UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS

Navy Research Laboratory
4555 Overlook Ave SW
Washington, D.C. 20375-5320
EPA ID No. DC8 170 024 311

EPA Region III
Land and Chemicals Division

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Section 1: Introduction

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for portions of the Navy Research Laboratory (NRL) property located at 4555 Overlook Ave S.W., Washington, D.C. 20375-5320, at latitude 38° 49' 24" North and longitude 77° 01' 05" West (Facility).

EPA reviewed available information, and data prepared and submitted by NRL under a Resource Conservation and Recovery Act (RCRA) Corrective Action Facility Lead Agreement (FLA) signed in 2003. Sixty-two (62) solid waste management units (SWMUs) and sixty-eight (68) areas of concern (AOCs) were identified. This SB highlights key information relied upon by EPA in making its proposed remedy.

EPA is proposing the following remedy, which EPA has determined to be protective of human health and the environment:

- For forty-eight (48) SWMUs and fifty-five (55) AOCs listed on Table 1, herein, EPA's proposed remedy is Corrective Action Complete without Controls. No additional characterization or remediation is necessary because there are currently no unacceptable risks to human health or the environment from Facility soils at these SWMUs and AOCs. Furthermore, the SWMUs and AOCs listed in Table 1 can be used without restriction, therefore, no land use restrictions are necessary.

- For five (5) SWMUs listed on Table 2, herein, the proposed remedy is Corrective Action Complete without Controls for Soils. There are no unacceptable risks to human health or the environment from Facility soils at these SWMUs.

- For four (4) SWMUs listed on Table 3, herein, the proposed remedy is Corrective Action Complete with Controls. Although contaminants remain in the soil at these 4 SWMUs, there are no risks associated with the soil as long as these areas of the Facility property are used for industrial purposes only.

The remaining SWMUs and AOCs and groundwater at the Facility are still under investigation. With respect to groundwater, contamination appears to be associated with SWMUs 26-30 and no unacceptable risks to human health or the environment appear to be related to the other SWMUs and AOCs at the Facility. EPA will issue a separate SB for those units and groundwater to solicit public comment on a proposed remedy(ies) once they have been further investigated under the Corrective Action Program.

EPA is providing a 30-day public review and comment period on this SB. EPA may modify its proposed remedy based on comments received during this period. EPA will announce its selection of a final remedy for the Facility in a document entitled Final Decision and Response to Comments (Final Decision or FDRTC) after the public comment period has ended.

Before EPA makes a final decision on its proposed remedy 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 the complete set of reports that document Facility conditions, including a map of the Facility. EPA relied on the documents in the AR to select the proposed remedy.

EPA encourages anyone interested in this matter to review the AR. The AR is available at the EPA Region III office, the address of which is provided in Section 7, below.

EPA will address all significant comments received during the public comment period. If EPA determines that new information or public comments warrant a significant modification to the proposed remedy, EPA will modify the proposed remedy or select other alternatives based on such new information and/or public comments and will solicit public comment on its modified proposed remedy. If the final remedy is substantially unchanged from the one proposed, EPA will issue a Final Decision and inform all persons who submitted written comments or requested notice of EPA's final determination.

Information on the Corrective Action Program as well as a fact sheet for the Facility can be found by navigating https://www.epa.gov/hwcorrectiveaction/hazardous-waste-cleanup-naval-research-laboratory-nrl-washington-dc.

Section 2: Facility Background

The Facility occupies approximately 131 acres in Southwest Washington, D.C., and is bounded by the Bolling Air Force Base and the Navy Bellevue Housing Project to the north and northeast, Interstate 295 and Overlook Avenue to the east, the D.C. Water and Sewer Authority's Blue Plains Wastewater Treatment Plant to the south, and the Potomac River to the west. A portion of the Facility property was formerly owned and operated as an Annex to the Naval Gun Factory, which used to store materials and munitions associated with the Washington Navy Yard.

NRL was officially established on July 2, 1923 as the Naval Experimental and Research Laboratory. From its inception, NRL used the Facility as the research laboratory for the United States Navy and Marine Corps, where a wide range of research and development activities have been conducted. These activities range from basic scientific research and technology development, to the construction and operation of pilot-scale process facilities (e.g., use of industrial radiography as a tool for nondestructive evaluation of construction materials). Many of these activities included the use of radioactive materials or radiation-generating devices, and the operation of a research nuclear reactor.

