UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION III

STATEMENT OF BASIS
No Further Action Proposed

National Institutes of Health
Bethesda, Maryland

EPA ID: MD6150004095

Prepared by
Office of Remediation
Land and Chemicals Division
April 2018

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Section 1: Introduction

The United States Environmental Protection Agency (EPA) prepared this Statement of Basis (SB) to solicit public comment on its proposed remedy for the National Institutes of Health (NIH) Facility, located in Bethesda, Maryland (Figure 1). EPA's review of available information from EPA's files, discussions with NIH personnel and field verification of the information form the basis of EPA's recommendation that 'no further action' is warranted under the Corrective Action Program for the NIH Facility in Bethesda.

This Statement of Basis highlights the available information that EPA used as the 'basis' of its proposed no further action decision. EPA's Administrative Record (AR) for this Facility contains all the documents EPA used to make its proposed decision. Attachment 1 lists the AR documents. To review the AR documents listed, see Section 6, Public Participation.

NIH 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/or hazardous constituents that occurred at their property. EPA currently implements the Corrective Action Program in the State of Maryland because Maryland is not authorized for implementation under Section 3006 of RCRA.

EPA is providing thirty (30) days for public comment on EPA's proposed remedy decision on NIH regarding Corrective Action. EPA may modify its proposed decision based on comments received during this period. EPA will evaluate comments received and make a final remedy decision in a Final Decision and Response to Comments document.

Information on the Corrective Action Program as well as a fact sheet for the Facility can be found by navigating to **https://www.epa.gov/hwcorrectiveaction/hazardous-waste-cleanup-national-institutes-health-bethesda-md**.

Section 2: Facility Background

The NIH Facility is a 305-acre complex located in Bethesda, Montgomery County, Maryland at 9000 Rockville Pike. The Figure 1 map shows the extent of the NIH Facility. NIH is part of the Department of Health and Human Services. It is the primary federal agency that helps and supports the nation's medical research. With a combination of research hospital, clinics, animal research and thousands of laboratories, NIH is one of the largest biomedical research centers in the world. The laboratories generate many chemical and biochemical wastes including hazardous wastes.

The chemical waste stream generated by NIH facilities is extremely complex. The wastes can be grouped into: laboratory unused and spent chemicals; mixed chemicals from biomedical research, and wastes from supporting facility operations and maintenance services. Except for several defined bulk waste streams produced by physical plant operations, most NIH chemical wastes consist of

laboratory chemicals and experimental process wastes generated in a research laboratory in small containers with capacities ranging from 5 milliliters to 5 gallons. Approximately 50,000 bottles and 150,000 vials of chemical wastes are received at NIH's hazardous waste management facility (WMF) yearly. NIH's WMF is permitted under MDE Controlled Hazardous Substance Facility Permit A-285. The Permit lists 19 off-site NIH Facilities that generate hazardous and/or mixed wastes. Each off-site location has its own RCRA ID number.

Section 3: Summary of Environmental History

In 1990 and 1991, EPA conducted a *Phase I* and *II RCRA Facility Assessment* (*RFA*) at NIH. The *Final Phase II RFA* Report (1992) lists 150 solid waste management units (SWMUs) and 3 areas of concern (AOC) on the NIH campus, identified by EPA. However, only 8 SWMUs and 3 AOC were recommended for further action: 4 SWMUs for sampling, 3 SWMUs for modification, 1 SWMU for a RCRA Facility Investigation (RFI) and the 3 AOCs for integrity testing. Soon after the *RFA* Reports, EPA determined that NIH was a low priority Facility regarding addressing the few SWMUs and AOC identified for further action. In 2018, EPA revisited the NIH Facility to follow up on the 11 units identified in the *RSA*s. **Table 1** lists the 11 units, their function at the time of the *RFA*s and their current status.

