FINAL

March 2022

2021 Land Use Control Inspections Technical Memorandum

Sites 302, 303, and 304, and Tank 50 Manchester Fuel Depot, Port Orchard, Washington

United States Department of the Navy
Naval Facilities Engineering Systems Command
Engineering Field Activity, Northwest
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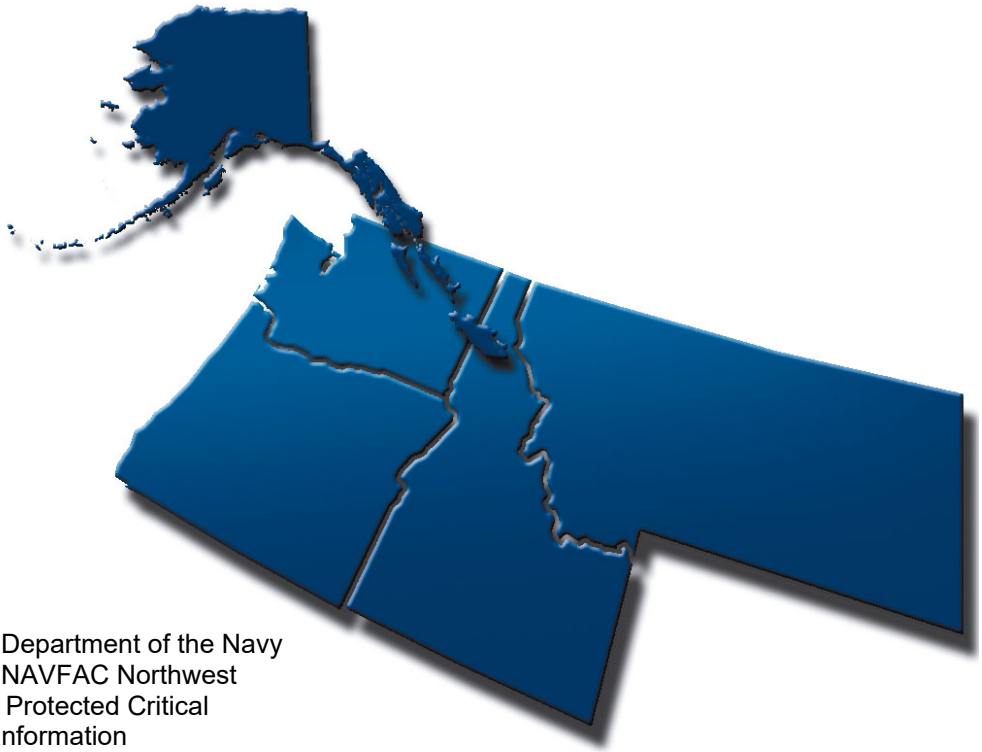

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Naval Facilities Engineering Systems Command Northwest
Silverdale, WA

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2021 Land Use Control Inspections Technical Memorandum

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Manchester Fuel Depot, Port Orchard, Washington

March 2022

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FINAL
2021 LAND USE CONTROL INSPECTIONS TECHNICAL MEMORANDUM
SITES 302, 303, AND 304, AND TANK 50
MANCHESTER FUEL DEPOT, PORT ORCHARD, WASHINGTON

March 2022

Prepared for
United States Department of the Navy
Naval Facilities Engineering Systems Command Northwest

Silverdale, WA 98315

REVIEW AND APPROVAL

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Acronyms and Abbreviations

Ecology ..... Washington State Department of Ecology
ESG ..... Environmental and Safety Guide

FYR ..... five-year review

LUC ..... land use control

MFD ..... Manchester Fuel Depot
MTCA ..... Model Toxics Control Act

NAVFAC ..... Naval Facilities Engineering Systems Command
NFA ..... no further action

PCB ..... polychlorinated biphenyl

TPH ..... Total Petroleum Hydrocarbons

U.S. Navy ..... U.S. Department of the Navy
UST ..... underground storage tank

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Executive Summary

This Land Use Control (LUC) Inspection Technical Memorandum describes the observations and subsequent recommendations from the LUC inspections conducted in June 2021 at specified sites at Fleet Logistics Center Puget Sound Manchester Fuel Depot (MFD), Port Orchard, Washington.

LUCs are required at several sites at MFD due to remaining contaminated soil and/or groundwater that prevent unlimited use and unrestricted exposures, as detailed in the LUC Plan for Sites 302, 303, and 304 and Tank 50 (U.S. Department of the Navy [U.S. Navy], 2016).

The LUC Plan addresses four sites:

- Site 302 – Polychlorinated Biphenyl (PCB) Site
- Site 303 – D-Tunnel Tanks
- Site 304 – Industrial Area
- Tank 50 – Underground Storage Tank (UST) Release Site

The purposes of the LUC inspections are to:

1. Assess the effectiveness of the LUCs in the protection of human health and the environment; and
2. Assist in identifying recommendations for corrective/additional action(s) needed so that the LUCs continue to be effective at MFD.

This technical memorandum: 1) provides documentation that the LUCs have not been modified or terminated and land use has not been modified (without regulatory approval) at any site; and 2) communicates the status of the LUCs to the project stakeholders (i.e., Washington State Department of Ecology [Ecology] and Suquamish Tribe).

The LUC inspections of Sites 302, 303, and 304 and Tank 50 at MFD were conducted on 2 June 2021, in accordance with the procedures detailed in the Land Use Control Plan (U.S. Navy, 2016). The annual LUC inspections include a field inspection, determination of the current land use, document review (i.e., administrative and institutional controls in place, specifically excavation permits), and condition assessment of engineering controls, such as fencing, gates, signage, monitoring wells, and soil covers. Table ES-1 summarizes the salient observations/findings from the 2021 LUC inspections, subsequent recommendations, and comments regarding the recommendation. To note, during finalization of the 2020 LUC Technical Memorandum

(Battelle, 2020a), MFD Environmental Personnel confirmed the soil staging area southwest of Tank 24 was approved by the Navy.

The 2021 LUC inspections are the fifth inspections conducted at Sites 302, 303, and 304 and Tank 50 since issuance of the LUC Plan (U.S. Navy, 2016). The 2021 inspections found that the LUCs in place at these sites remain effective in the protection of human health and the environment. The Fourth Five-Year Review (FYR) (U.S. Navy, 2020) for MFD was recently completed; the Fourth FYR summarized previous inspections and provided determinations that remedies (i.e., LUCs) at MFD continue to be protective of human health and the environment. Thus, the findings from the 2021 LUC inspections support the conclusions of the Fourth FYR.