Currently, the Facility consists of 87 numbered buildings and structures, which house four directorates related to Naval Research, Systems Development, Materials Science and Component Technology, Ocean and Atmospheric Science and Technology, and Naval Center for Space Technology.

Section 3: Summary of Environmental History

NRL has conducted numerous investigations and submitted multiple reports to EPA under the RCRA Corrective Action Facility Lead Agreement (FLA) signed by NRL on August 19, 2003. Site characterization conducted pursuant to the FLA identified a total of one hundred and thirty (130) units, which included sixty-two (62) SWMUs and sixty-eight AOCs. Subsequent desktop review identified seven (7) units as duplicates. The duplicate units are: (i) AOC 16 (duplicate of AOC 40); (ii) AOC 17 (duplicate of AOC 1); (iii) AOC 21 (duplicate of AOC 38); (iv) AOC 23 (duplicate of SWMU 49); (v) AOC 29 (duplicate of SWMU 26); (vi) AOC 32 (duplicate of SWMU 42); and (vii) AOC 41 (duplicate of SWMU 42).

In addition, two (2) units (SWMU 20 and SWMU 23) identified in the FLA are not located on the Facility, and, therefore, were not evaluated as part of this investigation.

EPA evaluated the following reports before proposing the remedy described in this SB: (a) NRL Initial Assessment Study, prepared by Fred C. Hart Associates in March 1984; (b) NRL Summary of SWMUs / AOCs, prepared by CH2M Hill in April 2007; and (c) Facility Assessment Report, prepared by CH2M Hill in November 2008.

Complete details, including sampling data, can be found in the individual reports listed above and in the Index to the AR (Attachment #1), and located in the AR. Sampling included surface and subsurface soil, groundwater, and concrete sampling at the Facility. Chemicals of concern (COCs) include volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), organochlorine pesticides, organochlorine herbicides, polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals (e.g., mercury).

For certain units listed in Table 1, where it was unlikely that any kind of release to environmental media had occurred, NRL performed desktop audits of data and /or operational history to determine that there was no risk to human health or the environment. EPA concurred with the recommendation of Corrective Action Complete without Controls for these units, which are included in Table 1. At other units listed in Table 1, the impacted media were evaluated, reasonable assumptions as to the potential receptors were applied, and the data were compared to site screening levels. If soils did not exceed residential risk-based concentrations (RBCs) or generic soil screening levels (SSLs), no further action was recommended for the unit. For groundwater, contamination appears to be associated with SWMUs 26-30. EPA will issue a separate SB for Facility-wide groundwater.

For units where investigation into potential impacts to surface and subsurface soil, groundwater, and concrete at the Facility did not exceed the RBCs and SSLs in soils, but shows impact to groundwater above the Groundwater Screening Levels, EPA concurred with the recommendation of Corrective Action Complete without Controls for Soils only. Additional investigation into the impact to groundwater at these units is ongoing. These units are presented in Table 2.

For units where investigation into potential impacts to surface and subsurface soils and concrete at the Facility exceed the RBCs and SSLs in soils, but alternate considerations (including Background) indicate that industrial land use is reasonable, EPA concurred with the recommendation of Corrective Action Complete with Controls. These units are presented in Table 3.

