facilitate the development of a remedial approach for this area.

Remediation of the Drum Dumping Area was included in the remedy for the Non-Permitted Landfill (SWMU No. 8) as the Drum Dumping Area is collocated with Area VI noted above. Following remediation of the Non-Permitted Landfill, which includes the Drum Dumping Area, four quarters of post-closure groundwater monitoring was completed. Quarterly Monitoring Report #4, Final Monitoring Event was submitted on July 12, 2002, and

recommended no groundwater remediation and discontinuation of the groundwater monitoring.

### **Buried Drum Area - SWMU#10**

During redevelopment efforts in 2003, an area of buried drums (SWMU#10) was encountered by Pulte Homes while installing a stormwater outfall. This 80-foot by 80-foot by 14-foot deep burial area was located between the former rail line (i.e., the Greenway) and the side spur used to switch rail cars. It was believed the 55-gallon drums may have been buried in the late 1960s and had been from the vehicle maintenance activities conducted at the Lorton Correctional Complex. A DEQ inspection following drum discovery estimated that 20 to 25 drums may have been buried in this area. Some drums were found to be punctured and leaking.

Cleanup of this area was conducted in April 2003 and consisted of waste characterization; removal of buried drums and impacted soil; and off-site disposal. A sludge sample collected from one drum was found to be hazardous (D008) with a lead concentration of 45 mg/l in the leachate. Samples of material in the drums indicated the presence of TPH, at concentrations as high as 950,000 mg/kg, as well as xylenes, toluene, and naphthalene. With the exception of the one hazardous drum, the remainder of the waste streams (i.e., impacted soils, scrap drum waste, and liquid waste) were determined to be non-hazardous, petroleum-impacted material.

Confirmatory soil samples were collected from the sidewalls and bottom of the excavation following drum removal. Analytical results indicated the excavation had successfully addressed contamination in the lateral extent but that vertical excavation would be necessary. Based on discussions with regulatory agencies, the final approach to address impacted soil was agreed to include direct-push borings to define the horizontal extent of impacts. A grid system was established over the 80' by 80' excavation with a total of 18 grid squares that each corresponded to a direct-push boring. Samples were collected at 4' intervals and analyzed for TPH-DRO and TPH-GRO. Results were used to target grids for additional excavation.

The calculated average compliance sample concentration was 34 mg/kg TPH-DRO in soil in this area. This is well below the DEQ's Petroleum Tank Program action level or performance standard of 100 mg/kg and below the clean fill criteria of 50 mg/kg. A groundwater sample collected from a temporary well point was non-detect for both TPH-DRO and TPH-GRO. The cleanup efforts conducted for this SWMU are summarized as follows:

- 149.5 tons of non-hazardous scrap drum waste was removed;
- 6,040.2 tons of impacted soil was removed;
- 6,112 gallons of liquid was removed;
- One drum of hazardous material was removed; and
- Seven loads of scrap metal (e.g., debris, engine blocks, and axles) were removed.

The above waste materials were shipped or manifested off site for treatment and or disposal to appropriate TSD facilities either regulated under RCRA Subtitle D, Subtitle C, or recycled as applicable, under the DEQ's oversight.

**Occoquan Blacksmith/Tractor Repair Shop - SWMU #11**

As part of the Phase II ESA, the Occoquan Blacksmith/Tractor Repair Shop (SWMU #11) was assessed for potential impacts to soil and groundwater from prior operations. Suspected contaminants included petroleum products, solvents, PCBs, and metals. Therefore, soil and groundwater samples were collected from this area and analyzed for VOCs, SVOCs, PCBs, TPH, pesticides, and priority pollutant metals.

Analytical results were non-detect for VOCs, SVOCs, PCBs, and pesticides. Low level detections of chromium, copper, lead, nickel, selenium, and zinc were reported. However, the reported concentrations were at concentrations consistent with background levels expected in the soils of Northern Virginia. The only metal to exceed background concentrations was selenium, which was detected at a concentration of 36 mg/kg. As no known source for the selenium is present in this area, therefore it is believed to be naturally occurring.

