



UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
STATEMENT OF BASIS  
**Parcel N**  
**Southeast Federal Center**  
**Washington, D.C.**  
EPA ID: DC8 470 090 004

June 2013

## **I. Introduction**

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the United States General Services Administration (GSA), Southeast Federal Center (SEFC), Parcel N (Parcel N, the Parcel or the Site). Parcel N is located at 1331 4<sup>th</sup> Street SE (between Tingey and Water Streets), Washington, D.C. 20003. EPA's proposed remedy consists of excavation and off-site disposal of contaminated soil and compliance with and maintenance of an institutional control prohibiting groundwater use for potable purposes. This SB highlights key information relied upon by EPA in making its proposed remedy selection.

The SEFC is subject to EPA's 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 property. The District of Columbia (District) is not authorized for the Corrective Action Program under Section 3006 of RCRA. Therefore, EPA retains primary authority in the District for the Corrective Action Program.

The Administrative Record (AR) for the Site contains all documents, including data and quality assurance information, on which EPA's proposed remedy is based. The Index to the AR for Parcel N may be found in Attachment 1. See Section X, Public Participation, for information on how you may review the AR.

## **II. Facility Background**

Parcel N consists of approximately 1.3 acres within SEFC and is bounded by Tingey, 4<sup>th</sup> and Water Streets, S.E., to the north, east and south, respectively, and to the west is Building 160, a historic 4-story brick building. Parcel N is currently vacant, comprised of paved and unpaved surfaces. A developer, Forest City Washington, anticipates constructing a residential building with retail space on the ground floor, and a three level underground parking garage (Proposed Building). The garage will encompass most of the Parcel's subsurface. In previous investigations conducted prior to 2006, Parcel N was referred to as Block N, which encompassed a larger area that included Building 158 on Parcel N, as well as Buildings 160 and 173 and a portion of Building 187 outside of the current Parcel N. A location map is attached as Figure 1.

The SEFC was formerly part of the Washington Navy Yard (WNY). In 1963, the United States Department of the Navy (Navy) transferred the western portion of the WNY to GSA to develop. The developer for the SEFC, including Parcel N, is Forest City Washington. GSA transfers parcels by sale or ground lease after parcels have been cleaned up. FC Remediation SEFC, Inc., a separate entity acting as an agent for GSA, is performing the remedial work at Parcel N in accordance with the *Final Interim Measures Work Plan, Parcel N, SEFC* (WSP, 2013) approved by EPA on May 1, 2013 (EPA-approved IM Work Plan).

In 1918, Building 158 was built on Parcel N. Building 158 was a brass foundry where gun barrel blanks were cast. The foundry had large crucible furnaces, core ovens and coal and foundry sand storage bins. There were a number of sumps and pits in the floor throughout the building. Later, Building 158 was used as a motor vehicle service area. In the 1940's, the

western portion of the building was converted to office space. Prior to demolition in 1998, the building was used for storage and office space. The building underwent abatement of hazardous building materials prior to demolition.

### **III. Summary of Environmental Investigations**

From 1990 to 2008, GSA conducted a number of environmental investigations and remedial actions at Parcel N to identify contaminants of concern (COCs) and areas of contamination in soil and groundwater. A summary of this work is provided below. For more details, reports on these investigations and remedial actions can be found in the AR.

#### **A. Activities Completed on Parcel N Prior to Section 3013 Consent Order**

From 1990 to 1996, Phase I, II and Supplemental Phase II Investigations were completed for the entire SEFC. In 1990, one soil boring was installed north of Building 158 on Parcel N. One sample from that boring contained concentrations of total petroleum hydrocarbon (TPH) and nickel that exceeded the respective residential action levels (ALs) being used at the time. The area around the boring was subsequently identified as Area N1. In the Phase II investigation, some samples from in and around the below-grade pits were collected. For the Supplemental Phase II investigation, one soil sample collected east of Building 158 was found to have lead and barium levels that exceeded the respective residential ALs. The area surrounding the sample location was subsequently identified as Area N2.