As detailed in Table ES-1, the 2021 LUC inspections yielded a total of seven salient findings:

1. Site 302: The central portion of site is covered with large, older (covered with vegetation) stockpiles of soil and armor rock. The excess soil placed in the central portion of the site originated from a culvert replacement project that was located upgradient and outside the four sites with established LUCs, in an area that had not historically been used for industrial activity. The excess soils were sampled and characterized in January 2020 for site contaminants of concern (COCs; PCBs and total petroleum hydrocarbon [TPH]) as a precaution because the MFD operates as a fuel facility. Because there is no knowledge of additional COCs in the area from which the excess soils originated, the samples were not analyzed for other constituents. Analytical results indicated that neither PCBs nor TPH were detected in excess of Washington Model Toxics Control Act (MTCA) Method A Cleanup levels (Kane Environmental, Inc., 2020). The armor rock originated from a shoreline project. A decision on how to handle the stockpiles is being made in consultation with stakeholders and is pending; the Navy anticipates having a plan by summer 2022.

- Site 302: The gated entrance on the north side of the site is closed and locked, though not adequately secured, as the gate can be pushed open. It is recommended that the gate be properly secured to prevent it from being pushed open.

- Site 302: During the 2020 LUC Inspection, approximately 60 linear feet of chain-link fencing was noted to have collapsed on the northwestern side of the site, likely due to incursion of vegetation; however, this area could not be reinspected during the 2021 LUC inspection due to the presence of heavy vegetation. A total of approximately 60 additional linear feet of fencing was noted during the 2021 LUC inspection to have collapsed also on the northwestern boundary of the site, due to fallen trees. It is recommended that the fence be repaired. The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.
- Site 303: One old soil stockpile is situated on a tarp and surrounded by disintegrating absorbent boom in the laydown area north of Tank 29. U.S. Navy personnel are aware that the stockpile continues to be an issue and, in coordination with the installation, will take actions to address the stockpile.
- Site 303: Two new stockpiles of mixed debris (gravel and torn pieces of tarp) were observed in the northwest corner of the construction laydown area south of Tank 25. These stockpiles are authorized reusable material and are in an approved staging area. U.S. Navy personnel are aware of the stockpiles and plan to reuse the material on-site. This finding does not affect the LUC as written.
- Site 304: A cut in asphalt was observed off the southwest corner of Building 12, which was due to an excavation to repair a small area of subsidence near the building. The asphalt cut was triangular with surface dimensions of approximately 10 feet by 9 feet by 7 feet. It is recommended that the cut in the asphalt be repaired.
- Site 304: Ongoing excavation was observed to the northwest of the fuel pier and northeast of monitoring well MW-4 to repair/replace a fire hydrant. Recommendations include confirming any excavated soil is stockpiled in an approved staging area or that it has been properly disposed of from the site, confirming that the proper protocols as outlined in the Environmental and Safety Guide (ESG; NAVSUP, 2020) were followed during excavation activities, and repairing asphalt following hydrant repair.

As stated in the Fourth FYR Report (U.S. Navy, 2020) for prior year inspection results, previous findings did not affect protectiveness of the LUC remedy (see Table ES-1 for details). Based on the 2021 inspection results, it is recommended that the LUC inspections continue on an annual basis. Continuing the LUC inspections on an annual basis will allow for a timely evaluation before and after completion of recommended action items. Executed recommendations will be documented in subsequent LUC Technical Memoranda and the Sixth FYR for MFD.

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Table ES-1: Summary of Findings and Recommendations from the 2021 LUC Inspections

Findings/Observations	Recommendations	Comment
Site 302 – PCB Site		
Central portion of site is covered with large, older stockpiles of soil and debris, which were covered with vegetation.	As recommended in the Fourth FYR (U.S. Navy, 2020), use excess soil to regrade the site and develop a vegetative cover.	The excess soil placed in the central portion of the site originated from a culvert replacement project that was located up gradient and outside the four sites with established LUCs, that had not historically been used for industrial activity. The soil was characterized in January 2020 for site contaminants of concern (PCBs and TPHs); analytical results indicate that neither PCBs nor TPHs were detected in excess of MTCA Method A Cleanup levels (Kane Environmental, Inc., 2020). Armor rock from a shoreline project was also placed in this area. A decision on how to handle the stockpiles is being made in consultation with stakeholders and is pending; the Navy anticipates having a plan by summer 2022.
Gated entrance on north side of site is closed and in a remote area of MFD, not easily accessible by personnel. There is LUC signage and lock; however, the gate is not secured and can be pushed open.	Add chain and lock to secure gate and prevent it from being pushed open.	LUC signage and a lock were installed on the gated entrance in July 2020; however, the gate is not adequately secured, as it can be pushed open.
During the 2020 LUC Inspection, approximately 60 linear feet of chain-link fencing was noted to have collapsed on the northwestern side of the site, likely due to incursion of vegetation. Due to heavy vegetation, this area could not be inspected to confirm that this section of fence had been repaired.	Reconstruct fence if not previously repaired.	This 2020 observation could not be inspected during the 2021 LUC inspection due to vegetation. This finding does not affect the LUC as designed (U.S. Navy, 2020). The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.
Approximately 60 linear feet of fencing were noted during the 2021 LUC inspection to have collapsed on the northwestern boundary of the site due to fallen trees.	Reconstruct fence.	Per the 2020 conclusion that the collapsed fence at Site 302 does not affect the LUC remedy (U.S. Navy, 2020), neither does this additional collapsed fence affect the LUC as designed. The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.
Site 303 – D-Tunnel Tanks		
Old stockpile of soil on a tarp surrounded by disintegrating absorbent boom in the laydown area north of Tank 29.	Properly characterize, transport, and appropriately dispose off site.	Same finding from 2017, 2018, 2019, and 2020 LUC inspections. U.S. Navy personnel are aware that soil stockpiles continue to be an issue and in coordination with the installation will take actions to address the stockpile. As indicated in the Fourth FYR (U.S. Navy, 2020), this finding does not affect the LUC as written.
Two new stockpiles of landscape rock (red lava rock) and pieces of landscape fabric) were observed in the northwest corner of the construction laydown area south of Tank 25. The material in these stockpiles originated from the landscaped areas at the main gate (outside of a LUC site) and is authorized reusable material in an approved staging area.	Keep piles covered and maintained until an on-site use can be found.	U.S. Navy personnel are aware of the stockpiles and plan to reuse the material on-site. This finding does not affect the LUC as written.

Table ES-1: Summary of Findings and Recommendations from the 2021 LUC Inspections (continued)

Findings/Observations	Recommendations	Comment
Site 304 – Industrial Area		
A cut in asphalt was observed off the southwest corner of Building 12, which was due to excavation to repair subsidence near the building. The asphalt cut was triangular with approximate surface dimensions of 10 feet by 9 feet by 7 feet resulting in an opening in the asphalt that had been filled with gravel.	The cut in the asphalt should be repaired.	As noted in the 2020 LUC Technical Memorandum, and observed during the 2021 LUC inspections, the cut in the asphalt has not been repaired.
Ongoing excavation observed to the northwest of the fuel pier and northeast of monitoring well MW-4 to repair/replace a fire hydrant.	It was confirmed with the MFD Environmental Manager that the proper protocols, outlined in the ESG (NAVSUP, 2020), were followed during excavation activities (i.e., dig permits, etc.). Repair asphalt following hydrant repair.	Confirm with MFD Environmental Personnel that excavation, fire hydrant repair, and asphalt repair are complete.

