



AECOM  
222 Central Park Ave, Suite 300  
Virginia Beach, VA 23462  
757-306-4000

May 7, 2025

Mr. Mark Hiltke  
Environmental Engineer 4  
Huntington Ingalls Inc.  
4101 Washington Avenue, B79-1  
Newport News, VA 23607

Subject: **Request for Class 2 Permit Modification**  
Hazardous Waste Management Post-Closure Care and Site-Wide Corrective  
Action Permit  
Huntington Ingalls, Inc. – Newport News Shipbuilding  
EPA ID# VAD001307495

Dear Mr. Hiltke:

As requested by Virginia Department of Environmental Quality (VDEQ), AECOM prepared this request for a Class 2 Permit Modification to remove groundwater monitoring activities from Permit Module VII.B.5 and revise relevant Permit attachments for SWMU-25, 38, and ORF2. This request is based on groundwater monitoring results demonstrating compliance with applicable screening criteria established in the Permit as documented in previous Annual Reports.

For DEQ review, this request includes attached redlined-strikeout versions of the applicable Permit sections and a modified Permit with changes accepted, dated May 7, 2025. Following a public comment period and DEQ acceptance, the modified version would replace the current Permit.

The following sections summarize the basis for the Permit modification request and provide recommended edits to the relevant Permit sections and attachments.

## **1.0 Basis for Permit Modification**

### **1.1 ORF2**

As documented in the 2022 Annual Report, groundwater monitoring at SWMU-ORF2 indicated benzene, chlorobenzene, and isopropyl benzene concentrations below applicable screening criteria for three consecutive years. These results meet the Permit criteria to remove groundwater monitoring for this SWMU, and DEQ concurred with his assessment by letter dated March 6, 2023.

### **1.2 SWMU 38**

As documented in the 2022 Annual Report, gauging of piezometer PZ-22 at SMWU - 38 in 2022, consistently indicated LNAPL measured at or below 0.01 feet in thickness, following the last dual phase extraction event in December of 2021. These

results indicate the LNAPL as been removed to the extent practicable, and DEQ concurred with this finding by letter dated March 23, 2023.

### **1.3 SWMU 25**

As documented in the 2018 Annual Report, groundwater monitoring at SMWU-25 indicated all groundwater constituents were below applicable screening criteria. In a letter dated June 17, 2019, DEQ concurred that remedial objectives had been met and that groundwater monitoring could be discontinued. AECOM properly abandoned the monitoring wells on November 17, 2020, as documented in our well abandonment report dated January 6, 2021. The Permit was never formally modified to reflect the approved discontinuation of groundwater monitoring at SWMU-25.

## **2.0 Permit Modification**

To implement the proposed modification, the following sections of the current Permit will be revised as shown on the attached redline-strikeout versions and summarized below:

### **2.1 Permit Module VII.B.5 – Final Remedy Actions**

- Delete subsection b referencing groundwater monitoring at SWMU 25 and ORF2
- Delete subsection c referencing monitoring and passive recovery of mineral oil at SWMU 38

### **2.2 Permit Attachment A – Facility Maps and Figures**

- Remove Figures 4, 5, and 6, corresponding to SMWU-25, ORF2, and 38, respectively.

### **2.3 Permit Attachment B – Facility Background**

- Add SWMU-25, ORF2, and 38 to the section titled *No Further Action Required with Institutional Controls*
- Delete SWMU-25, ORF2, and 38 from the section titled *Further Action Required with Institutional Controls*
- Delete SWMU-25, ORF2, and 38 from the section titled *RCRA Facility Investigation Activities*

### **2.4 Permit Attachment F - Groundwater Monitoring Lists**

- Delete all constituents from table F-2 Site Wide Corrective Action Groundwater Monitoring List, including 1,1 -Dichlorobenzene, Benzene, Chlorobenzene, Isopropyl benzene, and naphthalene.

DEQ has requested that this proposed change be processed as a Class 2 Permit Modification, therefore in accordance 40 CFR §270.42.b, a public notice announcing the public comment period and public meeting date will be published in the local newspaper and submitted to the facility mailing list.

Should you have any questions or need additional information regarding this project, please contact Jack Moore at 757-513-5577 or [jack.moore@aecom.com](mailto:jack.moore@aecom.com).