**Central Facilities Industries Shop - SWMU#12**

As part of the Phase II ESA, the Central Facilities Industries Shop (SWMU#12) was assessed for potential impacts to soil and groundwater from prior operations. The DEQ had recently cited these operations for deficiencies in the management of hazardous wastes. Samples of soil and groundwater were collected and analyzed for VOCs, SVOCs, and priority pollutant metals. The sampling locations were selected, as they were known staging and temporary storage locations for 55-gallon drums.

Soil results were generally below detection limits for VOCs and SVOCs or at concentrations for metals consistent with background levels expected in the soils of Northern Virginia. However, one sample exhibited elevated metals concentrations. This sample was collected on the north side of the Furniture Repair Shop. The following table summarizes the elevated detections in this sample and the average concentrations found in the United States.

<b>Chemical</b>	<b>Detected Concentration</b>	<b>Average Concentration in United States Soil<sup>1</sup></b>
Copper	3,300 mg/kg	1 mg/kg to 700 mg/kg
Lead	2,700 mg/kg	10 mg/kg to 700 mg/kg
Zinc	7,900 mg/kg	5 mg/kg to 2,900 mg/kg

<sup>1</sup> Elemental Concentrations in Soils and other Surficial Materials of the Conterminous United States, Schacklette & Boerngen, USGS, 1984

Groundwater concentrations in the Central Facilities Industries Shop were generally below primary and secondary drinking water standards, the exception being lead at concentrations of 42 µg/l and 130 µg/l. Based on the soil and groundwater samples collected as part of the 1999 Phase II ESA, the IC's to be implemented will eliminate the groundwater pathway.

**Old Vehicle Maintenance Facility - SWMU#14**

The Old Vehicle Maintenance Facility (SWMU#14) was included in the subsequent Phase II ESA to determine if operations had impacted soil and groundwater. Surface and subsurface soil samples were collected. Attempts to reach groundwater were unsuccessful in this area. The soil samples were analyzed for VOCs, SVOCs, priority pollutant metals, and pH. Analytical results from the Old Vehicle Maintenance Area were non-detect for VOCs and SVOCs. Low level detections of metals were found in soil samples in this area consistent with background concentrations. No further investigation was deemed warranted.

**Firing Range Sites - SWMU#15**

As part of the Phase II ESA, the three Firing Range Sites (SWMU#15) were assessed for potential impacts to soil and groundwater. The primary environmental concern at the Firing Ranges was lead. For Firing Range No. 1, the highest concentrations were found in the 30 feet by 90 feet area in front of the stacked timbers. Outside this area, lead concentrations returned to background concentrations. Lead at Firing Range No. 2 and Firing Range No. 3 appeared to be contained in the backstops and upper 6 inches of soil in the firing lanes. In addition, elevated lead concentrations were detected in samples from the backstop at the Shotgun Range.

The following table summarizes lead concentrations that exceeded applicable standards in each of the Firing Range Sites. All concentrations are reported in mg/kg.

Sample	Detected Concentration	Average Concentration in United States Soil <sup>1</sup>	Bare Residential Soil with Child Contact	Bare Residential with Minimal Child Contact	Maximum Bare Residential Soil
<b>Firing Range Site #1</b>					
A-06-SS-01	770	10 – 700	400	2,000	5,000
A-06-SS-02	640				
A-06-SS-03	420				
<b>Firing Range Site #2</b>					
A-23-SS-01	520	10 – 700	400	2,000	5,000
A-23-SS-02	940				
A-23-SS-06	18,000				
A-23-SS-07	6,000				
A-23-SS-09	870				
A-23-SB-03	720				
<b>Firing Range Site #3</b>					
A-66-SS-03	4,500	10 – 700	400	2,000	5,000
A-66-SS-04	10,000				
A-66-SS-06	4,900				
A-66-SS-07	30,000				
<b>Shotgun Range Site</b>					
A-66-SS-01	480	10 – 700	400	2,000	5,000
A-66-SS-02	1,800				

<sup>1</sup> Elemental Concentrations in Soils and other Surficial Materials of the Conterminous United States, Schacklette & Boerngen, USGS, 1984

Elevated lead concentrations were also reported in groundwater samples collected from Firing Range No. 2 and Firing Range No. 3. The following table summarizes lead concentrations that exceeded drinking water standards in each of the Firing Range Sites.