Abbreviations:
FYR = Five Year Review; LUC = land use control; MFD = Manchester Fuel Depot; MTCA = Washington Model Toxics Control Act; NAVFAC = Naval Facilities Engineering Systems Command; PCB = polychlorinated biphenyl; U.S. Navy = Department of the Navy; TPH = Total Petroleum Hydrocarbons

1.0 Introduction

This Land Use Control (LUC) Inspection Technical Memorandum describes the observations and subsequent recommendations from the LUC inspections conducted in June 2021 at specified sites of Fleet Logistics Center Puget Sound Manchester Fuel Depot (MFD), Port Orchard, Washington. This report was prepared by Liberty JV for Naval Facilities Engineering Systems Command (NAVFAC) Northwest under Contract No. N44255-20-D-5006, Task Order No. N4425521F4089.

LUCs are required at several sites at MFD due to remaining contaminated soil and/or groundwater that prevent unlimited use and unrestricted exposures, as detailed in the *Land Use Control Plan for Sites 302, 303, 304 and Tank 50, Naval Base Kitsap Manchester, Manchester, Washington* (U.S. Navy, 2016a).

These sites comprise:

- Site 302 – Polychlorinated Biphenyl (PCB) Site
- Site 303 – D-Tunnel Tanks
- Site 304 – Industrial Area
- Tank 50 – Underground Storage Tank (UST) Release Site

The 2021 LUC inspections are the fifth annual inspections to occur since issuance of the LUC Plan (U.S. Navy, 2016a) and were conducted in accordance with that document. The LUC inspection procedures provide a means to verify that the LUC requirements ensure protection of human health and the environment.

1.1 Purpose

The purposes of the LUC inspections are to assess the effectiveness of the LUCs in the protection of human health and the environment and to assist in identifying recommendations for corrective/additional actions needed so that the LUCs continue to be effective at MFD.

This technical memorandum provides: 1) documentation that the LUCs have not been modified or terminated, and that land use has not been modified (without regulatory approval) at any site, and 2) communicates the status of the LUCs to the project stakeholders (Washington State Department of Ecology [Ecology] and Suquamish Tribe).

1.2 Facility Description

1.2.1 Location

MFD is located less than 1 mile southwest of Bainbridge Island, approximately 3.5 miles northeast of the town of Port Orchard. The facility is situated on a small peninsula on the larger Kitsap Peninsula. This smaller peninsula is located on the eastern edge of the Kitsap Peninsula and adjacent to Puget Sound to the east and Clam Bay to the north. MFD is divided into eastern and western portions by Little Clam Bay with the two portions connected by a 100-foot-wide causeway. Figure 1 depicts the vicinity map for MFD.

1.2.2 Current Use

In the early 1940s (at the beginning of World War II), MFD was developed into a key fuel depot and currently remains a fuel depot for the Navy. Most of the facility is used for fuel storage, including underground and aboveground petroleum product storage tanks, associated pipelines, and a fuel pier. The remainder of the facility is dedicated to an industrial area with support and administrative buildings located adjacent to the fuel pier. Fuel products that have been or are currently stored at the fuel depot include Navy Special Fuel (No. 6 fuel oil [Bunker C]), marine diesel fuel, jet fuel, lubricant oil, and aviation gasoline.

Several areas of the facility have been impacted by past releases of petroleum products, which have required remedial investigations and corrective actions. These areas include Site 302 (PCB Site, which has also been a dumping ground for various industrial wastes), Site 303 (D-Tunnel Tanks), Site 304 (Industrial Area), and Tank 50 (UST Release Site) and are further described in the LUC Plan (U.S. Navy, 2016a). A site plan of MFD depicting the locations of these specific areas is provided as Figure 2. Sites 302, 303, and 304 and Tank 50 have received No Further Action (NFA) regulatory status and the resulting letters from Ecology state that the sites are “either properly remediated or do not pose a risk to human health or the environment” based on the current and future land use (Ecology, 1998, 2000, and 2001). However, LUC requirements are identified or referred to in the NFA letters to prevent exposure to residual soil and/or groundwater contamination, ensuring continued protection of human health and the environment.

1.3 Technical Memorandum Organization and Content

This technical memorandum consists of the following sections:

- Section 1.0 Introduction: presents the purpose of the technical memorandum and the facility description, including location and current use.

- Section 2.0 LUC Inspection Approach and Findings: describes the approach to the LUC inspections and findings/observations from the LUC inspections at MFD.
- Section 3.0 Conclusions and Recommendations: presents a summary of findings/observations, conclusions, and subsequent recommendations for MFD.
- Section 4.0 References: provides a full and complete list of documents cited within this technical memorandum.

The following appendices to this technical memorandum provide additional documentation of the completed 2021 LUC inspections:

- Appendix A – LUC Inspection Checklists
- Appendix B – Monitoring Well Inspection Checklists
- Appendix C – Field Notes
- Appendix D – Photographic Log
- Appendix E – Field Change Request Forms

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2.0 LUC Inspection Approach and Findings

This section presents the approach for the LUC inspections and the findings and observations from the LUC inspections of Sites 302, 303, and 304 and Tank 50 at MFD.

2.1 LUC Inspection Approach

The LUC inspections of Sites 302, 303, and 304 and Tank 50 at MFD were conducted on 2 June 2021, in accordance with the procedures detailed in the LUC Plan (U.S. Navy, 2016a). The annual LUC inspections include a field inspection, determination of the current land use, document review (i.e., administrative and institutional controls in place, specifically permits for approved excavation or disturbances), and condition assessment of engineering controls, such as fencing, gates, signage, monitoring wells, and soil covers. An authorized soil excavation or disturbance indicates that the already established, formal process as detailed in the Environmental and Safety Guide (ESG) has been followed (including development of plans and analytical testing) and ultimately approved by MFD Environmental Personnel. As part of the approval process, MFD Environmental Personnel (with knowledge of the LUC requirements) review the application with respect to the LUCs. If the activities are to be conducted within an area with LUC requirements, the reviewer directs the contractor or Navy personnel conducting the excavation with regard to the processes required to control the activities in a way that is protective of human health and the environment (U.S. Navy, 2016a; NAVSUP, 2020).

In October and November 2019, well rehabilitation and decommissioning activities were conducted at MFD based on the findings of the Well Rehabilitation and Decommissioning Study (U.S. Navy, 2017). Ultimately, a total of seven monitoring wells remain in the monitoring network. The following wells were located but were not opened for inspection during the 2021 LUC inspections:

- MW-1 south of Tank 24
- MW-1 and MW-3 northwest of Tank 30
- MW-1, MW-2, and MW-4 (under a temporary storage unit and partially covered by wood pallets) at Site 304
- MW-1 at Tank 50

These monitoring wells were resurveyed for horizontal locations, top of casing elevations, and ground elevations on 14 and 18 November 2019 by NL Olson & Associates, Inc.