Table 1
SWMUs/AOC Recommended for Further Action

SWMUs/AOC	Description in RFA	Current Status & Basis for No Further Action (NFA)
SWMU 26 – Waste Marshalling & Adjacent Storage Sheds at Bldg. 26 (grated trench drains by storage sheds). EPA recommended modification to the drain system to prevent releases.	The trench drain collected rainwater or waste chemicals (in case of a spill), which directed flow to a sump pit. By turning a valve, the sump could discharge to a grassy area north of Bldg. 26. The only documented waste spill was contained in paved parking lot.	The Adjacent Storage Sheds and trench drains were removed as part of Bldg. 26 (SWMU 27) Clean Closure under MDE (7/19/1996 MDE letter to NIH). EPA recommends NFA.
SWMU 27 – Bldg. 26 Former Waste Chemical Disposal Facility. EPA recommended RFI.	From 1958 to 1978, wastes were managed here. Arsenic & cyanide allegedly buried near SWMU. Solvents burned in brick pit. Soil samples collected in 1983 did not exceed EPA's EP-Toxicity values.	As part of Clean Closure under MDE, NIH removed 300 tons of soil (MDE Clean Closure letter dated 6/19/1996). Bldg. 26 was demolished, different in place. Chemical wastes handled at Bldg. 21 & 26T. EPA recommends NFA.
SWMU 30 – Bldg. 21 Former Low-level Radioactive Decay Holding Tanks. EPA recommended soil sampling.	From 1950s to 1988, two 10,000-gallon concrete USTs were used to store low level radioactive liquid until levels decreased (by radioactive decay), then liquid was released to sanitary sewer (AOC 1).	Under MDE & NRC[1] Closure, USTs were closed in place after rinsing, then filled with clean sand. Bldg. 21 extension covers tank location. EPA verified location. EPA recommends NFA.

[1] NRC – Nuclear Regulatory Commission

Table 1 (con't) SWMUs/AOC Recommended for Further Action		
SWMUs/AOC	**Description in RFA**	**Current Status & Basis for No Further Action (NFA)**
SWMU 31 – Radioactive Material Burial Site, upgradient from Bldg. 21. EPA recommended additional soil sampling.	Radioactive material allegedly buried in hillside upgradient of Bldg. 21. Earlier soil sampling showed no evidence of wastes, however, EPA recommended another round of soil samples.	EPA concluded earlier soil samples were taken in correct location. NIH produced map that showed samples were correctly located. Former employees recollected that wastes were removed. EPA recommends NFA.
SWMU 32 – Former Waste PCB Marshalling Facility at Bldg. 34. EPA recommended soil sampling.	PCBs, waste oils, rags & PCB filled transformers were handled at SWMU. As part of MDE Clean Closure process, 15 feet of contaminated soil was removed.	After soil removal, MDE sent NIH Clean Closure of Bldg. 34 letter (9/21/1995). Bldg. 34 was demolished in 2016. EPA recommends NFA.
SWMU 65 – Waste Dumpsters near Bldg. 11. EPA recommended NIH install lids on dumpsters.	Medical Pathological Waste Incinerator Ash/Unburned Material and Boiler Soot Collection Dumpsters did not have lids.	After EPA's Site visit in 1991, the incinerators were removed along with the dumpsters. EPA recommends NFA
SWMU 67 – Scrap Yard. EPA recommended soil sampling.	A black topped pad where misc. waste was stored outside (tires, lab equipment, scrap metal, etc.). During EPA's 1990 visit, lead-acid batteries and waste oil stored there.	Currently, Yard is blacktopped 80' by 150' area with a barn/shed structure used as a staging area for discarded furniture or equipment, for recycling or off-site removal. EPA recommends NFA.
AOC A – Sanitary Sewer System. EPA recommended integrity testing.	For approximately 26 years, acid/corrosive waste was disposed into sewers. Annual disposal estimate of 20 tons of solids & 50 to 60 tons of liquids from Bldg. 26.	Before 1990, NIH replaced boundary sewer mains. In 1992, NIH prohibited chemical discharges to sewer without prior approval. In 2000's, NIH relined primary lines to prevent leakage. Discharges to WSSC[2] (public utility) are monitored quarterly. EPA recommends NFA.
AOC B – Stormwater (SW) Sewer System. EPA recommended integrity testing.	Two on-site tributaries received SW & water from oil skimmer & possible undocumented discharges. MDE NPDES Permit allowed cooling water blowdown discharge.	SW is managed under MDE NPDES permit. NIH checks SW pond weekly for illicit discharges. Stream refurbished with rip-rap and trees to stabilize banks. NFA.
AOC C – Fuel Oil USTs. EPA recommended integrity tests.	NIH has steel & fiberglass USTs for gasoline, diesel and heating oil storage. During the RSAs, it was unknown whether tanks were integrity tested.	USTs are managed under MDE regs.: monthly UST inspections, UST integrity evaluated every 3 yrs. Aboveground tank integrity managed by NIH. EPA-NFA.