Sample	Detected Concentration	Drinking Water Standards
Firing Range Site No. 2		
A-23-GW-01	280 µg/l	15 µg/l
A-23-GW-02	1,600 µg/l	
A-23-GW-03	440 µg/l	
Firing Range Site No. 3		
A-66-GW-01	24 µg/l	15 µg/l
A-66-GW-02	440 µg/l	
A-66-GW-03	270 µg/l	
A-66-GW-04	1,300 µg/l	

Based on the soil and groundwater samples collected as part of the 1999 Phase II ESA, it appears that firing range activities had impacted both soil and groundwater at the site. Contamination was primarily located near the natural soil berm backstops. Subsequent to the Phase II ESA, additional site characterization was undertaken as part of divestiture of the Lorton Correctional Complex. The investigations were conducted between November 1999 and January 2000 and included hand auger soil samples and groundwater monitoring at the three Firing Range Sites. The purpose of the investigation was to delineate areas of lead in excess of 400 mg/kg for remediation.

Remediation of the Firing Range Sites was initiated on May 23, 2000 and completed on September 29, 2000. During this timeframe, a total of 19,021 tons of non-hazardous lead-contaminated soil was removed from the three ranges and sent off-site for disposal to a RCRA Subtitle D Landfill. Approximately 2,490 tons of the contaminated soil was initially considered hazardous and required on-site treatment (i.e., cement stabilization) prior to off-site disposal. Waste minimization strategies resulted in the recovery and recycling of 96,160 pounds of lead shot.

The area of Firing Range No. 3 was located within the footprint of the Golf Course that has been developed at the former Lorton site.

**Agricultural Areas - SWMU#15**

As part of the Phase II ESA, the Agricultural Areas (SWMU#15) were assessed for potential impacts to soil and groundwater from prior pesticide and/or herbicide applications. Subsurface soil samples were collected from the orchard area and pesticides, herbicides, and priority pollutant metals. Analytical results from this area were non-detect for all analytes. Based on these results, it was concluded that operations in this area had not adversely impacted soil.

### **Small Storage Shed - SWMU#16**

In addition to the PCB-containing equipment throughout the facility, a small storage shed (SWMU#16) in the northwestern portion of Facilities Management was labeled as a “PCB Storage Shed”. This shed was adjacent to Building N-9, the Welding Shop. The 1999 Phase II ESA included assessment in this area to determine if soil and groundwater had been impacted by PCBs. Analytical results for both soil and groundwater were below detection limits for PCBs. Based on these results, it did not appear that soil or groundwater were impacted by operations at the PCB Storage Shed.

### **NIKE Missile Complex - SWMU #17**

As part of the Phase II ESA, the NIKE Missile Complex (SWMU #17) was assessed for potential solvent, acid, or other hazardous chemical impacts to soil and groundwater from prior activities. Contaminants typically associated with NIKE Missile Sites include carbon tetrachloride, trichloroethene (TCE), 1,1,1-trichloroethane (TCA), nitric acid, alcohols, dimethyl hydrazine, battery acid, petroleum products, waste oils, and other solvents and degreasers. Soil and groundwater samples collected from the NIKE Missile Complex were analyzed for VOCs and petroleum hydrocarbons.

Analytical results were generally below detection limits. However, TCE, cis-1,2-dichloroethene, carbon tetrachloride, and chloroform were detected in the groundwater. TCE was the only contaminant detected at concentrations above applicable standards. The following table summarizes the elevated detections in these samples and the drinking water standards.