Table 1
Corrective Action Complete without Controls

Location	Investigation Area	Description	Status
SWMU 2	Building 57 Cyclone	Cyclone is located on south west side of Building 57. The unit is supported on steel legs over an 8-cubic-yard steel dumpster. It began operations in 1977. Currently collects sawdust from the Building 57 Carpentry and Machine Shop.	No evidence of release
SWMU 3	Building 57 Dry Paint booth	The paint booth is enclosed in cement block walls with 6 feet (ft) x 8 ft disposable filter section. It began operations in 1983 and it is currently active.	No evidence of release
SWMU 5	Building 57 Dry Paint Booth	Plating shop with waste water treatment plant. Began operations in 1994 and it is currently active.	No evidence of release
SWMU 6	Building 2 Cyclone	Began operations in 1994 as a conical steel cyclone on a steel box that sat on concrete. No longer exists. Area is covered in concrete pavement.	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
SWMU 7	Building 2 Machine Shop	Operated as machine shop located on ground floor with intact concrete floor. Operations began in 1990 and it is currently active.	No evidence of release
SWMU 8	Building 2 Used Oil Tank	Between 1960 and 1993 the unit was used to store used cutting oil. No longer exists; area is covered in concrete pavement.	No evidence of release
SWMU 9	Building 2 Water Curtain Spray Booth	Operated as a stainless-steel spray booth and a paint can drying area from 1960s through early 1990s. A water curtain collected over sprayed paints in an open steel tank beneath it.	No evidence of release
SWMU 10	Building 2 Former Pickling Room	Operations removed imperfections, such as rust from the surface of metals and equipment by bathing them in acidic solutions. Operated between 1968 and 1993.	No evidence of release
SWMU 11	Building 2 Sandblaster	Operated as a sandblaster located outside entrance to former pickling room. Operations began in 1968; area is currently office space.	No evidence of release
SWMU 13	Building 149 Waste Oil Tanks	Two 1,000 gallon cylindrical ASTs in basement in a concrete containment. Collection point for waste oil used for fuel in Building 149 boilers. Operated between 1979 and 1992; tanks have been removed.	No evidence of release
SWMU 14	Building 149 Boilers	Burned waste oil as fuel in 3 vertical stainless steel boilers located on the ground floor 50 meters from Potomac River between 1979 and 1991.	No evidence of release
SWMU 15	Building 149 Oily Waste Collection Area	Consists of a steel trash can labeled "oiled stained materials only." Operations began in 1991.	No evidence of release
SWMU 16	Cyanide Burial area	Used in 1951 to bury metal containers of liquid cyanide, total of less than 5 gallons	No COCs detected in surface soil above the SSLs
SWMU 17	Building 53 Former Circuit Board Room	Conducted electroplating activities between 1971 and 1990.	No evidence of release
SWMU 18	Building 73 Classified Document Incinerator	Unit sits on a 10 ft x 10 ft concrete pad with a cinder block wall for 3 sides. Used for the incineration of classified documents between 1973 and late 1990s.	No evidence of release
SWMU 19	Former Building 110 Outside Storage Area	Stored wastes such as contaminated diesel fuels, glycerin, AFF (fire-fighting foam), heptane, marine diesel and gasoline fuels, and methanol in the 1970s and 1980s.	No evidence of release

Table 1. (cont.)

Location	Investigation Area	Description	Status
SWMU 21	Building 150 Oily Waste Storage	Storage shed with epoxy coated concrete floor. Used for the storage of drums of waste oils, rags, PCBs transformers and oil, and other oily waste. Has been in operation since 1986.	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
SWMU 24	Building 72 Silver Recovery Unit	Was used to collect silver wastes from X-ray machine. Operated between the 1970s and 1990s.	No evidence of release
SWMU 25	Building 72 Medical Waste Accumulation Area	Unit comprises a number of one-gal plastic pails with lids, trashcans, and plastic bags used to collect biologically contaminated waste. Operations began in 1950s.	No evidence of release
SWMU 32	Building 71 Waste Oil Tanks	Three 500-gal aboveground storage tanks (ASTs) located within a concrete containment area for storage of used dielectric oil. Began operations in 1988.	No evidence of release
SWMU 33	Building 222 Silver Recovery Unit	Small plastic containers and one 250-gal cylindrical fiberglass surge tank used to recover silver from photo processing wastewater. Operated from 1970 through early 2006.	No evidence of release
SWMU 34	Building A50 Former Pesticide Dumpster	Paved area with steel dumpster used for empty bags and boxes from pest control operations between 1975 and 1978.	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
SWMU 35	Building A51 Storage Area	Original pesticide shop. Operated from 1950s to 1976. Area also stored hazardous waste from all NRL divisions between 1976 and 1978.	No evidence of release
SWMU 37	Building 207 <85 Day Storage Areas	Has stored non-halogenated and halogenated waste solvents and waste oils on a concrete loading dock in metal storage cabinets since 1990.	No evidence of release
SWMU 38	Building 207 Dry Spray Booth	Stainless steel, cylindrical autoclave used to destroy biological wastes using pressurized steam beginning in 1991.	No evidence of release
SWMU 39	Building 207 Dry Spray Booth	Spray booth located on second floor of building used to paint model parts from 1972 through the 1990s.	No evidence of release
SWMU 40	Former Building 70B	Used as a small storage unit of PCB filled transformers and drummed hazardous waste between 1970 and 1974.	No evidence of release
SWMU 41	Building 28 Kitchen Waste Area	An outside storage and collection area for kitchen waste. Containment area's central sump connected to a below-grade oil and/or water separator. In use from 1941 through late 1990s.	No evidence of release

Table 1. (cont.)

