Explanation of Significant Differences

Operable Unit 3
Portsmouth Naval Shipyard, Kittery, Maine

Summary of Explanation of Significant Differences (ESD)

The Navy is modifying a component of the remedy for Operable Unit (OU) 3 documented in the Record of Decision (ROD) for OU3 based on the results of a voluntary Site Screening Process (SSP) investigation of the chemicals of emerging environmental concern per- and polyfluoroalkyl substances (PFAS). The Navy conducted the SSP investigation to evaluate potential environmental releases of PFAS at PNS from fire suppression systems containing aqueous film-forming foam (AFFF) or AFFF use at PNS. Soil and/or groundwater samples were collected to determine whether these media were impacted by PFAS.

The Navy conducted the SSP investigation at five areas from 2019 to 2021. PFAS are considered 'pollutants or contaminants' under CERCLA but are not currently listed as CERCLA hazardous substances. Although there are currently no promulgated federal standards for PFAS in any medium, the PFAS analytical data were compared to current risk-based screening levels. Concentrations of PFAS in soil were less than screening levels. Analytical data from groundwater samples had PFAS concentrations greater than screening levels in all five areas of investigation. For Building 18, no LUCs are required due to the low detection of perfluorooctanesulfonic acid (PFOS) as well as several other factors described in Appendix E of the SSP report, but LUCs are needed in the other four areas: Building 29, Former Building 335, Building 337, and Building 357. Based on the results of the SSP investigation and because the OU3 remedy includes groundwater land use controls (LUCs), the groundwater LUC component of the OU3 remedy will be altered. Because two of the four areas are adjacent to OU3 which has land use controls (LUCs) for groundwater as a remedy, the boundaries of the LUC component of the OU3 remedy will be altered to include all four areas:

- LUCs to prohibit the use of groundwater as a potable water source at four areas which are associated with Building 29, Former Building 335, Building 337, and Building 357. The expanded LUC boundary at each of the four areas are based on the maximum extent of potential PFAS impacted groundwater as identified in the SSP Report.
- LUC requirements for annual inspection within the expanded LUC boundary to ensure continued protection of human health and the environment.

The alteration of the remedy for OU3 will ensure long-term protectiveness of human health and the environment, complies with federal and state requirements, and remains cost-effective.

Documents finalized after signature of this ESD will include an updated LUC Remedial Design and an updated long-term management plan that provides the inspection and maintenance activities for the added LUC areas to ensure that groundwater is not utilized as a drinking water source.

Introduction and Statement of Purpose

Investigations of hazardous waste contamination at Portsmouth Naval Shipyard (PNS) began in 1983. Investigations under the authority of the Resource Conservation and Recovery Act (RCRA) began in 1985. With the inclusion of PNS on the National Priorities List in 1994, subsequent studies have been conducted under the authority of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The cleanup program for PNS is being conducted under the Department of Defense (DoD) Environmental Restoration Program (ERP) and meets the requirements of CERCLA and the Superfund Amendments and Reauthorization Act. There are currently six Operable Units (OUs) within PNS that have remedies in place that require continued response actions. The response actions for these OUs require long-term management (LTMgt) that includes maintenance of land use controls (LUCs) and five-year reviews. In addition, the Navy conducted a voluntary SSP investigation of chemicals of emerging environmental concern, per- and polyfluoroalkyl substances (PFAS), for five areas of known or suspected releases of aqueous film-forming foam (AFFF) containing PFAS to the ground surface. Based on the results of the PFAS SSP investigation (Tetra Tech, 2022), the Navy, United States Environmental Protection Agency (EPA), and Maine Department of Environmental Protection (MEDEP) agreed that a response action was needed for groundwater at four of the five areas to provide a method to ensure continued protection of human health and allow EPA to closeout PNS and delete PNS from the National Priorities List. This

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document is being issued by the Navy, as the lead agency for all investigation and cleanup programs ongoing at PNS, and EPA with the concurrence of MEDEP.

In August 2001, the Navy and EPA, with concurrence from MEDEP, signed a Record of Decision (ROD) (Navy, August 2001) that documents the selected final remedial action for OU3, soil and groundwater within the boundary of the Jamaica Island Landfill (JILF). An Explanation of Significant Differences (ESD) for the OU3 remedy was signed in September 2003 that documents a significant change to the remedy related to construction activities. A second ESD for the OU3 remedy was signed in October 2005 that documents a significant change to the remedy related to management of migration of groundwater. The ESD provided herein documents another significant change to the remedy related to expansion of groundwater LUCs to include the areas as shown on Figure 1. The lead agency for a Superfund site may determine that a change to the selected remedy, as described in a ROD, is necessary after the ROD has been issued. A change to the ROD can be made under CERCLA Section 117(a), the National Contingency Plan (NCP) Section300.435(c), and EPA guidance (Office of Solid Waste and Emergency Response Directive 9200.1-23P, July 1999).

EPA guidance (July 1999) categorizes a post-ROD change as a non-significant or minor change, a significant change to a component of the remedy, or a fundamental change to the overall remedy. The Navy, as lead agency for PNS, has determined that a significant change to a component of the remedy (i.e., extension of the LUC boundary) will be made. A significant change involves a change to a component of the remedy that does not fundamentally alter the overall cleanup approach. Where changes represent a significant but not fundamental change to the ROD, the Navy, as lead agency, must publish an ESD as set forth in NCP Section 300.435(c)(2)(i). The Navy is also required to publish a notice of availability and a brief description of the ESD in a major local newspaper.