Chemical	Detected Concentrations					Drinking Water Standard
	GW-02	GW-04	GW-05	GW-06	GW-07	
Trichloroethene		6 µg/l	8 µg/l	24 µg/l	21 µg/l	5 µg/l

Soils in the NIKE Missile Complex did not appear to be impacted by earlier operations. The groundwater at the Facility is not used as a drinking water source and future use will be addressed with ICs. In addition, based on the levels of VOCs present in the groundwater, the vapor intrusion (VI) pathway is not anticipated to be an issue. Further, the former NIKE Missile Complex facility falls under the Formerly Used Defense Sites (FUDS) program so any further assessment would be completed by the DoD.

## **IV. Corrective Action Objectives**

### **V.a Groundwater**

DEQ's Corrective Action Objectives for groundwater at the Facility is to control exposure to any hazardous constituents in the groundwater by requiring the compliance with and maintenance of an institutional control that restricts use of groundwater since several chemicals of concern (COC) have been identified above an USEPA maximum contaminate level (MCL). The IC's will remain in effect until data is presented demonstrating that groundwater is below applicable MCLs.

## V.b Soil

DEQ's Corrective Action Objective for Facility soils is to control exposure to any remaining hazardous constituents remaining in subsurface soils by requiring the compliance with and maintenance of land use restrictions at the Facility and adherence to a Soil Management Plan.

## VI.c Vapor Intrusion

There are currently no demonstrated unacceptable risks to human health due to vapor intrusion from the identified COCs.

## VI. Proposed Remedy

### VI.a Compliance with and Maintenance of Institutional and Engineering Controls (ICs and ECs)

DEQ's proposed decision represents "Corrective Action Complete with Controls" as described in EPA's "Final Guidance on Completion of Corrective Action Activities at RCRA Facilities", (68 FR 8757, February 25, 2003). A Corrective Action Complete with Controls determination indicates that protection of human health and the environment has been achieved, and will continue as long as the necessary operation and maintenance actions are performed, and the institutional controls are maintained and complied with. Institutional controls are required to limit disturbance of subsurface soil and to prohibit the potable use of groundwater beneath the facility. Fairfax County prohibits the installation of Class III potable wells in areas where public water is available within 400 feet of a water main. Further based on Virginia Department of Health private water well regulations regarding setbacks, private water well installation would not be approved in the developed areas of the former Facility.

DEQ's proposed remedy for the Facility consists of the following components:

Because contamination may remain in the subsurface soils and groundwater at the Facility, DEQ's proposed final remedy includes land use restrictions to minimize the potential for human exposure to soil that contains contaminants above levels of concern. The land use restrictions will be implemented through institutional (ICs). ICs are non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use and inform subsequent purchasers of the environmental conditions at the Facility and of DEQ's final remedy for the Facility.

DEQ is proposing the following institutional controls be implemented and maintained at the Facility:

- All earth moving activities including excavation, drilling and construction activities that would result in direct exposure to soil or disturbance of the soil on those portions of the

Facility associated with the closed landfills shall be prohibited without DEQ approval of a Materials Management Plan.

- Maintain cap and comply with all applicable VA solid waste regulations at the closed solid waste landfill (SWMU-8).
- The I-95 Landfill will continue to be operated and monitored according to Virginia Solid Waste Regulations.
- In accordance with Fairfax County's ordinance 70.1, Class III Private Potable Wells are prohibited from being installed at a private dwelling that is located within 400 feet of public water supply line.
- Groundwater shall not be used for potable purposes unless it is demonstrated to DEQ that such use does not pose an unacceptable risk to human health and DEQ provides prior written approval for such use.
- Notify local health department that groundwater has been impacted and no new groundwater wells should be permitted unless it has been demonstrated that groundwater has meet applicable EPA or DEQ standards.

## VII. Evaluation of DEQ's Proposed Remedy

### VII.a Threshold Criteria

#### 1. **Protect Human Health and the Environment**

The primary human health and environmental threats are potential human consumption of contaminated groundwater and direct contact with contaminated soil. The proposed remedy will achieve protection of human health and the environment by land and groundwater use restrictions to prohibit future use and through the adherence to a soil management plan.