Location	Investigation Area	Description	Status
SMWU 43	Building A100 Emergency Permit Unit	Hypervelocity chamber used for one-time detonation of explosive chemicals between 8/25/1993 and 9/4/1993.	HHRA indicates risk estimates associated with COPC are within risk management range. No Further Action is required.
SWMU 44	Building A11 Former PCB Storage	Used for storage of PCB contaminated equipment and oil from 1980 through February 1982. May have also been used for explosive storage and production.	No evidence of release
SWMU 45	Chemistry Division AA	Chemistry Division AA	No evidence of release
SWMU 46	Radar Division AA	Radar Division AA	No evidence of release
SWMU 47	Information Technology Division AA	Information Technology Division AA	No evidence of release
SWMU 48	Optical Sciences Division AA	Optical Sciences Division AA	No evidence of release
SWMU 49	Tactical Electronic Warfare Division AA	Tactical Electronic Warfare Division AA	No evidence of release
SWMU 50	Materials Science & Technology Division AA	Materials Science & Technology Division AA	No evidence of release
SWMU 51	Condensed Matter & Radiation Sciences Division AA	Condensed Matter & Radiation Sciences Division AA	No evidence of release
SWMU 52	Plasma Physics Division AA	Plasma Physics Division AA; major facilities include two high-voltage power generators, a two-beam laser and target facility, and a carbon dioxide laser	No evidence of release
SWMU 53	Electronics Science & Technology Division AA	Electronics Science & Technology Division AA	No evidence of release
SWMU 54	Bimolecular Science and Engineering Division AA	Bimolecular Science and Engineering Division AA	No evidence of release
SWMU 55	Acoustics Division AA	Acoustics Division AA	No evidence of release
SWMU 56	Space Science Division AA	Space Science Division AA	No evidence of release
SWMU 57	Space Technology & Spacecraft Engineering	Space Technology & Spacecraft Engineering	No evidence of release
SWMU 58	Former Building 62 Waste Areas	Building was used as paint operations area. Building demolished in 1986; area currently an asphalt parking lot.	No evidence of release
SWMU 59	General Facility Dumpsters	Eight cubic yard steel dumpsters equipped with lids.	No evidence of release
SWMU 60	C&D Dumpsters	Thirty cubic yard steel open-topped dumpsters	No evidence of release
SWMU 61	Contaminated Soil Stockpile	Fuel contaminated soil stockpiled on 2 layers of 6 mil poly after removal of Building 36 LUSTs in late 1992.	No evidence of release

Table 1. (cont.)

Location	Investigation Area	Description	Status
SWMU 62	Building 2 Former Machine Shop	Operated as a machine shop 1940 through 1990; currently used as office space.	No evidence of release
AOC A	Mercury Lime Bed	Intentional release of mercury contaminated water to a lime bed. Area is currently a parking island with grass.	The maximum concentration of mercury detected (0.41 mg/kg) is less than the Soil RSL Residential (adjusted) of 2.3 mg/kg.
AOC B	No. 2 Fuel Oil Spill Containment Area	Three 30,000-gal horizontally mounted steel AST 50 ft from Potomac River, installed in 1951	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC C	Building 43A Underground Storage Tank (UST)	A 155,000-gal concrete reserve tank with rubber bladder approximately 30ft from Potomac River. Operated 1990 through 1994	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC D	Building 16 Asphalt Area	Consisted of asphalt equipment and a work area during roofing replacement	No evidence of release
AOC E	Building 54 Chemical Research	Laboratories that determined detection and protection against nerve agents.	No evidence of release
AOC F	Building 35 Chemical Research	Laboratories testing detection and protection against nerve agents (1940s - 1955); possible fracture studies.	No evidence of release
AOC G	Building 49 Loading Dock	Shipping/receiving area covered in concrete and asphalt.	No evidence of release
AOC H	Building 4 Chemical Research Area	1904s-1955 Chemical Materials Nerve Agents lab	No evidence of release
AOC I	Building 49 Loading Dock	Shipping/receiving area covered in concrete and asphalt.	No evidence of release
AOC J	Building A69 Loading Dock	Loading dock	Release was remediated and soils results showed no COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC K	Building 150 Spill	One-time gasoline spill	Release was remediated and soils results showed no COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC L	Mercury spill	Mercury spill on asphalt roadway	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC M	Building 52 Spill Area	Transformer oil spill on roadway	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs?
AOC N	Building 3 Loading Dock	Hydraulic oil spill at loading dock	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC O	Building A59 Diesel Fuel Dispensing Station	Operated as a diesel fuel dispensing site. Sat on concrete pad with 4-inch containment dike and gate valve	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC P	Trench at Building 260	Location of small volume, one-time hydraulic oil release.	one-time release, contaminated soils were removed- no potential for that may pose an unacceptable risk.
AOC Q	Roadway spill between Building 71 and Building A47	Roadway spill between Building 71 and Building A47	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC R	Building 51 Spill	release description of one spill is inconsistent with chart report of multiple spills	No evidence of release