Site History, Contamination, and Selected Remedy

PNS is a restricted-access military facility on a 276-acre island in the Piscataqua River at the mouth of the Great Bay Estuary (commonly referred to as Portsmouth Harbor). The Piscataqua River is a tidal estuary that forms the southern boundary between Maine and New Hampshire. PNS was established as a government facility in 1800, and it served as a repair and building facility for ships during the Civil War. A large number of submarines have been designed, constructed, and repaired at this facility since 1917. PNS is engaged in the conversion, overhaul, and repair of submarines for the Navy and continues to service submarines as its primary military focus. The long history of shipbuilding in Portsmouth Harbor dates back to 1690.

OU3 is approximately 22 acres in size and is located in the eastern portion of the Shipyard (Figure 1). OU3 consists of soil (including landfill material) and groundwater within Site 8, Jamaica Island Landfill (JILF). The Navy used Site 8, which previously consisted of tidal mudflats, from 1945 to 1978 for disposal of general refuse, trash, construction rubble, dredge sediment, and various industrial wastes.

Site 9 (Former Mercury Burial Sites I and II) and Site 11 (Former Waste Oil Tanks Nos. 6 & 7) were part of OU3; however, as documented in the ROD for OU3, the source areas were removed, and no further action was required. Therefore, Site 9 and Site 11 are no longer included in OU3. The ROD for OU3 was signed in 2001, and the selected remedy consisted of installation of a hazardous waste landfill cap, implementation of LUCs, erosion controls, and monitoring. An ESD was signed in September 2003 documenting the addition of excavation and consolidation of material within the limits of the JILF to the remedy, which was completed in 2002, and construction of a wetland within the excavated area, which was completed in 2003. After it was determined that management of migration of groundwater offshore of the JILF (OU6) was being addressed by the OU3 (source control) remedy, a second ESD was issued in October 2005 to combine management of groundwater migration (formerly OU6) with the source control remedy (OU3). As documented in the 2005 ESD, construction activities associated with the OU3 remedy, including wetlands construction and placement of geotextile and riprap along the OU3 shoreline, addressed the issue regarding seeps in the offshore area (formerly OU6). The remedial action was conducted in two phases. Phase I included the excavation and consolidation of material and construction of wetlands in 2002. Phase II included landfill cap construction, which was completed in 2004. LUCs, monitoring, and operations and maintenance were initiated in 2006.

The Navy prepared a *Remedial Design for Land Use Controls of OU3 Site Remedy* that describes the necessary institutional controls for the OU3 remedy to prevent use of the landfill other than for uses consistent with the selected design. The Remedial Design is included in the final Operation, Maintenance, and Monitoring (OM&M) Plan (Tetra Tech, December 2011), which includes the inspection and maintenance activities for these institutional controls. The OU3 Land Use Control Remedial Design (LUC RD) was completed in August 2011, and it provides the required implementation activities to comply with the LUC remedy (Navy, August 2011).

A summary of site activities associated with the OU3 remedy, including remedial action objectives (RAOs), remedial actions to address the RAOs, construction completion, and LTMgt and five-year reviews completed, is provided in Table 1. A summary of the remedy components based on the ROD, 2003 ESD, 2005 ESD, and this current ESD is provided in Table 2. Ongoing activities required as part of the OU3 remedy include continued OM&M, LUC inspections, and five-year reviews. The most recent annual OM&M and LUC inspection was completed in June 2021 and most recent groundwater sampling round was conducted in March 2022. The most

recent five-year review was completed in March 2022, and the document was signed in April 2022.

Summary of Past Explanation of Significant Differences

The September 2003 ESD discusses the significant changes made to the OU3 remedy based on re-evaluation of the feasibility of constructing wetlands in the Jamaica Cove area and construction activities as part of the OU3 remedy. In accordance with the OU3 ROD, the Navy re-evaluated the feasibility of consolidating waste material removed from the Jamaica Cove area and the vicinity of the former location of Mercury Burial Site II into the existing landfill. The report entitled *Evaluation of Jamaica Cove Options* (USACE, June 2002a) recommended the consolidation of landfill material and construction of wetlands in the Jamaica Cove area. This approach meets the goals of establishing wetlands and removing waste from groundwater contact without disturbing a significant area of existing wetlands. The disturbance of approximately 400 square feet of wetlands was necessary to allow the new wetland area to drain fully during each tidal cycle. The area disturbed was less than the minimum area that requires a permit under State of Maine and federal regulations. Consolidation of waste from the Mercury Burial Site II area was not recommended (USACE, June 2002b). Based on the design for the wetlands construction the following was conducted:

- Excavation of the contaminated soil/waste from an approximately 2.6-acre area bounded by Parker Avenue, Stephenson Road, and Jamaica Cove.
- Consolidation of the excavated material within the limits of the JILF south of Parker Avenue.
- Construction of wetlands within the excavated area.

Other minor changes to the remedy included that the Remedial Design (RD) (USACE, June 2002c and November 2002) provided shoreline erosion controls within the boundary of the existing landfill instead of outside the boundary of the landfill as originally proposed to minimize impact to existing natural resources. Also, the landfill waste material in the area of Building 320 (Automotive Hobby Shop) was excavated to the depth of the water table, backfilled with clean material, and paved with asphalt; this area was not included under the landfill cap.