#### 2. **Achieve Media Cleanup Objectives**

The proposed remedy will not achieve the media cleanup objectives. However, land use controls will control exposure to any hazardous constituents remaining in subsurface soils or groundwater.

#### 3. **Remediating the Source of Releases**

The source of the releases have either been remediated through site redevelopment or regulatory closure. Identified petroleum releases from either an AST or UST have been addressed by the DEQ UST remediation program.

### VII.b Balancing/Evaluation Criteria

#### 1. **Long-Term Effectiveness**

The proposed remedy will provide long-term protection of human health and the environment. In addition, land and groundwater use controls prohibiting potable use of groundwater beneath the facility.

#### 2. **Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents**

The reduction of toxicity, mobility and volume of hazardous constituents at the Facility has already been achieved by the excavation of contaminated soils associated with known petroleum releases, excavation of lead impacted soil, and excavation of former unpermitted landfills.

**3. Short-Term Effectiveness**

Under the proposed remedy, land and groundwater use restrictions that limit excavation of soils and prohibit consumption of groundwater will be developed after selection of the remedy to provide short term effectiveness in protecting human health. Groundwater for potable use is limited by Fairfax County's ordinance that prohibits the installation of Class III Private Potable Water Wells for private dwellings located within 400 feet of a public water supply line.

**4. Implementability**

DEQ's proposed remedy is readily implementable. With respect to the implementation of the ICs, DEQ expects to use local county ordinance and Master Declaration and Soil Management Plan that will be included in the bylaws of the Home Owner's Association for the Laurel Hill development. Therefore, DEQ does not anticipate any regulatory constraints in implementing its proposed remedy.

**5. Cost**

DEQ's proposed remedy is cost effective since the only remaining CA activities include maintaining compliance with land use controls.

**6. Community Acceptance**

DEQ will evaluate Community acceptance of the proposed remedy during the public comment period and will be addressed in the Final Decision and Response to Comments (FDRTC).

**10. Federal Agency Acceptance**

DEQ and EPA coordinated on the proposed remedy. EPA will be notified of the proposed remedy. If EPA provides comments during the public comment period, DEQ will address them in the FDRTC.

## **VIII. Financial Assurance**

DEQ will not require financial assurance annually to cover the costs of implementing the proposed remedy.

## **IX. Public Participation**

Before DEQ makes a final decision on its proposal for the Facility, the public may participate in the remedy selection process by reviewing this SB and documents contained in the Administrative Record (AR) for the Facility. The AR contains all information considered by DEQ

in reaching this proposed decision. The Administrative Record, including the SB, is available for review during normal business hours at:

Virginia Department of Environmental Quality  
1111 East Main Street, Suite 1400  
Richmond, Virginia 23218  
Contact: Kurt Kochan  
Phone 703-583-3825  
Fax 703-583-3821  
Email [kurt.kochan@deq.virginia.gov](mailto:kurt.kochan@deq.virginia.gov)

Interested parties are encouraged to review the AR and comment on DEQ's proposed remedy. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. You may submit comments by mail, fax, or e-mail to Kurt Kochan, DEQ corrective action project manager. DEQ will hold a public meeting to discuss this proposed remedy upon request, which should also be made to Kurt Kochan whose contact information is listed above.

DEQ will respond to all relevant comments received during the comment period. If DEQ determines that new information warrants a modification to the proposed remedy, DEQ will modify the proposed remedy or select other alternatives based on such new information and/or public comments. DEQ will announce its final remedy and explain the rationale for any changes in a document entitled the FDRTC. All persons who comment on this proposed remedy will receive a copy of the FDRTC. Others may obtain a copy by contacting Kurt Kochan at the address listed above.