Interim Measures/Site Stabilization (IM/SS) (1999): The IM/SS activities conducted on Parcel N consisted of abatement of hazardous building materials and removal of material in the below-grade pits in Building 158 before the demolition of that building. The remediation of Areas N1 and N2 soil and the Building 158 Process Pit consisted of excavation and off-site disposal of contaminated soil. Soil confirmation samples collected from the excavations confirmed that the contaminated soil was removed from Areas N1 and N2 and the Building Process Pit.

#### **B. Activities Completed on Parcel N under Section 3013 Consent Order**

In 1999, EPA and GSA entered into a Final Administrative Order on Consent (1999 Order), Docket No. RCRA III-019-AM, under Section 3013 of RCRA, 42 U.S.C. Section 6934. GSA's responsibilities under the 1999 Order included conducting a RCRA Facility Investigation (RFI) to determine the nature and extent of any releases of hazardous waste at or from SEFC, including Parcel N, and to perform Interim Measures (IM) to remediate releases. The data collected during the investigations and remedial actions conducted prior to the 1999 Order were included in the RFI Report along with the results of new sampling required by the 1999 Order. EPA approved the RFI Report in July 2008.

RCRA Facility Investigation (2001-2002): In 2002, three soil borings were completed on Parcel N and groundwater monitoring wells were installed in two of the borings. Soil samples were collected at multiple depths in each of the three locations. Of the many soil samples collected only one sample contained constituents that exceeded EPA's residential Risk Based Concentration (RBC)<sup>1</sup>. The constituents were arsenic and a polynuclear aromatic hydrocarbon

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<sup>1</sup> RBCs are screening levels used to determine whether a contaminant will be used in the human health risk assessment.

(PAH). Arsenic was found at 3.1 parts per million (ppm) and the residential RBC for arsenic was 0.39 ppm; the PAH was found at 386 ppm and the residential RBC for the PAH was 150 ppm. Groundwater samples were collected from the two monitoring wells in both March and July 2002 and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals. The groundwater samples from the two wells did not contain constituents at concentrations greater than Maximum Contaminant Levels (MCLs) promulgated at 40 C.F.R. Part 141 pursuant to Section 1412 of the Safe Drinking Water Act, 42 U.S.C. Section 300g-1, or RBCs. For contaminants that do not have an MCL, the results were screened against the EPA Region 3 RBCs for Tap Water.

Soil and Groundwater Characterization for Construction and Risk Assessment (2008): Additional soil samples were collected to characterize Parcel soils and to conduct a risk assessment for soil that will be left in place after excavation and construction activities are complete. Parcel N was divided into a 50 foot by 50 foot grid, and soil samples were collected from each of the resulting 28 grid cells within the proposed limits of excavation. Soil samples were collected from four discrete depth intervals. The soil samples were analyzed for polychlorinated biphenyls (PCBs), SVOCs, VOCs, total petroleum hydrocarbons (TPH and metals). The soil and groundwater quality data were used to develop the EPA-approved IM Work Plan.

The investigation identified PAHs, PCBs, petroleum hydrocarbons, lead and arsenic as possible COCs. PCBs were detected at concentrations greater than the industrial RBC of 0.74 ppm in two soil samples, and the maximum PCB concentration detected was 1.8 milligrams per kilogram (mg/kg) Aroclor 1260. One or more PAHs were detected above the residential or industrial RBCs in 14 samples, with the highest concentration at 4.8 ppm. Two metals (arsenic and lead) were detected above the residential or industrial RBCs in one or more samples. TPH-diesel range organics (DRO) was detected over the TPH disposal criteria of 10 mg/kg in 52 of 80 samples collected and analyzed for TPH-DRO. Four samples contained TPH-DRO concentrations over the D.C. Tier 1 cleanup criteria of 2,120 mg/kg. The soil samples above the D.C. Tier 1 cleanup criteria were detected at the northern portion of the Parcel, from 18 to 22 feet below ground surface (bgs). Arsenic was also detected at concentrations above the residential RBC, but the concentrations detected were within the range of naturally occurring background concentrations.