The October 2005 ESD documented a modification to the OU3 ROD that significantly changed, but did not fundamentally alter, the selected remedy. The change to the remedy for OU3 did not alter the decision to install a hazardous waste landfill cap or implement institutional controls, erosion controls, and monitoring. The OU3 remedy was modified to include management of migration as part of OU3, and was no longer required to efficiently address groundwater migration (OU6) separate from source control (OU3). The remedy for OU3 with modifications based on the September 2003 ESD and October 2005 ESD met the Applicable and Relevant and Appropriate Requirements (ARARs) and the RAO for groundwater migration from the JILF. The monitoring component of the OU3 remedy was affected by the addition of the ARARs and RAO for groundwater migration from the JILF.

Basis for this Explanation of Significant Differences

The Navy conducted a voluntary SSP investigation from 2019 to 2021 of the chemicals of emerging environmental concern, PFAS, which are considered 'pollutants or contaminants' under CERCLA but are not currently listed as CERCLA hazardous substances. The SSP focused on areas of known or suspected releases of PFAS to the ground surface, which were identified because of the potential for PFAS releases from fire suppression systems containing AFFF or AFFF use at PNS. As part of the SSP, soil and groundwater samples were collected and analyzed in five areas and the results compared to current screening levels to determine whether these media were potentially impacted by PFAS.

The results of the SSP showed that PFAS concentrations were less than screening levels in soil. Groundwater monitoring well data revealed that PFAS concentrations exceeded screening levels at all five sites sampled. For Building 18, no LUCs are required due to the low detection of perfluorooctanesulfonic acid (PFOS) as well as several other factors described in Appendix E of the SSP report. The four areas that require LUCs are Building 29, Former Building 335, Building 337, and Building 357.

Figures 2 through 5 provide the analytical results for perfluorooctanoic acid (PFOA), PFOS, and perfluorobutane sulfonic acid (PFBS) for the four areas that require LUCs. Although groundwater in these four areas is not considered potable, the maximum extent of potential PFAS-impacted groundwater was identified in the SSP Report.

There are currently no promulgated federal standards for any PFAS in any medium. In May 2016, EPA's Office of Water issued Lifetime Drinking Water Health Advisory (HA) levels for PFOA and PFOS. Health advisories are not enforceable, regulatory levels; rather they are levels that would provide Americans, including sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water. The 2016 HA is 70 nanograms per liter (ng/L) for PFOS and 70 ng/L for PFOA. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOA and PFOS should be compared with the 70 ng/L HA level (EPA, 2016a, 2016b). In June 2022, the EPA issued new interim HA levels for PFOA (0.004 ng/L) and PFOS (0.02 ng/L), and final HA levels for PFBS (2,000 ng/L), and Gen X chemicals (10 ng/L).

The Maine Center for Disease Control and Prevention (MECDC) established a 70 ng/L drinking water action level for PFOA and/or PFOS. Maine Remedial Action Guidelines (MERAGs) provide procedures to determine clean-up levels

when site-specific clean-up levels are not calculated. The current residential MERAGs for groundwater are 70 ng/L for Group II PFAS, which is defined as the sum of five PFAS (PFOA, PFOS, perfluoroheptanoic acid [PFHpA], perfluorononanoic acid [PFNA], and perfluorohexanesulfonate [PFHxS]) and 400,000 ng/L for PFBS. For construction workers exposed to groundwater, current MERAGs are 750,000 ng/L for PFOA, 750,000 ng/L for PFOS, and 100,000,000 ng/L for PFBS (MEDEP, 2021). On June 21, 2021, Maine published a Resolution requiring community water systems and nontransient, noncommunity water systems to implement treatment or other remedies to reduce combined concentrations of six specified PFAS to below 20 ng/L as an interim drinking water standard. The interim drinking water standard is for PFOA, PFOS, PFHxS, PFNA, PFHpA, and perfluorodecanoic acid (PFDA), either individually or in combination (Maine, 2021).

Risk-based PFAS soil and groundwater screening levels for environmental investigations are provided in the DoD guidance (DoD, 2022). As provided in the SSP investigation, these human health risk-based screening levels for soil and groundwater for PFOS, PFOA, PFBS, perfluorononanoic acid (PFNA), perfluorohexane sulfonate (PFHxs), and hexafluoropropylene oxide dimer acid (HFPO-DA) from the EPA's Regional Screening Level (RSL) table, updated May 18, 2022, based on the residential receptor scenario for ingestion of tap water. See SSP report, Appendix E.