Date: 8/6/18

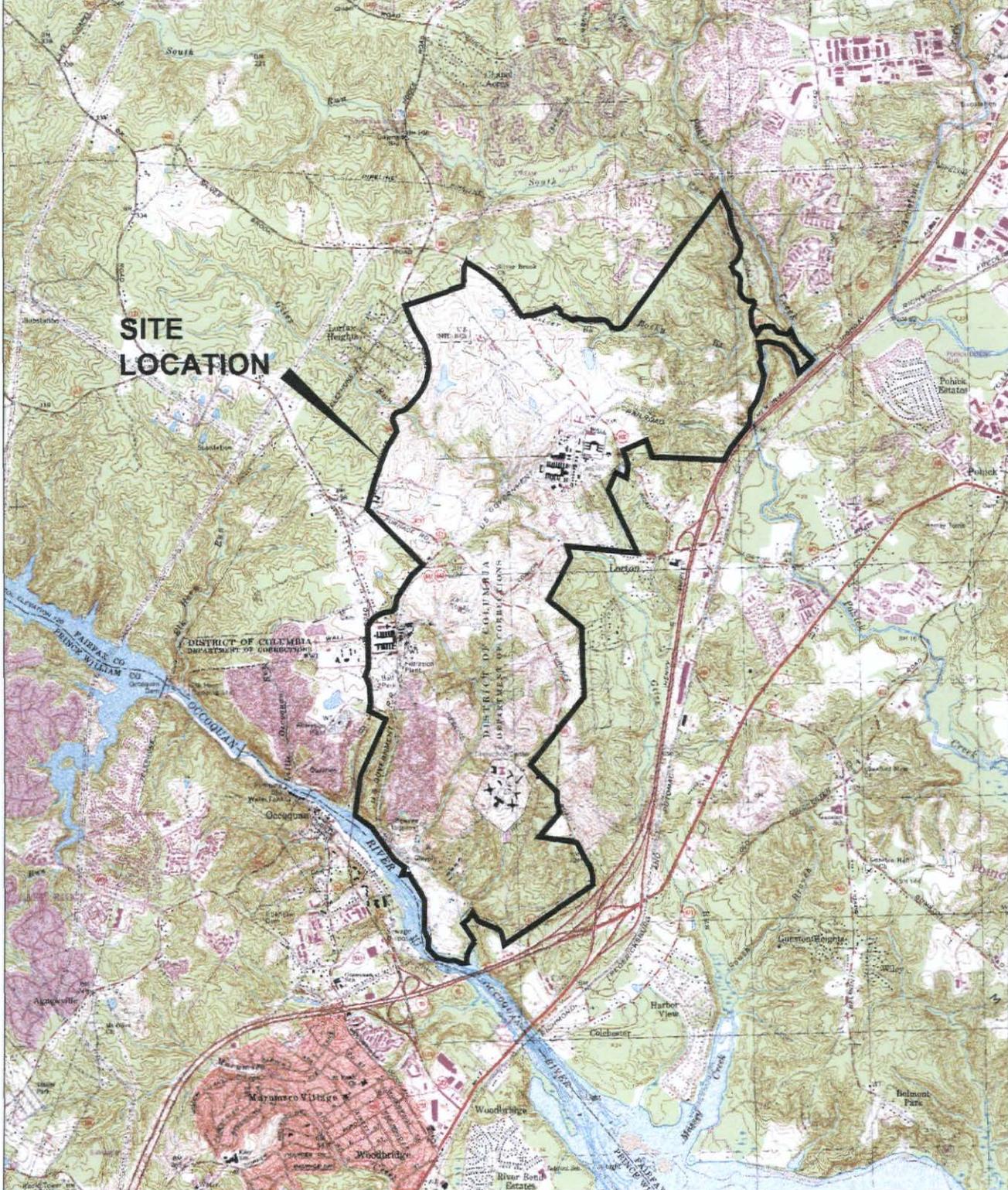


Chris M. Evans, Director  
Office of Remediation Programs

## Administrative Record – Index of Documents for Statement of Basis

1. Hazardous Waste Management Plan, DEQ, July 30, 1999
2. Phase I Environmental Site Assessment Report, AAS Environmental Inc., August 27, 1999
3. Phase II Environmental Site Assessment Report, AAS Environmental Inc., August 27, 1999
4. Hazardous Waste Determination Survey Report, AAS Environmental, Inc., October 12, 1999
5. Comprehensive Site Characterization and Remedial Action Plan for the Three Firing Ranges, AAS Environmental, Inc., February 25, 2000
6. Comprehensive Site Characterization and Remedial Action Plan for the Non-Permitted Landfill Areas, AAS Environmental, Inc., March 29, 2000
7. Disposal of the Lorton Correction Complex – Draft Environmental Assessment Report, Greenhorne and O’Mara Inc. and Heery International, September 2000
8. Survey Sheet for Inspection of Hazardous Waste Facilities, DEQ, December 4, 2000
9. RCRA Inspection Report – DC Dept. of Corrections, DEQ, January 16, 2001
10. Letter to DEQ relating to the voluntary remediation of three firing ranges, the non-permitted landfill area, and the drum dumping area, AAS Environmental, Inc., March 21, 2001
11. Firing Range Remediation Closeout Report, AAS Environmental, Inc., May 1, 2001
12. Non-Permitted Landfill Closure Report, AAS Environmental, Inc., September 15, 2001
13. Survey Sheet for Inspection of Hazardous Waste Facilities, DEQ, October 22, 2001
14. Letter to the DEQ indicating that the Central Facility Industries Metal Fabrication, Auto body and Paint Shops have been permanently closed, AAS Environmental, Inc., October 22, 2001 RCRA Inspection – DC Dept. of Corrections, DEQ, November 9, 2001
15. Notification to the DEQ that all requirements under the Consent Order had been satisfied, AAS Environmental, Inc., June 19, 2002.