Sincerely,



Jack Moore  
Associate Vice President  
Program Manager

Attachments: Draft Revised Module VII.B.5  
Draft Revised Attachment B  
Draft Revised Attachment F  
Revised Permit with changes accepted (MS Word format)

requirements, groundwater monitoring, and institutional and engineering controls. The final remedy for the Facility was developed and described in the Statement of Basis, dated November 2018. The requirements of this Permit provide for the operation and maintenance of the remedy described in the Statement of Basis.

#### VII.B.4 Remedy Controls

The goal of the remedy for corrective action is to ensure protection of human health and the environment. The final remedy for the Site consists of active remediation utilizing Monitored Natural Attenuation (MNA) and implementing Institutional and Engineering Controls, as set forth in the Permit. Institutional Controls (ICs) are generally non-engineered mechanisms such as administrative and/or legal controls that minimize the potential for human exposure to contamination and/or protect the integrity of a remedy. Engineering Controls (ECs) are generally engineered mechanisms such as a landfill cap.

#### VII.B.5 Final Remedy Actions

The details of the final remedy are summarized below and are described in more detail in the Administrative Record and Statement of Basis. Modifications in the activities, studies, techniques, procedures, and designs or schedules utilized in carrying out the requirements of this Permit and necessary for the completion of the remedy may be made by written agreement from the Department. Under this final remedy, the Department is requiring the following actions:

- a. Continue post-closure care and the groundwater monitoring program at SWMU 12a to monitor natural attenuation of hazardous constituents (**Permit Attachment(s) E and F, Table F-1**);
- ~~b. Continue the groundwater monitoring programs at SWMUs 25 and ORF2 to monitor natural attenuation of hazardous constituents (**Permit Attachment F, Table F-2**);~~
- ~~c. Continue to monitor and measure mineral oil thickness at SWMU 38 and conduct passive recovery as needed;~~
- ~~d.b.~~ Since the metal sorting area serves as an engineering control currently mitigating exposure to contaminants in soil at SWMU 10, complete surface soil removal when the area is no longer used or install an alternative engineering control that achieves the same purpose in the event the sorting area is removed; and
- ~~e.c.~~ Impose and maintain compliance with land use restrictions including institutional (ICs) and engineering controls (ECs) consisting of property use restrictions for groundwater and soil in accordance with **Permit Condition VII.B.6.**

#### VII.B.6 Final Remedy Implementation

Within ninety (90) days of the effective date of the Permit renewal with incorporating the Final Remedy, the Permittee shall submit to the Department for approval a CMI Plan for operation and maintenance of the post-closure care requirements. The CMI Plan will include the MNA groundwater monitoring programs and monitoring well networks, remedial effectiveness monitoring, sampling and analysis, reporting, and implementation and maintenance of institutional and engineering controls. All components of the remedy shall be implemented in accordance with the Department approved CMI Plan.

Identification	SWMU Description
SWMU #48	Proposed Substation 3 - BTEX PAH
SWMU #49	Grit Separator Excavation, Building 4720
SWMU #50	North 20, Area North of Dry Dock 12
ORF1	Oil Reclamation Facility 1, S. Building 276
ORF2	Oil Reclamation Facility 2, S. Building 1761
Waste Collection Boxes	Waste Collection Boxes – Oily Waste/Dinosaur/Waste Collection, Various Locations – Managed by Stop 550
SMOF	Submarine Modular Outfitting Facility (SMOF), S. Dry dock 10

**No Further Action Required SWMUs**

EPA and DEQ determined that no further investigation or action was necessary at 39 of the 55 SWMUs in order to meet Corrective action program goals based on operating history, records, and inspections (SWMU 1-9, 11, 12b, 13,15, 17-18, 20-24, 26-39, 43, 45-46, 50, Waste Collection Boxes, and SMOF.) RCRA closure activities have been completed for SWMU 12a. The groundwater monitoring and corrective measures for SWMU 12a continues to be addressed as part of Post-Closure Care via the Hazardous Waste Management Permit. The remaining SWMUs identified by EPA and DEQ were evaluation during the RFI.

**No Further Action Required with Institutional Controls SWMUs**

Based on results of the RFI investigations, limited interim measures and risk assessments, EPA and DEQ determined that no further action was necessary to meet program goals if institutional controls were implemented and maintained for SWMUs 14, 16, 19, 40-42, 44, 47-49, ORF1, ORF2, SWMU 25, and SWMU 38.