Table 1. (cont.)

Location	Investigation Area	Description	Status
AOC U	Mall Road	Location of one-time oil spill	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC S	Building 71 Oil Spill Area	Location of one-time dielectric oil spill	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC W	Trench at Building 35	Location of one-time diesel fuel release	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC X	Storm water Outfall South of Pier	Location of one-time latex paint rinse water release	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded RBCs or SSLs
AOC Y	Building 53 Oil Spill	Locations of one-time diesel fuel release from generator	No COCs detected in surface and subsurface soil exceeded RBCs or SSLs
AOC 1	Former Building 30 Fulminate and Lead Azide Drying House	Location of fulminate drying house	No evidence of release
AOC 2	Radio Compass	Location of Radio compass	No evidence of release
AOC 3	Incinerator	Previous location of SWMU 18. Used for incineration of classified documents.	No evidence of release
AOC 5	Chemical Storage Vault	No further information could be obtained on this area identified in the Site Assessment Work Plan (SAWP).	No evidence of release
AOC 6	Temporary Lab	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 7	Gun Director Mound	Optical instrument used to identify enemy crafts during WWII.	No evidence of release
AOC 8	Explosive and Paint Storage Area	Building 66 storage, areas less than 25 meters from Potomac River.	No evidence of release
AOC 9	Fuel Tank	11,500 gal #2 fuel tank for generator inside Building 260.	No evidence of release
AOC 10	15,000 Gallon Oil Tank	Currently an asphalt parking lot	No evidence of release
AOC 11	Tetryl Mixing and Storage	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 12	Radar	Reported location of a radar unit.	No evidence of release
AOC 13	Oil House	Currently a sloped grassy area	No evidence of release
AOC 14	Machine Shop	Construction plans for Building 215 called for a machine shop, but area was finished as office space.	No evidence of release
AOC 15	Wind Tunnel	Used for aerodynamic testing	No evidence of release
AOC 18	Research Laboratory	Building 30 laboratory space	No evidence of release
AOC 19	AST for Generator	Diesel fuel generator for Building 12	No evidence of release
AOC 20	Storage of Inflammables	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 24	Paint Locker	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 27	HCL Spill	Lab Annex, location of one-time hydrochloric acid spill.	Release was remediated and soils results showed no COCs detected in surface and subsurface soils exceeded residential RBCs or SSLs

Table 1. (cont.)

Location	Investigation Area	Description	Status
AOC 28	Paint Shop	Location immediately north of Building A52 was identified in the 2004 SAWP as having been a paint shop. No further information could be obtained.	No evidence of release
AOC 30	Oceanographic Laboratory	Used as an oceanographic laboratory prior to 1969	No evidence of release
AOC 33	Battery Charging Units	Automotive maintenance, servicing, and repair operations	No evidence of release
AOC 34	Building 59 Laboratory	Laboratory in Room 505 used for repairs and fabrication of electronics and circuit boards.	No evidence of release
AOC 35	Electronics and Sonar Laboratory	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 36	Fuels Test Chamber	No further information could be obtained on this area identified in the SAWP.	No evidence of release
AOC 37	Electronics Laboratory	Electronics lab for repair of computer circuit boards and other electronics	No evidence of release
AOC 39	Power House	Previous location of coal fired boilers. A coal pit was located to the east of the building 1928-1979.	HHRA indicates risk estimates associated with COPC are within risk management range. No Further Action is required
AOC 40	Explosive Storage Area	Explosives Storage Area	No evidence of release
AOC 42	Building 3 Foundry	Metal melting and stretching operations 1928 through late 1980s or early 1990s	HHRA indicates risk estimates associated with COPC are within risk management range. No Further Action is required
AOC 43	Building 215	Fuel Line Vent Release	HHRA indicates risk estimates associated with COPC are within risk management range. No Further Action is required