16. Submission of 2001 Hazardous Waste Report, AAS Environmental, Inc., May 13, 2002.
17. Notification to the DEQ that all requirements under the DEQ issued Consent Order had been satisfied, AAS Environmental, Inc., June 19, 2002
18. Quarterly Monitoring Report No. 4 – Final Monitoring Event – Closure of the Laundry Wastewater Clarifier (Ink Pit), AAS Environmental Inc., July 12, 2002
19. Letter of cancellation of Consent Order as the requirements had been met, DEQ, July 26, 2002
20. Letter to DEQ describing history of the area where buried drums were discovered in the Pulte Homes Area of the Lorton site, Consolidated Engineering Services, April 7, 2003
21. Letter to GSA documenting the buried drum clean up activities conducted in the Pulte Homes Area of the Lorton site, Consolidated Engineering Services, June 30, 2003
22. Limited Phase II ESA – Laurel Hill (Landbay 1, 3, and 4) prepared by D3G dated December 18, 2014
23. Limited Phase II ESA – Laurel Hill (Landbay 2, 6, 7) prepared by D3G dated December 18, 2014
24. Phase I ESA - Laurel Hill – “Affordable Housing Partners (AHP) Property” prepared by D3G dated December 2, 2015
25. Phase I ESA - Laurel Hill – “Elm Street” prepared by D3G dated December 2, 2015.
26. Limited Phase II ESA - Laurel Hill – “Affordable Housing Partners (AHP) Property” dated December 7, 2015
27. Limited Phase II ESA - Laurel Hill – “Elm Street” prepared by D3G dated December 2, 2015
28. Soil Management Plan – Laurel Hill Adaptive Reuse prepared by D3G dated December 11, 2015
29. Underground Storage Tank Closure Assessment – Laurel Hill “Elm Street Property” prepared by D3G dated July 1, 2016
30. Underground Storage Tank Initial Abatement Measures Report – Site Assessment – Laurel Hill Adaptive Reuse – DEQ PC No. 2017-3023 prepared by D3G dated August 17, 2016