Based on the results of the PFAS SSP investigation (Tetra Tech, 2022), the Navy, EPA, and MEDEP agreed that a response action was needed for groundwater in the four areas to provide a method for addressing PFAS in groundwater through the CERCLA process and allow EPA to closeout PNS and delete PNS from the National Priorities List. The decision to modify the remedy for OU3 is based upon a number of site-specific facts, including that the existing OU3 remedy comprises groundwater LUCs to prohibit use of groundwater as a potable water source, the proximity of OU3 to Building 337 and Building 357, two of the four areas which are the subject of this ESD, and results of sampling presented in the recent PFAS SSP Report. Importantly, PNS is an active military site which is uniquely situated entirely on an island, resulting in limitations to the potable use of groundwater due to salinity and yield. The facility has and will continue to receive potable water from Kittery Water District. With a current and future industrial land use, there is no current use of groundwater for drinking on the base and no current groundwater withdrawals on base for any reason. Although there is currently no groundwater extraction anticipated in the future and the levels of PFAS contamination in groundwater are below current risk thresholds, LUCs for PFAS impacted groundwater are necessary at the four SSAs to prevent future potable use of the groundwater and ensure the long-term protection of human health. Therefore, this ESD formally expands the boundaries of the OU3 land use controls, which prohibit the use of groundwater as a potable source for residential receptors, to include the four SSAs identified in this document.

After the changes documented in this ESD are implemented, the final cleanup remedy will continue to be protective of human health and the environment. The Navy has obtained concurrence from EPA and MEDEP on the modifications to the cleanup remedy for OU3. The LUC boundaries for the four additional areas are shown on Figure 1.

Description of the Significant Differences

Based on the results of the SSP investigation and because the OU3 remedy includes groundwater LUCs, the groundwater LUC component of the OU3 remedy will be altered. The groundwater LUCs will now include:

- LUCs to prohibit the use of groundwater as a potable water source at four areas which are associated with Building 29, Former Building 335, Building 337, and Building 357. The expanded LUC boundary at each of the four areas are based on the maximum extent of potential PFAS impacted groundwater as identified in the SSP Report.
- LUC requirements for annual inspections within the expanded LUC boundaries to ensure continued protection of human health and the environment.

The altered remedy maintains long-term protectiveness of human health and the environment, complies with federal and state requirements, and remains cost-effective. Although PFAS are emerging chemicals of environmental concern and promulgated federal standards currently do not exist, use of an administrative control in the interim of regulatory requirements for PFAS will provide the Navy with a method to ensure long-term protection of human health and the environment through maintenance of the LUCs at the newly expanded boundaries of OU3, LTMgt and five-year reviews to allow for EPA to closeout PNS and delete PNS from the National Priorities List.

The expanded LUC boundary for OU3 now includes the four areas and are provided on Figures 1 through 5. The LUC boundaries were established based on the maximum potential extent of PFAS impacted groundwater as identified in the SSP Report. The total area of the revised LUC acreage for OU3 is 63 acres.

Documents finalized after signature of this ESD will include an updated LUC Remedial Design and an updated LTMgt plan that provides the inspection and maintenance activities to ensure that groundwater is not utilized as a drinking water source.

Support Agency Comments

EPA and MEDEP reviewed the draft ESD and provided comments that the Navy has incorporated into this document.

Statutory Determinations

The selected remedy provided in the September 2001 ROD for OU3 as modified by this ESD will continue to satisfy all statutory requirements of CERCLA Section 121 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). Although PFAS are chemicals of emerging environmental concern without current promulgated federal and/or state standards for drinking water, the use of land use controls with boundaries based on risk-based concentrations to prohibit drinking water use of groundwater will provide the Navy with a method to ensure long-term protectiveness of human health and the environment.

The modified remedy will ensure long-term protectiveness for human health and the environment, will comply with federal and state ARARs, and will remain cost-effective.

Public Participation Compliance

The public participation requirements set out in NCP Section 300.435(c)(2)(i) will be met. These requirements include making the ESD and supporting information available to the public as part of the Administrative Record and Information Repository and publishing a notice that briefly summarizes the ESD, including the reasons for such differences, in a major local newspaper of general circulation.

The Navy, EPA, and MEDEP meet regularly with site stakeholders to keep the community up to date on the site's cleanup status. Additional meetings occur as necessary to successfully implement the cleanup program.