The remaining groundwater and vapor monitoring wells at MFD were decommissioned because of their poor/moderate general condition, location, intended purpose (i.e., vapor monitoring), and/or the fact that the well would be damaged or destroyed during planned upcoming military construction (MILCON) activities. General condition assessments and depth to water measurements (and depth to product measurements, if present) were collected immediately prior to decommissioning each of these monitoring wells. The details of the well rehabilitation and decommissioning activities were documented in a separate technical memorandum finalized in July 2020 (Battelle, 2020b).

Site-specific LUC Inspection Checklists and Monitoring Well Inspection Checklists were used as tools to guide the annual LUC inspections. Appendices A and B present the completed LUC Inspection Checklists and Monitoring Well Inspection Checklists from the 2021 LUC inspections, respectively. In addition, field notes were taken, and a photographic log was developed to document the findings/observations of the field inspection. The field notes and photographic log are presented as Appendices C and D, respectively. As part of the effort, three field change request forms were developed (see Appendix E) documenting minor changes to the Final Abbreviated Accident Prevention Plan for Various Site Reconnaissance Activities (U.S. Navy, 2016c) and the LUC Plan (U.S. Navy, 2016a).

2.2 LUC Inspection Findings

2.2.1 Site 302 – PCB Site

Site 302 is a 1.4-acre area located in the southwest portion of MFD (see Figures 2 and 3). The site was used as a dumping area for ship bilge waste, transformer oil, and other petroleum waste from local naval facilities from about 1955 through 1976. No estimate of the volume of waste disposed at the site is available. PCBs were identified as a contaminant of concern at Site 302. Site-specific LUCs (U.S. Navy, 2016a) are as follows:

- Ensure that site signage is readable and adequate.
- Ensure that land use remains for industrial purposes.
- Ensure that there has been no unauthorized soil excavation or disturbance.
- Ensure that there has been no unauthorized placement of excess soil from another location.
- Ensure integrity of the soil cover vegetation, so that any excavation or improper disposal is apparent.

- Ensure that any soil excavated from the site is properly characterized and disposed off site and that on-site workers are protected during such activities.
- Ensure that site fencing is intact and that gates are secured and locked.

The 2021 LUC inspections confirmed that land use remains for industrial purposes. There has been no apparent unauthorized soil excavation, disturbance, or new unauthorized placement of excess soil from another location. The most salient findings from the 2021 LUC inspections were:

1. The central portion of site is covered with large, older (covered with vegetation) stockpiles of soil and armor rock. The excess soil placed in the central portion of the site originated from a culvert replacement project that was located upgradient and outside the four sites with established LUCs, in an area that had not historically been used for industrial activity. The excess soils were sampled and characterized in January 2020 for site contaminants of concern (COCs) (PCBs and total petroleum hydrocarbons [TPHs]) as a precaution because the MFD operates as a fuel facility. Because there is no knowledge of additional COCs in the area from which the excess soils originated, the samples were not analyzed for other constituents. Analytical results indicated that neither PCBs nor TPH were detected in excess of Washington Model Toxics Control Act (MTCA) Method A Cleanup levels (Kane Environmental, Inc., 2020). The armor rock originated from a shoreline project. A decision on how to handle the stockpiles is being made in consultation with stakeholders and is pending; the Navy anticipates having a plan by summer 2022.
2. The gated entrance on the north side of site is closed, locked, and in a remote area of MFD, not easily accessible by personnel. Although the gate is locked, it is not adequately secured, as it can be pushed open.
3. During the 2020 LUC Inspection, approximately 60 linear feet of chain-link fencing was noted to have collapsed on the northwestern side of the site, likely due to incursion of vegetation; however, this area could not be reinspected during the 2021 LUC inspection, due to the presence of heavy vegetation, to confirm that this section of fence had been repaired. A total of approximately 60 additional linear feet of fencing was noted during the 2021 LUC inspection to have collapsed also on the northwestern boundary of the site, due to fallen trees. These findings do not affect the LUC as designed (U.S. Navy, 2020). The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.

The locations of these findings are depicted on Figure 3. The completed LUC inspection checklist for Site 302 is provided in Appendix A. The field notes and photographs from Site 302 are provided in Appendices C and D, respectively.

2.2.2 Site 303 – D-Tunnel Tanks

Site 303 consists of eight 20,000- to 50,000-barrel (840,000- to 2,100,000-gallon) concrete USTs used to store marine diesel fuel (see Figures 2 and 4). The Naval fuel currently stored and dispensed at MFD is designated as F-76. The USTs are located adjacent to the D-tunnel line, which extends from Tank 30 to Building 12 in the Industrial Area (Site 304), as shown on Figure 4. Site-specific LUCs (U.S. Navy, 2016a) are as follows:

- Ensure that land use remains for industrial purposes. Coordinate with Ecology prior to change in property ownership or land use concerning the need for remedial actions.
- Ensure that warnings are posted for workers to guard against exposure to residual petroleum-contaminated soil.
- Identify remaining areas of concern on facility maps and specify in facility excavation permit instruction.
- Ensure no production wells are installed and groundwater is not used except for monitoring and/or remediation.
- Protect existing vapor monitoring wells until formally abandoned.
- Ensure that there has been no unauthorized soil excavation or disturbance.
- Confine authorized reusable material[1] to approved staging area.
- Ensure that any soil excavated from the site is properly characterized and disposed off site and that on-site workers are protected during such activities.

The 2021 LUC inspection confirmed that land use remains for industrial purposes. In addition, warnings are posted for workers; remaining areas of concern are identified on facility maps and specified in facility permit instructions (this was a recommended update for the Contractor ESG [U.S. Navy, 2016d]); no production wells were installed and groundwater was not used (except for monitoring and/or remediation); and there has been no apparent unauthorized soil excavation or disturbance. The most salient findings during the 2021 LUC inspections were:

1. "Reusable material" refers to those materials for which on-site placement has been coordinated with the Navy RPM and that have been characterized in collaboration with MFD Environmental Personnel. The Navy may choose to coordinate with the Ecology Cleanup Project Manager on a case-by-case basis.

1. An old soil stockpile situated on a tarp and surrounded by disintegrating absorbent boom in the laydown area north of Tank 29 has been observed since the 2017 LUC inspection. U.S. Navy personnel are aware that the stockpile continues to be an issue and, in coordination with the installation, will take actions to address the stockpile. This finding does not affect the LUC as written (U.S. Navy, 2020).
2. Two new stockpiles of landscape rock (red lava rock) and pieces of landscape fabric, removed from landscaped areas at the main gate (outside of a LUC site), were observed in the construction laydown area south of Tank 25. U.S. Navy personnel are aware of the stockpiles and plan to reuse the material on-site. This finding does not affect the LUC as written.