31. Soil Management Plan Implementation Evaluation – Environmental Laboratory Services – Soil Stockpile, Cap Soil and Background Sampling for Area of Concern (AOC-1) – Laurel Hill Adaptive Reuse report prepared by D3G dated November 23, 2016
32. Soil Management Plan Implementation – Preliminary Vault Release Investigation – Laurel Hill Adaptive Reuse Property prepared by D3G dated December 1, 2016
33. Soil Management Plan Implementation Evaluation –Coal and Coal Combustion Residual Confirmatory Sampling Investigation – Environmental Field Inspection and Laboratory Services Report prepared by D3G dated February 27, 2017
34. Soil Management Plan Implementation Evaluation – Environmental Laboratory Services – Confirmatory and Background Sampling Area of Concern (AOC-1) – Laurel Hill Adaptive Reuse report prepared by D3G dated February 6, 2017
35. Soil Management Plan Implementation – Vault Release Investigation – Laurel Hill Adaptive Re-Use Property prepared by D3G dated June 16, 2017
36. Vapor Intrusion Assessment – Laurel Hill Adaptive Reuse “AHP” Structures R-15, R-27 and R-28 prepared by D3G dated October 2, 2017
37. Vapor Intrusion Assessment – Laurel Hill Adaptive Reuse “AHP” Structures R-15 (Re-Test), R-23 and R-27 (Re-Test) prepared by D3G dated October 19, 2017
38. Soil Management Plan Implementation – Risk Based Corrective Action Measures – Laurel Hill Adaptive Reuse prepared by D3G dated February 2, 2018
39. Supplemental Vapor Intrusion Assessment – Structure R-27 (Re-Test) dated February 13, 2018



**SITE  
LOCATION**



United States Environmental  
Protection Agency

DC Department of Corrections  
Lorton, Virginia

FIGURE 1  
SITE LOCATION MAP



**TETRA TECH EC, INC.**

SOURCE: U.S.G.S. TOPOGRAPHIC MAP (7.5 Minute)  
LORTON, VIRGINIA

**Table 1 – Former Leaking Underground Storage Tanks**

<b>Tank ID</b>	<b>Installation Date</b>	<b>Location</b>	<b>Capacity (gallons)</b>	<b>Content</b>	<b>Releases</b>
<i>Central Facility</i>					
FLD 452	1984	400 Man Modular	20,000	Diesel	Clean, previous release
FLD 507	1990	Old Maintenance Transport	10,000	Diesel	Clean
	Unknown	Old Maintenance Transport	~10,000	Diesel	Unknown
	Unknown	Old Maintenance Transport	~10,000	Gasoline	Unknown
LV-005	Unknown	Industries	550	Varsol	Clean
L2-025	Unknown	Culinary	1,000	#2 Fuel Oil	Clean
LD-001	Unknown	Gen. Site	5,000	Diesel	Known release
LD-021	Unknown	Electrical Supply	12,000	Diesel	Known release
LW-026	Unknown	Maintenance	1,000	Used Oil	Known release
LU-022	Unknown	Electrical Supply	12,000	Gasoline	To be abandoned
LW-027	Unknown	Old Maintenance Transport	10,000	Waste Liquid	Suspected release
<i>Occoquan Facility</i>					
LD-010	Unknown	Vehicles	10,000	Diesel	Clean Closure
FLD 534	Unknown	Diesel Shop	1,000	Diesel	Confirmed release
LU-028	Unknown	White Brick Building	550	Gasoline	Confirmed release
LU-011	Unknown	Vehicles	10,000	Gasoline	Confirmed release
<i>Youth Facility</i>					
LU-004	Unknown	Hospital	500	Gasoline	Clean
LU-002	Unknown	Shops	500	Gasoline	Previously removed
FLD 505	1960s	Genset	2,000	Diesel	Confirmed release
LU-003	Unknown	Control	500	Gasoline	Confirmed release
<i>Minimum Security Facility</i>					
L2-006	1950s – 1960s	Women’s Annex	2,000	#2 Fuel Oil	Clean
L2-007	1950s – 1960s	Women’s Annex	1,500	#2 Fuel Oil	Previously removed
FLD 536	1988	Minimum Security	550	Diesel	Confirmed release
<i>Offices of Facilities Management</i>					
LD-008	Unknown	NIKE Site	10,000	Diesel	Clean
LU-024	Unknown	Welding Shop	1,000	Gasoline	Clean
L2-012	Unknown	Payroll Office	1,500	#2 Fuel Oil	Confirmed release