[2] WSSC – Washington Suburban Sanitary Commission

NIH is located in a highly developed urban area. The WSSC provides the NIH and surrounding areas with water, sourced from the Potomac River and treated prior to distribution. The

area does not rely on groundwater for drinking water. From data collected during the *RSA*s, NIH reported it had two industrial use groundwater wells located on site. NIH confirmed that the two wells did exist but haven't been used since 1987.

Section 4: Proposed Remedy

EPA determined that the units described in Table 1 do not pose unacceptable risk to human health or the environment, therefore, EPA proposes No Further Action for these units. EPA's decision is based on communications with NIH, a recent visual inspection of the SWMUs and AOC listed in Table 1 (conducted on April 13, 2018), review of the MDE Clean Closure letters (see AR) and EPA files. A No Further Action decision means that no additional characterization or remediation is necessary under the RCRA Corrective Action Program.

Section 5: Environmental Indicators

EPA set national goals to measure progress toward meeting the nation's environmental goals for facilities. Under EPA's Corrective Action Program, EPA evaluates two key environmental indicators for each facility: (1) current human exposures under control and (2) migration of contaminated groundwater under control. EPA determined that the NIH Facility met the current human exposures under control indicator and migration of contaminated groundwater under control indicators, signed on April 17, 2018.

Section 6: Public Participation

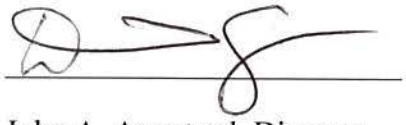
Before EPA makes a final decision on the proposed no further action remedy, the public may participate in the decision selection process by reviewing this SB and documents contained in the Administrative Record (AR) for the Facility. The AR contains all information considered by EPA in reaching this proposed remedy. AR documents are available for public review during normal business hours at:

U.S. EPA Region III
1650 Arch Street (3LC10)
Philadelphia, PA 19103
Contact: Barbara Smith
Phone: (215) 814-5786
Fax: (215) 814-3113
Email: smith.barbara@epa.gov

The public comment period will last thirty (30) calendar days from the date that the notice is published in a local newspaper. You may submit comments by mail, fax, or e-mail to Ms. Barbara Smith. EPA will hold a public meeting to discuss this proposed remedy upon request. Public meeting requests should be made to Ms. 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 an alternative based on the new information and/or public comments. EPA will announce its final decision and 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 Ms. Barbara Smith at the address listed above.