During finalization of the 2020 LUC Technical Memorandum (Battelle, 2020a), it was confirmed with the MFD Environmental Personnel that only clean, reusable aggregate material is approved for placement/staging in the construction laydown area south of Tank 25. Therefore, the two stockpiles listed above in item #2 are authorized reusable material and located in an approved staging area.

The LUC inspection checklist for Site 303 is provided in Appendix A. The field notes and photographs from Site 303 are provided in Appendices C and D, respectively.

As detailed in Section 2.1, monitoring wells MW-1 and MW-3 northwest of Tank 30 and MW-1 south of Tank 24 were located as part of the 2021 LUC inspection, though the wells were not opened and inspected (see Appendix B). Well repairs conducted in 2019 as part of the well rehabilitation activities included the lowering of the well casing to fit properly under the monument lid, as well as installation of new locks, labels, and well caps. The concrete apron surrounding the flush-mounted well monument for MW-1 south of Tank 24 was removed and new concrete was poured to protect the monument. Additionally, cold patch was placed in the road and tamped to repair the depression in the road surrounding the concrete apron. Well identification labels were affixed to, and a lock was secured, on well MW-1 (Battelle, 2020a). Table 2-1 provides a summary of the inspection findings/observations at monitoring wells at Site 303.

Table 2-1: Summary of Monitoring Wells at Site 303

Well ID	Northing	Easting	Well Located?	Comments from 2021 Inspections
South of Tank 24				
MW-1	64013.946	371485.35	Yes	Well located, monument cover in good condition, not opened.
North of Tank 30				
MW-1	64612.007	371179.515	Yes	Well located, monument cover in good condition, not opened.
MW-3	64625.423	371219.950	Yes	Well located, monument cover in good condition, not opened.

Note:
Coordinate system is State Plane – Washington North (meters).
ID = identification; MW = monitoring well

During the 2019 well rehabilitation and 2020 decommissioning activities, vapor monitoring wells were decommissioned at Tank 22 (13 wells), Tank 24 (13 wells), Tank 25 (1 well), Tank 26 (13 wells), Tank 27 (1 well), Tank 29 (13 wells), and Tank 30 (13 wells). Additionally, groundwater monitoring well MW-3 south of Tank 24 was decommissioned. Site restoration related to the well rehabilitation and decommissioning activities were completed in early March 2020 (Battelle, 2020a).

2.2.3 Site 304 – Industrial Area

Site 304 (Industrial Area) is in the eastern portion of MFD, as shown on Figures 2 and 5. It comprises maintenance, administration, fuel pumping, and water treatment buildings. Site 304 is the central transfer point for most of the petroleum products stored at MFD. Petroleum products (including marine diesel, jet fuels, aviation gasoline, and lube oil) are transported through a network of pipelines running from the fuel pier to storage tanks located throughout the facility. Site-specific LUCs (U.S. Navy, 2016a) are as follows:

- Ensure that land use remains for industrial purposes. Coordinate with Ecology prior to change in property ownership or land use concerning the need for remedial actions.
- Ensure that warnings are posted for workers to guard against exposure to residual petroleum-contaminated soil.
- Identify remaining areas of concern on facility maps and specify in facility excavation permit instructions.
- Ensure no production wells are installed and groundwater is not used except for monitoring and/or remediation.
- Protect existing monitoring wells until formally abandoned.
- Ensure that there has been no unauthorized soil excavation or disturbance.
- Ensure that any soil excavated from the site is properly characterized and disposed off site and that on-site workers are protected during such activities.

The 2021 LUC inspections confirmed that land use remains for industrial purposes. In addition, remaining areas of concern are identified on facility maps and specified in facility permit instructions (this was a recommended update for the Contractor ESG [U.S. Navy, 2016d]); no production wells were installed, and groundwater was not used (except for monitoring and/or remediation); and monitoring wells have been protected. One area of authorized soil excavation/disturbance was observed during the 2021 LUC

inspection related to a fire hydrant repair/replacement. The most salient findings during the 2021 LUC inspections were:

1. The LUC signage for Site 304 is located at the northeastern corner of Building 178, outside and north of the Site 304 LUC boundary (see Figure 5).
2. As noted in the 2020 LUC inspection, a small cut in asphalt was observed off the southwest corner of Building 12, which was due to excavation to repair a small area of subsidence near the building. The asphalt cut was triangular with dimensions of approximately 10 feet by 9 feet by 7 feet, resulting in an opening in the asphalt that had been filled with gravel. At the time of the 2021 LUC inspection, this cut in the asphalt had not been repaired. It is recommended that the cut in the asphalt be repaired.
3. An ongoing excavation was observed to the northwest of the fuel pier and northeast of MW-4 to repair/replace a fire hydrant. MFD Environmental Personnel responsible for compliance with excavation permit requirements confirmed that the proper protocols, outlined in the ESG (NAVSUP, 2020), were followed during excavation activities, and will confirm replacement of asphalt following hydrant repair.

During finalization of the 2020 LUC Technical Memorandum (Battelle, 2020a), the Ecology Project Manager confirmed that it is not necessary to move/relocate the LUC signage for Site 304.

The LUC inspection checklist for Site 304 is provided in Appendix A. The field notes and photographs from Site 304 are provided in Appendices C and D, respectively.

As detailed in Section 2.1, monitoring wells MW-1, MW-2, and MW-4 at Site 304 were located as part of the 2021 LUC inspection, though the wells were not opened and inspected (see Appendix B). Well repairs conducted in 2019 as part of the well rehabilitation activities included lowering the well casing to fit properly under the monument lid, as well as installation of new locks, labels, and well caps. The flush-mounted well monument associated with MW-2 was replaced, including placement of a new concrete apron surrounding the monument (Battelle, 2020a). Table 2-2 provides a summary of the inspection findings/observations at each monitoring well.

Table 2-2: Summary of Monitoring Well Condition Assessment at Site 304

Well ID	Northing	Easting	Well Located?	Comments from 2021 Inspections
MW-1	64019.596	371750.902	Yes	Well located, monument cover in good condition, not opened.
MW-2	64106.184	371804.246	Yes	Well located, monument cover in good condition, not opened.
MW-4	64054.635	371808.329	Yes	Well located, monument cover in good condition, not opened.