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Figure 1 – Base Map

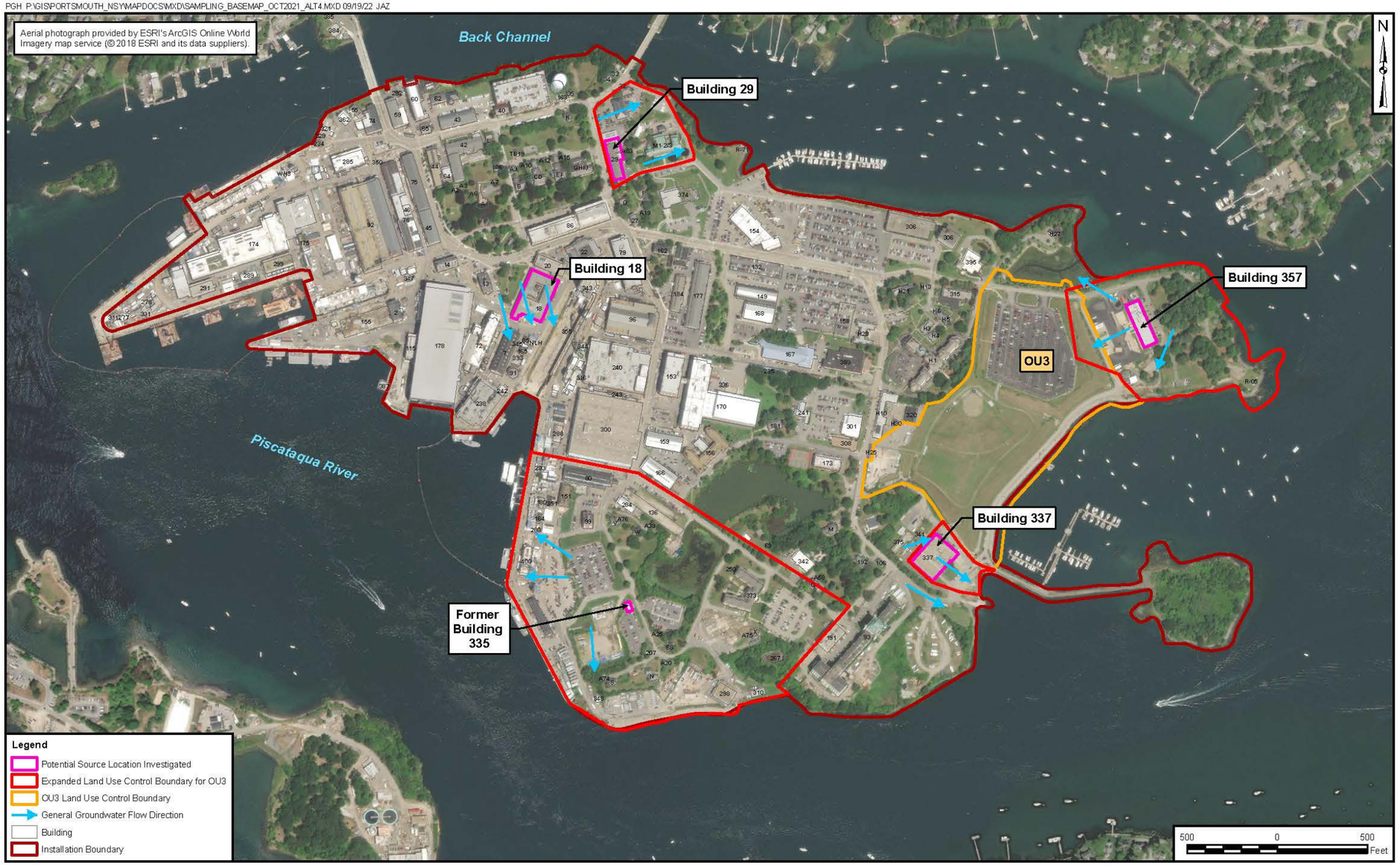

Figure 2 – Building 29 PFOA, PFOS, and PFBS Results and Expanded LUC Boundary for OU3

Figure 3 – Former Building 335 PFOA, PFOS, and PFBS Results and Expanded LUC Boundary for OU3

Figure 4 – Building 337 PFOA, PFOS, PFBS Results and Expanded LUC Boundary for OU3