**Further Action Required with Institutional Controls SWMUs**

EPA and DEQ determined that in addition to institutional controls, further actions including engineering controls, surface soil removal, and Monitored Natural Attenuation (MNA) groundwater monitoring were necessary at the following SWMUs 10, 25, and ORF2. SWMU 12a will be managed under Post-Closure Care as described in this Permit and **Permit Attachment C, Post-Closure Care for SWMU 12a.** Below is a summary of the Facility's environmental history at regulated unit SWMU 12a, including SWMUs 10, 25, 38, and ORF2.

**RCRA CLOSURE ACTIVITIES**

The Permittee implemented an interim status groundwater monitoring program in July 1981 which was designed to evaluate groundwater quality in the uppermost aquifer beneath the two operating surface impoundments. Six monitoring wells were installed (GM-1 through 6.) The wells were abandoned in 1985 prior to construction of the Blast and Coat Building. Replicate samples were not collected and statistical evaluations were not performed on the data collected between 1981 and 1985.

**SWMU 12a**

The former surface impoundments (SWMU 12a) are located in the north central portion of the Facility. They were designed to neutralize basic and acidic wastes, precipitate metal hydroxides, and provide retention time for gravity separation of oily wastes. Listed wastes handled by the impoundments included D002, D006, D007, and D008 hazardous wastes. Management of hazardous wastes in the impoundments was discontinued in 1982. However, the units were still

## **RCRA FACILITY INVESTIGATION ACTIVITIES**

Pursuant to the RCRA Corrective action program, HHI performed multiple RCRA Corrective action activities at the Facility. Investigations occurred from 2003-2018 in accordance with an EPA approved RFI Work Plan (O'Brien & Gere, 2003) and additional work plans specific to each SWMU as needed.

### **SWMU 10**

SWMU 10 is a 175ft by 20ft sorting area located within the Scrap Yard. It's surrounded by concrete and metal barriers and segregated into subareas for sorting and staging various types of metal. Ground cover in the area is a mix of gravel and soil. On September 19, 2007, the Facility conducted a soil sampling event. Results indicated that PCBs, SVOCs, and metals were detected, some of which exceeded industrial Regional Screening Levels (RSLs) for direct contact. Based on this, 2 follow on sampling events occurred in March 2008 and July 2009. Results of the assessments indicated contaminants of concern (COCs) were limited to PCB-Aroclor 1260 in surface soil at 1 sampling location and lead in surface soil at 6 sampling locations. No COCs were detected above industrial RSLs or background concentrations in subsurface soil, indicating that unacceptable impacts to groundwater are not likely.

Based on the results of the soil assessment, the Facility proposes to excavate surface soil to mitigate unacceptable risks to human health and the environment under current and future property use as industrial. SWMU 10 is currently used as part of the Facility's daily operation, which makes excavation of the surface soil not possible. Due to the nature of how the area is used for metal sorting and staging, no unacceptable risk to onsite workers has been identified. Therefore, the Facility proposes to complete the excavation of surface soil when the metal sorting area is no longer used or when it's not used temporarily for a period of time long enough to support the removal.

### **SWMU 25**

~~SWMU 25 was an underground storage tank (UST or Tank 517) used to containerize solvent-based wastewater. The tank failed a tightness test in 2000 and taken out of service and subsequently removed in 2004. Soil samples collected from the bottom and side walls of the excavation indicated tetrachloroethylene (PCE) and trichloroethylene (TCE) were present and exceeded RSLs. Results also indicated that Total Petroleum Hydrocarbons Diesel Range Organics (TPH DRO) were present above DEQ's action level of 100 milligram per kilogram (mg/kg.) The contaminated soil was removed and the excavation was backfilled.~~

~~In 2007, the Facility conducted a release assessment by advancing three soil borings near the former UST and collecting soil and groundwater samples. Results indicated TPH DRO was not detected in soil and groundwater. In addition, VOCs were not detected in soil, but were detected in groundwater. Specifically, TCE exceeded its Maximum Contaminant Level (MCL) of 5 micrograms per liter (ug/L) and chloroform and naphthalene both exceeded their respective tap water RSL.~~