Note:
Coordinate system is State Plane – Washington North (meters).
ID = identification; MW = monitoring well

2.2.4 Tank 50 – UST Release Site

Tank 50 is the southernmost of a set of five USTs built on the top of a small knoll located on the west side of Little Clam Bay (see Figures 2 and 6). The tank is believed to have been constructed in the early 1950s and is a steel cylinder approximately 100 feet in diameter and 22 feet tall with a capacity of approximately 27,000 barrels (1.1 million gallons). Site-specific LUCs (U.S. Navy, 2016a) are as follows:

- Ensure that warnings are posted for workers to guard against exposure to residual petroleum-contaminated soil.
- Identify remaining areas of concern on facility maps and specify in facility excavation permit instructions.
- Ensure that land use remains for industrial purposes. Coordinate with Ecology prior to change in property ownership or land use concerning the need for remedial actions.
- Ensure no production wells are installed and groundwater is not used except for monitoring and/or remediation.
- Protect existing monitoring wells until formally abandoned.
- Ensure that there has been no unauthorized soil excavation or disturbance.
- Ensure that any soil excavated from the site is properly characterized and disposed off site and that on-site workers are protected during such activities.

The 2021 LUC inspections confirmed that land use remains for industrial purposes. In addition, remaining areas of concern are identified on facility maps and specified in facility permit instructions (this was a recommended update for the Contractor ESG [U.S. Navy, 2016d]); no production wells were installed, and groundwater was not used (except for monitoring and/or remediation); monitoring wells have been protected; and there has been no unauthorized soil excavation or disturbance. No significant findings were noted during the 2021 LUC inspections.

The LUC inspection checklist for Tank 50 is provided in Appendix A. The field notes and photographs from Tank 50 are provided in Appendices C and D, respectively.

As detailed in Section 2.1, monitoring well MW-1 at Tank 50 was located as part of the 2021 LUC inspection, though the well was not opened and inspected (see Appendix B). Well repairs conducted in 2019 as part of the well rehabilitation activities included the placement of a new lock, label, and well cap (Battelle, 2020a). Table 2-3 provides a summary of the observations at monitoring well MW-1.

Table 2-3: Summary of Monitoring Well Condition Assessment at Tank 50

Well ID	Northing	Easting	Well Located?	Comments from 2021 Inspections
MW-1	64407.051	370946.014	Yes	Well located, monument cover in good condition, not opened.

Note:
Coordinate system is State Plane – Washington North (meters).
ID = identification; MW = monitoring well

Monitoring well MW-2 was decommissioned in 2019. Site restoration related to the well rehabilitation and decommissioning activities was completed in March 2020 (Battelle, 2020a).

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3.0 Conclusions and Recommendations

This section provides a summary of findings, conclusions, and subsequent recommendations associated with the results of the 2021 LUC inspections at Sites 302, 303, and 304 and Tank 50 at MFD.

On 2 June 2021, inspections were conducted to assess the effectiveness of LUC requirements as detailed in the *Land Use Control Plan for Sites 302, 303, 304 and Tank 50, Naval Base Kitsap Manchester, Manchester, Washington* (U.S. Navy, 2016a). A field inspection, determination of the current land use, document review, and condition assessment of engineering controls were conducted for each site to determine the conditions of the LUCs in place and verify that these LUCs remain effective as designed.

The 2021 LUC inspections are the fifth inspections conducted at Sites 302, 303, and 304 and Tank 50 since issuance of the LUC Plan (U.S. Navy, 2016a). The 2021 LUC inspections found that the LUCs in place at these sites are effective in the protection of human health and the environment. The Fourth FYR (U.S. Navy, 2020) for MFD was recently completed, which summarized previous inspections and provided determinations that remedies (LUCs) at MFD continue to be protective of human health and the environment. Thus, the findings from the 2021 LUC inspections support the conclusions of the Fourth FYR (U.S. Navy, 2020).

Table 3-1 presents a comprehensive list of observations/findings from the 2016 Current Conditions at Sites 302, 303, and 304, Naval Base Kitsap Manchester, Port Orchard, Washington (U.S. Navy, 2016b) through the 2021 LUC inspections along with recommendations. All findings and subsequent recommendations have been listed below and are included in Table 3-1:

- Site 302: Central portion of site is covered with large, older stockpiles of soil and armor rock, which were covered with vegetation. The excess soil placed in this area originated from a culvert replacement project that was located up gradient and outside the four sites with established LUCs, that had not historically been used for industrial activity. Sampling results indicate that the soil meets MTCA Method A Cleanup levels for both PCBs and TPHs (Kane Environmental, Inc., 2020). As recommended in the Fourth FYR, the stockpiled soil could be used to regrade and reseed the site or be removed from the site. A decision on how to handle the stockpiles is being made in consultation with stakeholders and is pending; the Navy anticipates having a plan by summer 2022.

- Site 302: Gated entrance on north side of site is closed and in a remote area of MFD, not easily accessible by personnel. There is LUC signage and a lock; however, the gate is not adequately secured and can be pushed open. It is recommended that a chain and lock be added to properly secure the gate, preventing it from being pushed open.
- Site 302: During the 2020 LUC Inspection, approximately 60 linear feet of chain-link fencing was noted to have collapsed on the northwestern side of the site, likely due to incursion of vegetation; however, this area could not be reinspected during the 2021 LUC inspection due to the presence of heavy vegetation. It is recommended that the fence be repaired. The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence
- Site 302: A total of approximately 60 linear feet of fencing was noted during the 2021 LUC inspection to have collapsed on the northwestern boundary of the site, due to fallen trees. It is recommended that the fence be repaired.
- Site 303: An old stockpile of soil on a tarp surrounded by disintegrating absorbent boom was observed in the laydown area north of Tank 29. It is recommended that the soil be characterized, transported, and disposed of (off site).
- Site 303: Two new stockpiles of landscape rock (red lava rock) and torn pieces of landscape fabric, removed from landscaped areas at the main gate (outside of a LUC site), were observed in the northwest corner of the construction laydown area south of Tank 25. These stockpiles are authorized reusable material and are in an approved staging area. It is recommended that the piles are covered and maintained until an on-site use can be found.
- Site 304: A small cut in asphalt was observed off the southwest corner of Building 12 during the 2021 LUC inspection, which was due to excavation to repair a small area of subsidence near the building. The asphalt cut was triangular with dimensions of approximately 10 feet by 9 feet by 7 feet resulting in an opening in the asphalt that had been filled with gravel. It is recommended that the cut in the asphalt be repaired.
- Site 304: Ongoing excavation was observed to the northwest of the fuel pier and northeast of MW-4 to repair/replace a fire hydrant. It was confirmed with MFD Environmental Personnel that proper protocols as outlined in the ESG (NAVSUP, 2020) were followed during excavation activities, and asphalt will be repaired following hydrant repair.

These findings do not affect the LUCs as designed or written, and are currently being reviewed and will be resolved after further evaluation (see Table 3-1 for details). Based

on this information, it is recommended that the LUC inspections continue on an annual basis. Continuing the LUC inspections on an annual basis will allow for a timely evaluation before and after completion of these actions. These recommendations will be executed and documented in subsequent LUC Technical Memorandums and the Fifth FYR for MFD. It should be noted that Ecology has the authority to revoke the NFA determinations for Sites 302, 303, 304, and Tank 50 for violations of the LUCs.