The Proposed Building to be constructed on Parcel N will occupy most of the Parcel, except for a thin band (approximately 10 feet wide) of soil around the perimeter of the Parcel. Shallow soil samples were collected from eight soil borings installed around the perimeter of the Parcel to characterize this soil. The perimeter sampling identified additional areas of soil to be removed because two perimeter samples contained PCB concentrations of 0.5 and 0.4 ppm, respectively, greater than the residential RBC of 0.22 ppm.

Groundwater sampling was conducted to characterize groundwater for construction dewatering purposes by collecting samples from two direct push borings on Parcel N. VOCs, SVOCs, PCBs, TPH-DRO, and TPH-gasoline range organics (GRO) were not detected at concentrations greater than the applicable MCLs or RBCs. Arsenic in one groundwater sample was found at 23 parts per billion (ppb) which is greater than arsenic's MCL of 10 ppb, and the arsenic concentration in the other sample was greater than the RBC for tap water.

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In 2008, the RBCs were renamed the Risk Screening Levels (RSLs).

#### **IV. Human Health Risk Assessment and Evaluation of Exposure Pathways** A

HHRA Report was included in the EPA-approved IM Work Plan (WSP, 2013) to identify potential human health risks associated with future exposures to COCs in soil and groundwater at Parcel N. The contaminated soil on Parcel N will be removed, therefore the HHRA evaluated potential risk to adult and child residents and utility and construction workers at Parcel N from soil and groundwater that may remain at Parcel N after remediation. Once the contaminated soil is removed, confirmation samples will be collected to ensure that any potential risks from remaining soil are within EPA's acceptable risk range.

##### HHRA Results:

Groundwater: To characterize groundwater in and around Parcel N, the 2002 and 2008 sampling results from two monitoring wells (MWs) on the Parcel and samples from three additional monitoring wells located within 100 feet of Parcel N were analyzed to assess potential vapor intrusion risk and potential risk from consumption. Also, sampling results from two temporary wells, installed on the Parcel in 2012 to characterize groundwater for dewatering purposes, were used to assess groundwater quality. One VOC, methyl tert butyl ether (MTBE), was detected in concentrations of 27 ppb in groundwater samples from one of the temporary wells; therefore, potential vapor intrusion into the Proposed Building was evaluated in the HHRA. The HHRA concluded that the potential risks to future residents from vapor intrusion were less than the EPA acceptable risk range. In addition, the HHRA concluded that, if groundwater were to be used for consumption purposes, the potential risks to future residents from groundwater consumption would exceed EPA's acceptable risk range of  $10^{-4}$  to  $10^{-6}$  excess cancers because of an arsenic level that was above the MCL in a sample from the 2008 data set and for a lead level that exceeded EPA's blood lead benchmark of 10 micrograms per deciliter (ug/dl).

The District's public water supply system (PWSS) currently supplies the SEFC and will be used for supplying potable water to the Proposed Building on Parcel N. To further preclude possible future use of groundwater as a potable water supply, a groundwater use restriction will be recorded with the deed or land records for Parcel N. The restriction will prohibit use of groundwater beneath Parcel N for any purpose other than environmental monitoring and testing, as approved by EPA or the District. If groundwater from the SEFC is not used as a potable water supply, the HHRA concluded that the potential risks to future residents, including children, utility and construction workers are within EPA's acceptable risk range of  $10^{-4}$  to  $10^{-6}$  excess cancers.

Soil: The HHRA concluded that the potential risks to future residents, including children, utility and construction workers from exposure to surface soil are within EPA's acceptable risk range of  $10^{-4}$  to  $10^{-6}$  excess cancers.

##### Ecological Assessment:

Parcel N is an urban parcel not suitable for sustaining a viable foraging and breeding wildlife community. Therefore, a quantitative ecological risk assessment was not conducted for Parcel N.