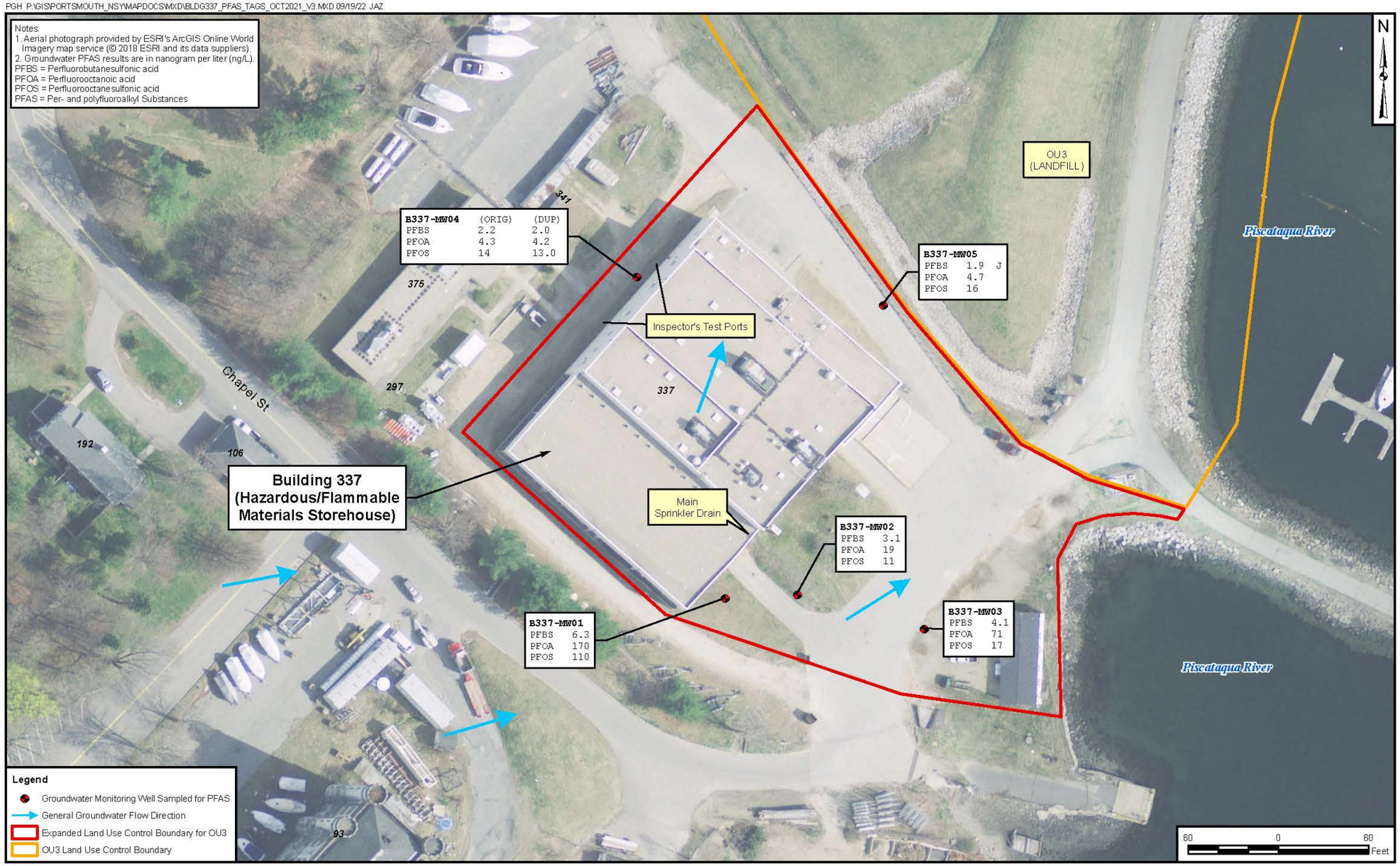

Figure 5 – Building 357 PFOA, PFOS, and PFBS Results and Expanded LUC Boundary for OU3

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TABLE 1: OU3 SUMMARY OF SITE ACTIVITIES

Source of Contamination	Landfill material associated with Site 8
Decision Documents	ROD (Navy, August 2001a); ESDs (Navy, September 2003 and October 2005)
RAOs	1. Prevent human exposure through ingestion of, inhalation of, and dermal contact with contaminated soil and/or waste within the landfill at unacceptable levels. 2. Prevent human exposure through ingestion of contaminated groundwater at unacceptable levels. 3. Prevent erosion of contaminated soil and/or waste on the edge of the landfill to the Piscataqua River or the Back Channel. 4. Provide for JILF's current and future uses (organized and unorganized sports, equipment storage, and parking) while providing sufficient protection of human health and the environment. 5. Ensure that migration of groundwater contaminants does not adversely impact the offshore environment.
Remedial Actions to Address RAOs	1. Excavation of soil outside the cap footprint, placement of a multiple-layer cap over remaining contaminated material, and construction of shoreline controls to prevent exposure to contamination within the landfill. Ongoing OM&M activities provide for the inspection and maintenance of the cap and shoreline controls and ensure that LUCs are being maintained to meet this RAO. 2. LUCs prohibiting use of freshwater groundwater within OU3 as a potable water source were implemented and are being maintained per the LUC RD to meet this RAO. 3. Soil excavation and wetlands construction in Jamaica Cove, placement of a multiple-layer cap over remaining contaminated material, and construction of shoreline controls along Clark Cove prevent erosion of contamination. Ongoing OM&M activities provide for the inspection and maintenance of the cap and shoreline controls and ensure that LUCs are being maintained to meet this RAO. 4. Placement of a multiple-layer cap and construction of shoreline controls prevent current and future users from exposure to contamination within the JILF. LUCs have been implemented to prevent unrestricted disturbance of the cap and shoreline controls. Ongoing OM&M activities provide for the inspection and maintenance of the cap and shoreline controls to ensure that LUCs are being maintained to meet this RAO. 5. Soil excavation, wetlands construction in Jamaica Cove, and placement of a multiple-layer cap and shoreline controls reduced the potential for contaminant migration by reducing the flow from seeps to the offshore. Groundwater monitoring as part of the OM&M program shows that chemical of concern (COC) concentrations are less than risk levels and confirms that contaminant migration is not occurring above unacceptable levels. Ongoing OM&M activities provide for inspection and maintenance of the cap and shoreline controls, groundwater monitoring, and to ensure that LUCs are being maintained to meet this RAO. The protectiveness of LUCs and LTMgt of the cap and shoreline controls will be evaluated during five-year reviews as long as contamination is present that does not allow for unlimited use and unrestricted exposure.

TABLE 1: OU3 SUMMARY OF SITE ACTIVITIES

Construction Completion	Remedial action construction activities were conducted from 2002 to 2004. Documentation of remedial action construction activities, including soil excavation, wetlands construction, and placement of the multiple-layer cap and shoreline erosion controls, is provided in the Remedial Action Report for Jamaica Island Landfill. EPA inspected the site on July 31, 2006, and concluded based on the results of the inspection that remedial action for OU3 is complete (EPA, July 2006).
LTMgt	LTMgt for the remedy includes cap, erosion control, and annual LUC inspections and groundwater monitoring, and the Navy has been conducting LTMgt activities since 2006 per the OM&M Plan (Tetra Tech, June 2006 as revised December 2011) and LUC RD (Navy, August 2011). The LTMgt program for OU3, which includes groundwater and landfill gas monitoring and LUC and landfill inspections and maintenance, is being conducted per the plan. The program was initiated in 2006 and was modified in 2009, 2011, and 2012 based on evaluation of data. Modifications include: (1) reduction of groundwater monitoring frequency from semiannual to annual and then to every 5 years for polycyclic aromatic hydrocarbons (PAHs) and metals; (2) discontinuing landfill gas monitoring; and (3) reduction of inspection frequency from semiannual to annual. Annual wetland inspections, required for the first 5 years, were completed in 2010. LUC and landfill inspections are conducted annually. Maintenance has been conducted as needed based on the inspections and five-year reviews. The two issues related to site conditions identified in the 2012 five-year review (tilted gas vents and possible minor slope movement upslope of the access road east of the JILF parking area and damage to the internal drainage pipe in at least one place within the cap) continue to be evaluated as part of LTMgt and five-year reviews.
Five-Year Reviews	Five-year reviews are required for OU3 as long as contamination remains within the OU3 boundary. OU3 was evaluated in the first, second, and third five-year reviews for PNS. The fourth five-year review, signed in May 2022, documents that the remedy implemented at OU3 is protective of human health and the environment. RAOs have been achieved and exposure to media that could result in unacceptable risks at Site 8 is prevented through LUCs and LTMgt.