Table 2
Corrective Action Complete without Controls for Soils

Location	Investigation Area	Description	Status
SWMU 26	Building 36 Fuel USTs	Tanks included 2 gasoline (4,000 gal UST on south side of building) and 3 diesel (one 1,000 gal UST and two 5,000 gal UST on southeast portion). They were operated from 1971 through 1992	No further action for soils (HHRA indicates risk estimates associated with COPCs are within risk management range for soils). Further investigation required for groundwater due to elevated contaminant levels
SWMU 27	Building 36 Used Oil UST	Used oil UST stored non-pub waste oil from 1971 through 1979. Unit removed in 1992.	No further action for soils (HHRA indicates risk estimates associated with COPCs are within risk management range for soils). Further investigation required for groundwater due to elevated contaminant levels
SWMU 28	Building 36 Parts Washer	Unit was a high metal sink that sits on top of a 55-gallon poly drum. Parts were cleaned in the sink using solvent. Operated 1984-through 2006	No further action for soils (HHRA indicates risk estimates associated with COPCs are within risk management range for soil). Further investigation required for groundwater due to elevated contaminant levels
SWMU 29	Building 36 Used Oil Area	Consists of 2 (275 gallon) steel tanks that sit in a metal pan with 3ft high concrete dike. Contains waste oil from garage operations. Began operation in the 1970s.	No further action for soils (HHRA indicates risk estimates associated with COPCs are within risk management range for soils). Further investigation required for groundwater due to elevated contaminant levels
SWMU 30	Building 36 Oil/Water Separator	Oil/water separator used to manage oily wastewater from vehicle maintenance operations. Began operations in 1925.	No further action for soils (HHRA indicates risk estimates associated with COPCs are within risk management range for soils). Further investigation required for groundwater due to elevated contaminant levels

Table 3
Corrective Action Complete with Controls

Location	Investigation Area	Description	Status
SWMU 1	Building 57 Carpentry/Machine Shop	Both are located on the first floor of Building 57. The carpentry shop began operations in 1944. The machine shop began operations in 1992.	Aroclor-1260 detected above the Industrial Soil RSLs. HHRA indicates carcinogenic risks within acceptable range for industrial use.
SWMU 22	Drum Salvage Area	Used since 1986 to store empty drums that have held hazardous constituents.	Benzo(a)pyrene, Aroclor-1260 and Arsenic were detected above the Industrial Soil RSLs. HHRA indicates carcinogenic risks within acceptable range for industrial use.
SWMU 31	Building 49 Material Salvage Yard	Stored PCB-contaminated transformers and oil between 1943 and 1988.	Arsenic was detected above the Industrial Soil RSLs. HHRA indicates carcinogenic risks within acceptable range for industrial use.
SWMU 36	Elephant Cage	Unpaved outside storage area used to store a variety of not-in-use equipment including out of service transformers. May have stored gun powder and other explosives. Began operations in 1986. Moved in late 1990s for the construction of Building 259.	Primary risk drivers are benzo(a)pyrene and chromium in soil. HHRA indicates potential carcinogenic risks exceeds the acceptable risk range for future industrial worker. Current exposure to subsurface soil is minimized by an existing asphalt cover.

Section 4: Corrective Action Objective

- EPA's Corrective Action Objective for soils at all the units addressed in this SB is to prevent direct human contact with hazardous constituents in surface soils that would present an unacceptable risk.

Section 5: Proposed Remedy

EPA's proposed remedy for the forty-eight (48) SWMUs and fifty-five (55) AOCs listed in Table 1 is Corrective Action Complete without Controls. As described in Table 1, above, concentrations of COCs in soils at those units are lower than the applicable residential RBCs or generic SSLs or require no further corrective action based on a HHRA. While groundwater contamination at the Facility appears to be related to the SWMUs listed in Table 2, and there are no unacceptable risks to human health or the environment at the SWMUs listed in Table 1, EPA will issue a separate SB for Facility-wide groundwater.

For five (5) SWMUS listed on Table 2, EPA's proposed remedy is Corrective Action Complete without Controls for Soils. Concentrations of COCs in soils at those units are lower than the applicable residential RBCs or generic SSLs. As stated above, groundwater contamination at the Facility appears related to these units and additional investigation is required into impact to groundwater from historic releases of constituents at these units.