## V. Corrective Action Objectives

EPA's Corrective Action Objectives for the Facility are the following:

### 1. Soil

The Corrective Action Objective for soil is to attain EPA's acceptable cancer risk range of  $10^{-4}$  to  $10^{-6}$  for a residential exposure scenario and construction/utility worker exposure scenario.

### 2. Groundwater

The Corrective Action Objective for groundwater at the SEFC, including Parcel N, is to control exposure to arsenic in the groundwater by requiring the compliance with and maintenance of groundwater use restrictions at the Facility, while arsenic levels remain above the applicable MCL.

## VI. Proposed Remedy

### A. Soil

EPA's proposed soil remedy is excavation and off-site disposal of contaminated soils to a depth of approximately 30 feet bgs and for a portion of 10 feet wide strip around the Proposed Building to a depth of 4 feet. Confirmation samples will be collected from the soil at the excavation sub-grade before the concrete slab of the Proposed Building is constructed over the soil. Clean fill will be used to backfill the excavation of an area south of the Proposed Building where PCBs were found. Soil to a depth of four feet bgs will be excavated and removed from the 10 feet wide strip south of the Proposed Building. Confirmation samples will be collected before this excavation is backfilled with clean fill. Additional soil will be removed if the confirmation samples do not meet residential criteria for PCBs and/or PAHs.

### B. Groundwater

EPA's proposed groundwater remedy for the Site is the compliance with and maintenance of a groundwater use restriction prohibiting potable uses of groundwater. EPA proposes that the groundwater use restriction be implemented through an enforceable institutional control (IC) to be recorded with the deed for Parcel N.

## VII. Evaluation of EPA's Proposed Decision

This section provides a description of the criteria EPA used to evaluate the proposed remedy, according to EPA guidance. The criteria are applied in two phases. In the first phase, EPA evaluates three decision threshold criteria as general goals. In the second phase, EPA then evaluates seven balancing criteria.

### A. Threshold Criteria

1. **Protect Human Health and the Environment**: The primary risks posed to human health and the environment from soil contaminants at Parcel N were related to direct contact with

the soil and to the soil being a continuing source of groundwater contamination. With the removal of contaminated soils containing Site-related COCs to a depth of 30 feet bgs, and restriction on the use of groundwater for potable uses, the potential human exposure to contaminants and environmental harm are eliminated.

**2. Achieve Media Cleanup Objectives:** The dimensions of the underground garage to be constructed under the Proposed Building require that most of the soil at Parcel N be excavated to a depth of 30 feet bgs. The 10 feet strip of surface soil along the edges of the Parcel will remain unexcavated, except for the area south of the Proposed Building, where PCB-contaminated soil will be removed to a depth of four feet. The backfill for the four feet deep excavation will meet EPA's acceptable risk range ( $10^{-4}$  to  $10^{-6}$ ) for a residential exposure scenario. Therefore, the proposed remedy achieves the cleanup objective and Parcel N will be suitable for residential purposes. Groundwater use for drinking water purposes at Parcel N will be prohibited.

**3. Remediating the Source of Releases:** In all proposed remedies, EPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may harm human health and the environment. With the removal of contaminated soil to 30 feet bgs, the source for contaminant loading to groundwater is removed.

#### B. Balancing/Evaluation Criteria

**1. Long-Term Effectiveness:** EPA's proposed remedy will maintain protection of human health and the environment over time by excavating and disposing of contaminated soils and by controlling exposure to any hazardous constituents that may remain in the groundwater. EPA's proposed remedy requires the compliance with and maintenance of a groundwater use restriction at Parcel N. EPA anticipates that this restriction will be implemented through an environmental covenant or deed to be recorded with the deed for Parcel N. The environmental covenant will run with the land and as such, will be enforceable by EPA and the District against future land owners.

**2. Reduction of Toxicity, Mobility, or Volume of the Hazardous Constituents:** The reduction of toxicity, mobility and volume of hazardous constituents at Parcel N will be achieved by soil excavation and off-Site disposal of contaminated soil at a permitted facility.