Section 7: Signature

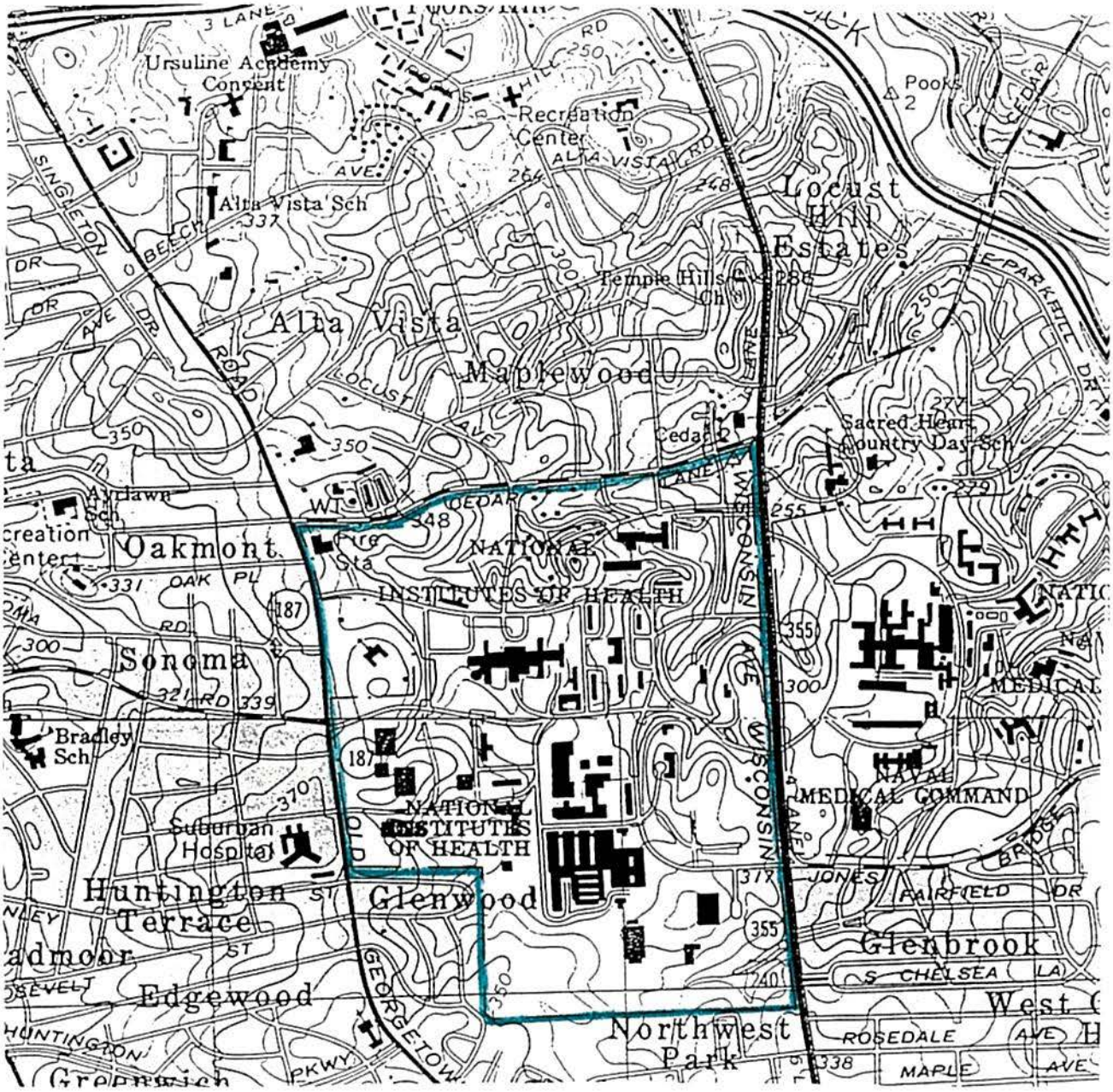


Date: 04-27-2018

John A. Armstead, Director
Land and Chemicals Division
US EPA, Region III

Figure I

Topographic Map of NIH and Surrounding Area



Attachment 1

Index to Administrative Record

1990, April 30; *RCRA Facility Assessment (RFA), Phase I*, A.T. Kearney, Inc. for EPA.

1991, June; *Draft RCRA Facility Assessment (RFA), Phase II*, A.T. Kearney, Inc. for EPA.

1992, March; *Final RCRA Facility Assessment (RFA), Phase II*, A.T. Kearney, Inc. for EPA.

1995, August; *Amendment to the Building 34 Closure Project*, NIH sent to MDE.

1995, September 21; MDE Letter to NIH Regarding Closure of Controlled Hazardous Substances Facility located in Building 34, MDE approval of Building 34 (SWMU 32) closure.

1996, July 19; MDE Letter to NIH Regarding Closure of Storage Facility Building 26, MDE approval of Building 26 (SWMU 26 & 27) closure.

2009, July; *Final Multi-Media Compliance Evaluation Inspection* Report, USEPA, Region III Office of Enforcement, Compliance and Environmental Justice.

2011, May 27, NIH Letter to EPA, Region III, NIH Response to Multi-Media Compliance Evaluation Inspection Report Identified Issues.

2018, February 28; SWMU 31- Radioactive Material Burial Site map overlay of soil sample locations, NIH e-mail to EPA.

2018, April; *Summary of EPA Corrective Action Files and Site Visit*, EPA Office of Remediation.

2018, April 17; Environmental Indicators for Current Human Exposures Under Control and Migration of Contaminated Groundwater Under Control.