~~In 2010, four monitoring wells were installed to further define the nature and extent of VOCs in groundwater. Based on sample results, an additional four monitoring wells were installed including a well in the background location to complete the assessment. In 2013, the Facility began a semi-annual groundwater monitoring program, during which time an evaluation of MNA in accordance with EPA's "Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater" was performed. Results of the evaluation generally indicated inadequate or limited~~

~~evidence that anaerobic biodegradation of chlorinated organics was occurring. However, groundwater monitoring results from 2010 to 2017 clearly demonstrate decreasing contaminant concentrations, which indicates that natural attenuation is occurring via physical processes such as dilution, volatilization, and/or adsorption onto the aquifer matrix. Based on that, the Facility continues to monitor groundwater for natural attenuation with DEQ concurrence.~~

~~From 2014-2016 a Vapor Intrusion (VI) study was conducted within Buildings 102, 105, and 134, which are adjacent to the tank location and TCE impacted groundwater. A total of six sub-slab vapor samples, eight indoor air samples, and two ambient air samples were collected. Target compounds included in the sample analysis were limited to VOCs related to solvents and naphthalene. Results indicated that target compounds were not detected above screening criteria in samples collected at Buildings 102 and 134. At building 105, TCE was detected in indoor air and sub-slab vapor at a concentration that exceeded screening criteria including the RSL for indoor air for industrial use based on the most conservative hazard quotient (HQ) of 0.1, but below the industrial RSL when considering an HQ of 1, which is appropriate when evaluating 1 chemical. Naphthalene was detected above EPA's and DEQ's screening criteria in one indoor air sample in 2015. However, naphthalene was not detected above laboratory method detection limits (MDL) in the follow on sampling that occurred in 2016. Based on the results, it was concluded that no unacceptable risk due to vapor intrusion was identified and no further action for indoor air was necessary in order to meet program goals.~~

### **SWMU 38**

~~SWMU 38 consists of a pipe shop located in Building 29 and 21, at which pipe cleaning operations were conducted in six dip tanks using trisodium phosphate (TSP) and sulfuric acid. TSP was stored in a tank located near the dip tanks and was removed in 2000. The area was investigated during the RFI for potential releases from the tank and the pipe operations. In 2008, soil samples were collected beneath the building's concrete slab and groundwater was collected from an existing piezometer (PZ-22) located down gradient of the area. Results indicated metals concentrations within site background levels in soil and groundwater. However, groundwater results indicated 0.08 feet of LNAPL in PZ-22. 2009 water level measurements for PZ-22 indicated 0.6 feet LNAPL. Subsequently, the Facility conducted a chemical analysis of the LNAPL. Results of that analysis indicated high concentrations of metals and chemical characteristics of mineral oil. In response, the Facility continued to monitor LNAPL thickness and installed a hydrophobic sorbent sock to remove recoverable product.~~

~~From 2010 to 2018, the Facility performed monthly gauging of PZ-22 and product recovery utilizing the sorbent socks. As of July 2018, product thickness was measured at 0.01 feet. The Facility will continue to monitor LNAPL thickness quarterly and re-implement product recovery using sorbent socks if product thickness increases to 0.1 feet. Based on the Facility's existing controls that restrict the location and nature construction projects and the forthcoming groundwater use restriction, no additional actions are necessary to protect human health and the environment.~~

### **ORF2**

~~ORF2 was an oil reclamation facility that consisted of three open top, rectangular tanks constructed of steel where oily waste waters including bilge water, oily ballast waters, and used oils were processed from 1956 to 1978. In 2011 a release assessment was conducted using direct push technology followed by installing five monitoring wells in 2012. Results indicated that benzene, chlorobenzene, and naphthalene were present and exceeded drinking water standards. In addition~~



~~TPH DRO exceeded DEQ's action level of 100 mg/L. Based on this, the Facility implemented annual groundwater monitoring and began collecting geochemical data to evaluate potential for natural attenuation. Results from 2013 to 2017 indicated that 1) naphthalene concentrations are decreasing; 2) there was no significant presence of SVOCs, therefore monitoring of TPH DRO was discontinued; and 3) a slight increasing trend for benzene concentrations was observed in one monitoring well.~~

~~Based on the results of the release assessment and groundwater monitoring, the Facility continues to monitor groundwater and natural attenuation of contaminants. Since groundwater is not used for any purpose at the Facility no unacceptable risks to human health and the environment identified other than to construction workers. However, based on the Facility's existing controls that restrict the location and nature of construction projects and the forthcoming groundwater use restriction, no additional actions are necessary to protect human health and the environment.~~

### **Corrective Measures Study**

Based on the results of numerous investigations that occurred from 2003 to 2018, a Corrective Measures Study (CMS) is not necessary considering site conditions including institutional and engineering controls that are already in place and the forthcoming institutional controls that will be implemented by the Facility's permit.