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Table 3-1: Summary of Findings and Recommendations from 2016 through 2021 Inspections

2016	2017	2018	2019	2020	2021	Findings/Observations	Recommendations	Comment
Site 302 – PCB Site								
✔	✔	✔	✔	✔	–	Primary gate/entrance to site is locked, requires MFD personnel for access, and has six (6) "Restricted Area/Keep Out" signs posted along the southern fence line; however, there is no specific LUC signage.	Install specific LUC signage on the primary entrance to Site 302.	Completed; LUC signage was installed on the primary entrance in July 2020.
✔	✔	✔	✔	✔	✔	Central portion of site is covered with large, older stockpiles of soil and debris, which were covered with vegetation.	As recommended in the Fourth FYR (U.S. Navy, 2020), use excess soil to regrade the site and develop a vegetative cover.	The excess soil placed in the central portion of the site originated from a culvert replacement project that was located up gradient and outside the four sites with established LUCs, that had not historically been used for industrial activity. The soil was characterized in January 2020 for site contaminants of concern (PCBs and TPHs); analytical results indicate that neither PCBs nor TPHs were detected in excess of MTCA Method A Cleanup levels (Kane Environmental, Inc., 2020). Armor rock from a shoreline project was also placed in this area. A decision on how to handle the stockpiles is being made in consultation with stakeholders and is pending; the Navy anticipates having a plan by summer 2022.
✔	✔	✔	✔	✔	✔	Gated entrance on north side of site is closed and in a remote area of MFD, not easily accessible by personnel. There is LUC signage and lock; however, the gate is not secure and can be pushed open.	Add a chain and lock to properly secure gate, preventing it from being pushed open.	LUC signage and a lock were installed on the gated entrance in July 2020; however, the gate is not adequately secured and can be pushed open. This finding does not affect protectiveness of the LUC remedy (U.S. Navy, 2020). The Navy will coordinate with the installation to properly secure the gate.
✔	–	–	✔	✔	–	During the 2020 LUC Inspection, approximately 60 linear feet of chain-link fencing was noted to have collapsed on the northwestern side of the site, likely due to incursion of vegetation. Due to heavy vegetation, this area could not be inspected to confirm that this section of fence had been repaired.	Reconstruct fence if not previously repaired.	This area could not be inspected during the 2021 LUC inspection due to vegetation. This finding does not affect protectiveness of the LUC remedy (U.S. Navy, 2020). The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.
–	–	–	–	–	✔	Approximately 60 linear feet of fencing was noted during the 2021 LUC inspection to have collapsed on the northwestern boundary of the site due to fallen trees.	Reconstruct fence.	This finding does not affect protectiveness of the LUC remedy (U.S. Navy, 2020). The Navy will coordinate with the installation on a plan and schedule to fix the damaged fence.
Site 303 – D-Tunnel Tanks								
✔	–	–	–	–	–	There is no LUC signage warning of contaminated soil and groundwater at Tanks D-24, D-25, D-27, or D-28.	Add signage at the primary vehicle or pedestrian access point to each UST (Tanks D-22, D-24, D-25, D-26, D-27, D-28, D-29, and D-30) warning of contaminated soil and groundwater and prohibiting unauthorized dumping and/or soil excavation.	Completed; signs were installed at Site 303, according to the 2016 recommendations.
✔	–	–	–	–	–	In 2016, numerous vapor monitoring wells could not be located, including: Tank D-22, MW-3; Tank D-25, all wells except MW-2 and MW-13; Tank D-26, MW-13; Tank D-27, all except for one unknown well; Tank D-28, all monitoring wells; Tank D-29, MW-1, MW-3, MW-4, MW-6, MW-8, MW-9, and MW-11; and Tank D-30, MW-1 and MW-4.	Locate all monitoring wells and assess for condition and integrity; mark with survey stakes, if feasible.	Completed; a well rehabilitation and decommissioning study, including a records review and site reconnaissance, was conducted from 2016 through 2017 (U.S. Navy, 2017).
–	✔	✔	✔	✔	–	An unmarked stockpile of soil covered by black poly sheeting in the northwest corner of the construction laydown area southwest of Tank 24. Poly sheeting was ripped, exposing stockpile.	Confirm soil stockpile is authorized reusable material and is located in an approved staging area. Replace poly sheeting cover.	Completed; As confirmed with MFD Environmental Personnel, soil stockpile is authorized reusable material and is located in an approved staging area. Only clean, reusable aggregate material is approved for placement/staging in the construction laydown area southwest of Tank 24.
–	–	–	–	✔	–	Soil stockpile under tarp in construction laydown area southwest of Tank 24. Pile of cut asphalt staged next to soil stockpile.	Confirm soil stockpile is authorized reusable material and is located in an approved staging area.	Completed; As confirmed with MFD Environmental Personnel, soil stockpile is authorized reusable material and is located in an approved staging area. Only clean, reusable aggregate material is approved for placement/staging in the construction laydown area southwest of Tank 24.
✔	✔	✔	✔	✔	✔	Old stockpile of soil on a tarp surrounded by disintegrating absorbent boom in the laydown area north of Tank 29.	Properly characterize, transport, and dispose of (off site) the soil stockpile.	U.S. Navy personnel are aware that soil stockpiles continue to be an issue and, in coordination with the installation, will take actions to address the stockpile. This finding does not affect protectiveness of the LUC remedy (U.S. Navy, 2020).
–	–	–	–	–	✔	Two new stockpiles of landscape rock (red lava rock) and pieces of landscape fabric) were observed in the northwest corner of the construction laydown area south of Tank 25. The material in these stockpiles originated from the landscaped areas at the main gate (outside of a LUC site) and is authorized reusable material in an approved staging area.	Keep piles covered and maintained until an on-site use can be found.	U.S. Navy personnel are aware of the stockpiles and plan to reuse the material on-site. This finding does not affect protectiveness of the LUC remedy.