**3. Short-Term Effectiveness:** EPA's proposed remedy includes excavation and off-site disposal of contaminated soil. Construction workers will take appropriate protective measures to protect themselves from short-term risks, and the construction zone will be monitored for any releases of contaminants into the air. The same monitoring and dust control measures used to protect construction workers will prevent contaminated soil from becoming airborne particulate matter that could be transported outside the limits of construction. Therefore, the public should not be exposed to Site-related COCs during excavation activities. In addition, EPA anticipates that the groundwater use restriction will be fully implemented shortly after the issuance of EPA's Final Decision and Response to Comments (FDRTC).

#### **4. Implementability:**

EPA's proposed remedy is readily implementable. The contaminated soil will be removed prior to the construction of the underground parking garage and will be disposed off-

site in accordance with applicable RCRA requirements. In addition, EPA does not anticipate any regulatory constraints in implementing a groundwater use restriction for Parcel N.

**5. Cost:**

EPA's proposed remedy is cost effective. Soil removal was planned by the developer, Forest City Washington, and is part of the construction plan. The groundwater use restriction will take minimal time and cost to develop and implement.

**6. Community Acceptance:**

EPA will evaluate community acceptance of the proposed remedy during the public comment period, which will be described in the FDRTC.

**7. State/Support Agency Acceptance:**

The District Department of the Environment (DDOE) is reviewing EPA's proposed remedy for Parcel N and will comment or concur during the public comment period.

**VIII. Environmental Indicators**

EPA sets national goals to measure progress toward meeting the nation's major environmental goals. For Corrective Action, EPA evaluates two key environmental indicators for each facility: (1) current human exposures under control and (2) migration of contaminated groundwater under control. The EPA determined that the entire SEFC Facility met these indicators in September 2003 and 2004, respectively.

**IX. Financial Assurance**

EPA has evaluated whether financial assurance for corrective action is necessary to implement EPA's proposed remedy for the Site. Parcel N is under GSA's responsibility and as a federal agency, GSA is not required to provide financial assurance.

**X. Public Participation**

Before EPA makes a final decision on its proposed remedy for Parcel N, the public may participate in the decision selection process by reviewing this SB and documents contained in the Administrative Record (AR) for the Facility. The AR contains all information considered by EPA in reaching its proposed remedy. It is available for public review during normal business hours at:

U.S. EPA Region III  
1650 Arch Street (3LC20)  
Philadelphia, PA 19103  
Contact: Barbara Smith  
Phone: (215) 814-5786  
Fax: (215) 814-3114  
Email: [smith.barbara@epa.gov](mailto:smith.barbara@epa.gov)

Interested parties are encouraged to review the AR and comment on EPA'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 Barbara Smith. EPA will hold a public meeting to discuss this proposed remedy upon request. Requests for a public meeting should be made to Barbara Smith.

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

Signature:   
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John Armstead, Director  
Land and Chemicals Division  
US EPA, Region III

Date: 7.1.13

Figure 1: Location Map

## **Attachment 1**

### **Index to the Administrative Record For the Statement of Basis Parcel N, Washington, DC**

United States Environmental Protection Agency (EPA), *RCRA §3013 Final Administrative Order on Consent with United States General Services Administration (GSA), Docket No. RCRA III-019-AM*, signed July 14, 1999.

URS Group, Inc., *Description of Current Conditions and Summary of Interim Measures/Site Stabilization, Southeast Federal Center, Washington, D.C.*, April 16, 2001.

URS Group, Inc., *RCRA Facility Investigation Work Plan, Southeast Federal Center Washington, D.C.*, April 16, 2001.