TABLE 2: SUMMARY OF REMEDY FOR OU3			
ROD	**2003 ESD**	**2005 ESD**	**CURRENT ESD**
The ROD for OU3 provides components for source control as well as activities related to management of migration (OU6).			This ESD adds LUCs for four areas with PFAS impacted groundwater.
A multiple-layer cap to prevent receptors on the surface from coming in contact with and to minimize infiltration of water through the landfill material. The ROD indicates that the Navy will re-evaluate the feasibility of consolidation of portions of the landfill (in the Jamaica Cove area and the vicinity of the former location of Mercury Burial Site II) into the existing landfill.	The significant change related to the reduction in the area on which to install the landfill cap because of the excavation of landfill material adjacent to Jamaica Cove, consolidation of excavated material in another part of the JILF, and the construction of wetlands in the excavated area. Minor changes to the remedy as documented in the ROD for OU3 are related to minor removal and consolidation of landfill material above the water table in the area of Building 320 (Automotive Hobby Shop).	No change.	No change.
		No change.	
Shoreline erosion controls, including riprap and/or wetlands placed along the shoreline, to minimize the potential for washing away of soil and/or waste materials from the edge of the landfill into the river.	One minor change to the remedy was for the shoreline erosion controls to be within the boundary of the existing landfill instead of outside the boundary of the landfill as originally proposed to minimize impact to existing natural resources.	No change.	No change.

TABLE 2: SUMMARY OF REMEDY FOR OU3			
ROD	**2003 ESD**	**2005 ESD**	**CURRENT ESD**
Long-term monitoring of site media to assess the effectiveness of the remedy.	No change.	The monitoring component of the OU3 remedy is affected by the addition of the ARARs and RAO for management of migration.	No change.
Routine inspections and maintenance of the cap, shoreline erosion controls, and institutional controls.	The area for which these activities will be conducted was reduced based on the consolidation activities.	No change.	Addition of LUC inspections within the LUC boundaries for Building 29, Former Building 335, Building 337and Building 357 to ensure groundwater is not used for drinking.
Five-year reviews to confirm continued effectiveness of the remedy.	No change.	No change.	No change.
The ROD included the following activities related to OU6: • Initiate development of a work plan for the additional investigation for OU6 by holding a Data Quality Objective (DQO) meeting within 60 days of signing of the ROD for OU3. • Complete the work plan for the additional investigation for OU6 by the time the JILF cap construction is complete. • Evaluate the possibility of wetlands construction specifically for water quality improvement to address groundwater migration from the JILF.	The September 2003 ESD provided for minor changes related to OU6. During development of the OU6 DQOs, there was agreement among the Navy, EPA, and MEDEP to prepare a decision tree that would be followed to initiate preparation of a work plan.	The post-remedial monitoring program for OU3 includes a decision tree (based on evaluation of OU3 groundwater) to determine whether additional evaluation of the seeps would be required, and this decision tree satisfies the requirements for an OU6 decision tree.	No change.

For More Information

If you have questions about the ESD for OU3, or if you would like further information, please contact:

Ms. Danna Eddy
Congressional and Public Affairs Officer
Portsmouth Naval Shipyard, Building 86
Portsmouth, NH 03804-5000
Phone: (207) 438-1525
Email: danna.eddy@navy.mil

Mr. Bob Lim, Remedial Project Manager
EPA New England (Region 1)
5 Post Office Square
Suite 100 Mail Code OSRR07-3
Boston, MA 02109-3912
Phone: (617) 918-1392
Email: lim.robert@epa.gov

Mr. Iver McLeod, Remedial Project Manager
Maine Department of Environmental Protection
17 State House Station
Augusta, ME 04333
Phone: (207) 592-2981
Fax: (207) 287-7826
Email: Iver.J.McLeod@Maine.gov

References

DoD (Department of Defense), 2022. Office of the Assistant Secretary of Defense (OASD) Memorandum for Investigating Per-and Polyfluoroalkyl Substances within the Department of Defense Cleanup Program. July.

EPA (United States Environmental Protection Agency), 1999. *A Guide to Preparing Superfund Proposed Plans, Records of Decisions, and other Remedy Selection Decision Documents*. OSWER 9200.1-23P. July.

EPA, 2006. Memorandum Regarding Remedial Action Complete, OU3 Jamaica Island Landfill, Portsmouth Naval Shipyard, Kittery, Maine. EPA Region I, Boston, Massachusetts. July.

EPA, 2016a. *Drinking Water Health Advisory for Perfluorooctane Sulfonate (PFOS).* EPA 822-R-16-004. May.