### **REMEDY SELECTION PROCESS**

In lieu of a CMS, EPA's RCRA Facility Investigation Remedy Selection Track (RCRA FIRST) initiatives were utilized to streamline the remedy selection process. More about the RCRA FIRST process can be found on EPA's website through the following link; <https://www.epa.gov/hw/toolbox-corrective-action-resource-conservation-and-recovery-act-facilities-investigation-remedy>.

A Remedy Selection Process (RSP) meeting was conducted in October 31, 2018 to gain concurrence on corrective action objectives, facets of the proposed remedy, and establish timelines. As a result of the RSP meeting, the Facility used EPA's balancing and threshold criteria to evaluate the proposed remedy to demonstrate its protectiveness, effectiveness, and feasibility. Based on this, the Facility's Permit will be modified to incorporate all facets of the proposed remedy including ongoing Post-Closure Care requirements, groundwater monitoring, and institutional and engineering controls.

### **CURRENT CONDITIONS**

The Facility continues to implement Post-Closure Care activities at SWMU 12a. ~~and conduct MNA groundwater monitoring at SWMUs 25, 38, and ORF2.~~ The metal sorting area located in SWMU 10, the scrap yard, is still used as part of the Facility's daily operations. The Facility is secured with perimeter fencing with controlled access and has an onsite excavation permitting process to regulate and control construction projects to ensure proper health and safety for workers and to manage soil and groundwater appropriately. In addition, groundwater beneath the Facility is not used for any purpose. Contaminants in groundwater are generally decreasing and it's anticipated that they will continue to decrease. Based on this, exposure to contaminants left in soil and groundwater is mitigated due to existing onsite policies and procedures, implementation of institutional controls and maintenance of engineering controls.

### **CORRECTIVE ACTION**

#### **Soils**



## **ATTACHMENT F**

### *Groundwater Monitoring Constituents and Corrective Action Remedial Targets*

**Table F-1: Groundwater Monitoring List for SWMU 12a**

Constituent	SW-846 Analytical Method	Origin	GPS (ug/L)
Vinyl-Chloride	8260B	MCL	2.0
Naphthalene	8270C	Background	8.8

Notes:

All methods are as described in EPA's SW-846, Test Methods for Evaluating Solid Waste, Third Edition.

Groundwater protection standard concentration limits based on:

1. ug/L = micrograms per Liter
2. Maximum Contaminant Levels (MCLs) derived from EPA's Drinking Water Regulations and Health Advisories
3. Background values are derived from the Sampling and Analysis Plan
4. Regional Screening Levels (RSLs) derived from EPA Region III Tapwater, TR 1E-06, May 2018
5. Alternate Concentration Limits (ACLs) derived from Virginia Department of Environmental Quality ACL table updated November 2017, effective January 2, 2018, are applied if MCL or the EPA Region III Tap Water RSL are not available

**Table F-2: Site-Wide Corrective Action Groundwater Monitoring List**

Constituent	SW-846 Analytical Method	Origin	GPS (ug/L)
<del>1,1-Dichloroethane</del>	<del>8260B</del>	<del>RSL</del>	<del>2.8</del>
<del>Benzene</del>	<del>8260B</del>	<del>MCL</del>	<del>5.0</del>
<del>Chlorobenzene</del>	<del>8260B</del>	<del>MCL</del>	<del>100.0</del>
<del>Isopropylbenzene</del>	<del>8260B</del>	<del>RSL</del>	<del>45</del>
<del>Naphthalene</del>	<del>8270C</del>	<del>Background</del>	<del>8.8</del>

Notes:

All methods are as described in EPA's SW-846, Test Methods for Evaluating Solid Waste, Third Edition.

Groundwater protection standard concentration limits based on:

1. ug/L = micrograms per Liter
2. Maximum Contaminant Levels (MCLs) derived from EPA's Drinking Water Regulations and Health Advisories
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