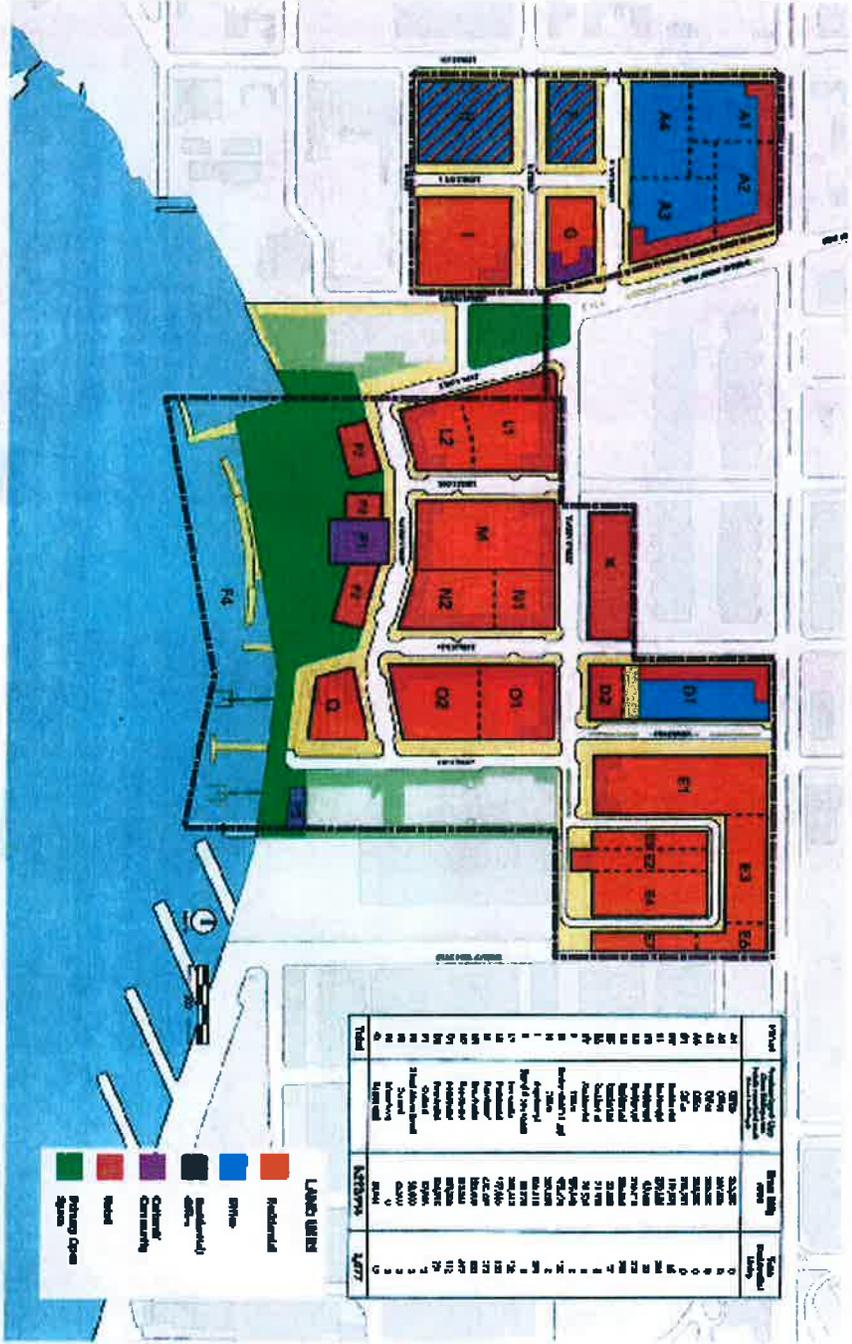
URS Group, Inc., *RCRA Facility Investigation, 44-Acre Parcel, SEFC, Washington, DC (with Revisions)*, June 16, 2004.

WSP Environmental Strategies, LLC, *SEFC Soil Management Plan*, November 2006.

WSP, *Final Interim Measures Work Plan, Parcel N, SEFC, Washington, DC*, March 25, 2013.

EPA letter dated May 1, 2013 to GSA approving the *Final Interim Measures Work Plan, Parcel N, SEFC, Washington, DC, March 25, 2013*.

**C1. LAND USE PLAN: GENERALIZED USE BY PARCEL**



**Figure 1**  
**Southwest Federal Center**  
**Parcel N = N1 + N2**