EPA's proposed remedy for four (4) SWMUs listed on Table 3 is Corrective Action Complete with Controls. While contaminants remain in the SWMU soil, EPA has determined that based on the investigations, there are no risks associated with the soil as long as these areas of the Facility property are used for industrial purposes only. However, because contaminants remain in the soil above levels appropriate for residential uses, EPA's proposed remedy requires the compliance with and maintenance of the following land use restrictions to be implemented through Institutional Controls:

- Use of SWMU 1, SWMU 22, SWMU 31, SWMU 36 areas of the Facility property shall be restricted to commercial and/or industrial purposes and shall not be used for residential purposes unless it is demonstrated to EPA that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and EPA provides prior written approval for such use.
- No earth moving activities, including soil excavation and drilling, shall be conducted at SWMU 36 unless it is demonstrated to EPA that such activities will not pose a threat to human health or interfere with the selected corrective measure and EPA provides prior written approval to conduct such activities.

Section 6: Evaluation of Proposed Remedy

Under the RCRA Corrective Action Program, evaluation criteria for corrective measures are assessed when multiple alternatives are considered for implementation. In this case, Institutional Controls is the only remedy considered given the limited hypothetical risk posed by the units at the Facility. However, EPA evaluated the proposed remedy in the context of the seven balancing criteria as follows:

Long Term Effectiveness

The long-term effectiveness criterion considers the amount of risk that would remain after the remedy has been implemented. It also considers whether the remedy is adequate and reliable.

Implementation of the proposed Institutional Controls (ICs) remedy would be reasonably permanent (e.g., routinely verified to be functional over the course of time).

Reduction in Toxicity, Mobility, and Volume through Treatment

This criterion evaluates how effectively treatment is being employed in the proposed remedy to reduce toxicity, mobility, and volume of contaminants at the Facility.

This criterion is not satisfied by ICs because treatment is not a component of the remedy.

Short-Term Effectiveness

Short-term effectiveness criterion accounts for the protection of remedial workers, members of the public, and the environment during the implementation of the remedy.

Implementation of the proposed remedy does not involve construction activities that will endanger public communities or remedial workers, or adversely impact the environment.

Implementability

The implementability criterion considers whether the remedy is practical in the technical and administrative sense, and whether the required services and materials are available.

The proposed remedy does not depend on difficult-to-obtain equipment, services or technical specialists. ICs are readily implementable.

Cost

This criterion considers the total capital cost, annual operation and maintenance costs, and the present worth of the remedy. The cost of the proposed remedy is relatively low.

Community Acceptance

Community acceptance will be evaluated after the public comment period of the Statement of Basis, and public comments will be addressed and documented in the forthcoming Final Decision and Response to Comments (FDRTC).

State Acceptance

Final concurrence from the State will be determined after the public comment period and documented in the forthcoming FDRTC.

Section 7: Public Participation

Before EPA makes a final decision on the remedy for the SWMUs and AOCs listed in Tables 1, 2, and 3, above, the public may participate in the remedy selection process by reviewing this SB and documents contained in the AR for the Facility. The AR contains all information considered by EPA in reaching this proposed decision. It is available for public review during normal business hours at:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Moshood Oduwole
Phone: 215-814-3362
Email: oduwole. moshood@epa.gov

Interested parties are encouraged to review the AR and comment on this proposed remedy. The public comment period will last thirty (30) calendar days from the date that notice is published in a local newspaper. EPA will hold a public meeting to discuss this proposed remedy upon request. You may submit comments and/or a request for a public meeting by mail or electronic mail to:

U.S. EPA Region III
1650 Arch Street
Philadelphia, PA 19103
Contact: Moshood Oduwole
Phone: 215-814-3362
Email: oduwole.moshood@epa.gov

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 FDRTC. All persons who comment on this proposed remedy will receive a copy of the FDRTC. Others may obtain a copy by contacting Mr. Oduwole at the contact information listed above.

Date:
7-25-17

Catherine A. Libertz

Catherine A. Libertz, Acting Director
Land and Chemicals Division
U.S. Environmental Protection Agency, Region III

Attachment 1

Index to Administrative Record

March 1984
NRL Initial Assessment Study

June 2003
Facility Lead Corrective Action Agreement

September 2006
Interim Measures Report – Petroleum Release Associated with Generator System Building 53

September 2006
Limited Subsurface Assessment Report Building 215

April 2007
NRL Summary of SWMUs/AOC

November 2008
Facility Assessment Report – Volumes I and II