EPA, 2016b. *Drinking Water Health Advisory for Perfluorooctanoic Acid (PFOA)*. EPA 822-R-16-005. May.

FWENC (Foster Wheeler Environmental Corporation), 1997. Final Action Memorandum for Mercury Burial Site I at Portsmouth Naval Shipyard, Kittery, Maine. September.

FWENC, 2001a. Final Closeout Report for Mercury Burial Vault Site I, Portsmouth Naval Shipyard, Kittery, Maine. June.

FWENC, 2001b. Removal Action Report for Mercury Burial Vault Site II, Portsmouth Naval Shipyard, Kittery, Maine. June.

Halliburton NUS, 1995. RCRA Facility Investigation (RFI) Data Gap Report (Final), Portsmouth Naval Shipyard, Kittery, Maine. November.

Maine, 2021. Resolve to Protect Consumers of Public Drinking Water by Establishing Maximum Contaminant Levels for Certain Substances and Contaminants, S.P. 64 - L.D. 129. https://legislature.maine.gov/bills/getPDF.asp?paper=SP0064&item=3&snum=130

McLaren/Hart (McLaren/Hart Environmental Engineering Corporation), 1991. RCRA Facility Investigation Work Plan for Portsmouth Naval Shipyard, Kittery, Maine. August.

Navy, 2001. *Record of Decision for Operable Unit 3*, Portsmouth Naval Shipyard, Kittery, Maine. August.

MECDC (Maine Center for Disease Control and Prevention), 2017. Summary of the 2016 Updates to the Maximum Exposure Guidelines. January 10.

MEDEP (Maine Department of Environmental Protection), 2021. Maine Remedial Action Guidelines (RAGs) for Sites Contaminated with Hazardous Substances. May 1

Navy, 2003. *Explanation of Significant Differences for OU3*, Portsmouth Naval Shipyard, Kittery, Maine. September.

Navy, 2005. *Explanation of Significant Differences for Operable Unit 3*, Portsmouth Naval Shipyard, Kittery, Maine. October.

Navy, 2011. *Land Use Control Remedial Design for Operable Unit 3*, Portsmouth Naval Shipyard, Kittery, Maine. August.

Tetra Tech, 2011. *Post-Remedial Operation, Maintenance, and Monitoring Plan for Operable Unit 3*, Portsmouth Naval Shipyard, Kittery, Maine. December.

Tetra Tech, 2022. *Per-and Polyfluoroalkyl Substances Site Screening Process Report,* Portsmouth Naval Shipyard, Kittery, Maine. February.

USACE (United States Army Corps of Engineers), 2002a. *Evaluation of Jamaica Cove Options for Operable Unit 3*, Portsmouth Naval Shipyard, Kittery, Maine. June.

USACE, 2002b. *Evaluation of MBII Waste Consolidation for OU3*, Portsmouth Naval Shipyard, Kittery, Maine. June.

USACE, 2002c. *Final Operable Unit 3 Phase I Remedial Design Specifications and Plans for Portsmouth Naval Shipyard, Kittery, Maine*. June.

USACE, 2002. *Final Phase II, Operable Unit 3 Remedial Design Analysis Report* including drawings and specifications, Portsmouth Naval Shipyard, Kittery, Maine. November.

DECLARATION

The issuance of this ESD for the OU3 ROD at Portsmouth Naval Shipyard, Kittery, Maine, is concurred with and recommended for immediate implementation.

United States Department of the Navy:

CAPT, USN 7OCT 22

Signature Date

Michael C. Oberdorf
Captain, U. S. Navy
Installation Commanding Officer
Portsmouth Naval Shipyard
Kittery, Maine

United States Environmental Protection Agency:

BRYAN OLSON Digitally signed by BRYAN OLSON
Date: 2022.10.11 18:33:54 -04'00'

Signature Date

Bryan Olson
Director
Superfund Emergency and Management Division
EPA Region 1
Boston, Massachusetts

Attachment 1-

MEDEP Concurrence Letter

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JANET T. MILLS
GOVERNOR

MELANIE LOYZIM
COMMISSIONER

September 27, 2022

Ms. Addison Phoenix
NAVFAC Mid-Atlantic
Code EV35 Attn: Ms. Addison Phoenix
9324 Virginia Ave, Bldg. N-26, Rm 3300
Norfolk, VA 23511-3624

re: Final Explanation of Significant Differences for Operable Unit 3 and Navy Responses to MEDEP Comments, Draft ESD for OU3, Portsmouth Naval Shipyard, Kittery, Maine

Dear Ms. Phoenix,

The Maine Department of Environmental Protection has completed its review of the subject documents. The Navy's responses and the revised text are acceptable, and we have no further comments.

The Department concurs with the Explanation of Significant Differences for OU3.

Please feel free to contact me at (207) 592-2981 if you have any questions.

Sincerely,

Iver McLeod
Project Manager
Bureau of Remediation and Waste Management

Pc:
C. Hopkins, MEDEP
C. Swain, MEDEP
F. Whiting, MEDEP
R. Lim, USEPA
J. Aglio, TetraTech
T. Chabot, US Navy
E. Fuery, US Navy
PNSY RAB

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826

BANGOR
106 HOGAN ROAD, SUITE 6
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 760-3143

website: www.maine.gov/dep