Table 3-1: Summary of Findings and Recommendations from 2016 through 2021 Inspections (continued)

2016	2017	2018	2019	2020	2021	Findings/Observations	Recommendations	Comment
–	✔	✔	✔	–	–	Monitoring wells MW-1 south of Tank 24 and MW-3 north of Tank 30 need casing to be lowered to fit cap under lid and minor maintenance/repairs.	Lower casing and perform needed minor maintenance/repairs on monitoring wells MW-1 and MW-3.	Completed; Casing was lowered and minor maintenance/repairs on monitoring wells MW-1 and MW-3 were completed during well rehabilitation activities in October/November 2019.
Site 304 – Industrial Area								
✔	–	–	–	–	–	Groundwater monitoring wells MW-1 and MW-2 were found; however, MW-3 and MW-5 are presumed to be buried under landscaping rocks. MW-4 was located in November 2019 and added to the well rehabilitation activities.	Locate all monitoring wells and assess for condition and integrity.	Completed; a well rehabilitation and decommissioning study, including a records review and site reconnaissance, was conducted from 2016 through 2017 (U.S. Navy, 2017).
✔	✔	–	–	–	–	There is no LUC signage warning of potential exposure to contaminated soil and groundwater.	Considering there is relatively more activity within the area compared to other sites, signage should be installed at all vehicle and pedestrian access points to Site 304. The signs should warn of contaminated soil and groundwater and prohibit unauthorized soil excavation.	Completed; LUC signage was installed at the main entrance to Site 304 between the 2017 and 2018 LUC inspections.
–	–	✔	✔	✔	–	The LUC signage for Site 304 is located at the northeastern corner of Building 178, outside and north of the LUC boundary.	Maintain the LUC signage in its current location.	Completed; Per Ecology comment on the draft 2020 LUC inspections, there is no need to move the LUC signage, as it is located prior to and along the main entryway to Site 304.
–	✔	✔	✔	–	–	Monitoring wells MW-1 and MW-2 do not have identification and the expansion caps are broken. In addition, one monument ear is broken on MW-1.	Perform needed minor maintenance/repairs on monitoring wells MW-1 and MW-2.	Completed; Casing was lowered and minor maintenance/repairs on monitoring wells MW-1 and MW-3 were completed during well rehabilitation activities in November 2019.
–	✔	–	–	–	–	There is construction of a trench box for a fuel line (i.e., excavation activities).	Post approval permit from MFD Environmental for construction of trench box at job site.	Completed; The trench box was completed after the 2017 inspections and not observed during the 2018 and 2019 inspections.
–	–	–	–	✔	–	Visual evidence of excavation under asphalt north of MW-1. Approximately 10 feet by 9 feet by 7 feet triangular dimension.	Confirm any excavated soil is stockpiled in an approved staging area, or that it has been properly disposed of. Confirm that proper protocols were followed during excavation activities (i.e., dig permits, etc.).	Completed; As confirmed with MFD Environmental Personnel, excavation was conducted to repair subsidence in the area and all proper protocols were followed during activities.
–	–	–	–	–	✔	A small cut in asphalt was observed off the southwest corner of Building 12, which was due to excavation to repair a small area of subsidence near the building. The asphalt cut was triangular with approximate dimensions of 10 feet by 9 feet by 7 feet resulting in an opening in the asphalt that had been filled with gravel	The cut in the asphalt should be repaired.	As noted in the 2020 LUC Technical Memorandum, and observed during the 2021 LUC inspections, the cut in the asphalt has not been repaired.
–	–	–	–	–	✔	Ongoing excavation observed to the northwest of the fuel pier and northeast of MW-4 to repair/replace a fire hydrant.	It was confirmed with the MFD Environmental Manager that the proper protocols, outlined in the ESG (NAVSUP, 2020), were followed during excavation activities (i.e., dig permits, etc.). Repair asphalt following hydrant repair.	Confirm with MFD Environmental Personnel that fire hydrant repair and asphalt repair are complete.
Tank 50 – UST Release Site								
×	✔	✔	✔	✔	–	There is LUC signage along the southwestern access road, downhill from Tank 50 and near the past environmental release; however, there is no LUC signage on the northern access road – the primary entryway to Tank 50.	Add LUC signage on the northern access road to Tank 50 (i.e., the primary entryway to the site). LUC signage at this location is noted in the Well Installation and Sampling and Analysis Tank No. 50 Fuel Hydrocarbon Leak Assessment, Manchester Fleet and Industrial Supply Center, Manchester, Washington (Hart Crowser, 1998).	Completed; LUC signage was installed at the primary entryway in July 2020.
×	✔	✔	✔	–	–	Monitoring well MW-1 has no exterior well identification and no lock on lid.	Perform needed minor maintenance/repairs on monitoring well MW-1.	Completed; The minor maintenance/repairs on MW-1 were completed during well rehabilitation activities in November 2019.

Note:
Green shaded rows indicate that the finding/observation and subsequent recommendation have been addressed/completed.
FYR = Five-year Review; LUC = land use control; MFD = Manchester Fuel Depot; MTCA = Model Toxics Control Act; NAVFAC = Naval Facilities Engineering Systems Command; PCB = polychlorinated biphenyl; UST = underground storage tank

4.0 References

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Figures

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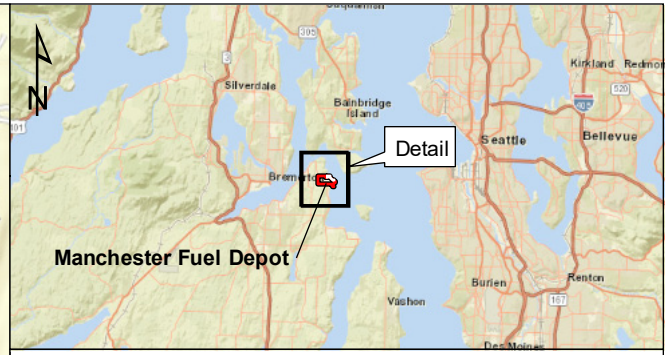
Figures



Legend

Installation Boundary

Acronyms:
PCB = polychlorinated biphenyl

Basemap Source: ESRI Online Streaming Service 2022

N

0 0.25 0.5 0.75 1
In Miles
1 Inch = 0.5 Mile

2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington

Site Vicinity Map

PROJECT NO.:	N4425521F4089
DATE:	March 2022
DRAWN BY:	JP
CHECKED BY:	JF

NAVFAC

FIGURE 1

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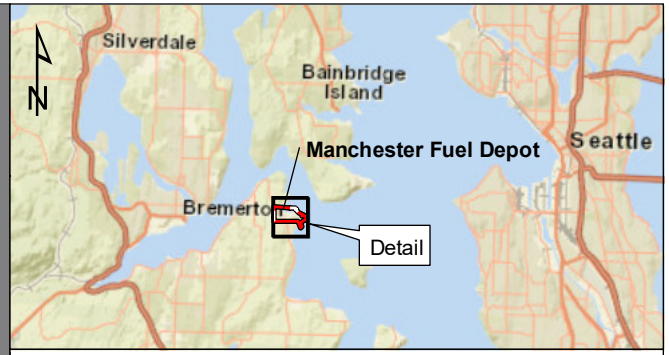
Figures



Legend

- Fuel Tank
- Site Boundary
- Installation Boundary

Acronyms:
PCB = polychlorinated biphenyl

Basemap Source: ESRI Online Streaming Service 2022

N

0 500 1,000 1,500 2,000
In Feet
1 Inch = 1,000 Feet

2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington

Site Plan

PROJECT NO.:	N4425521F4089
DATE:	March 2022
DRAWN BY:	JP
CHECKED BY:	JF

NAVFAC

FIGURE 2

Date: 3/3/2022 File: Figure 2 Site Plan.mxd

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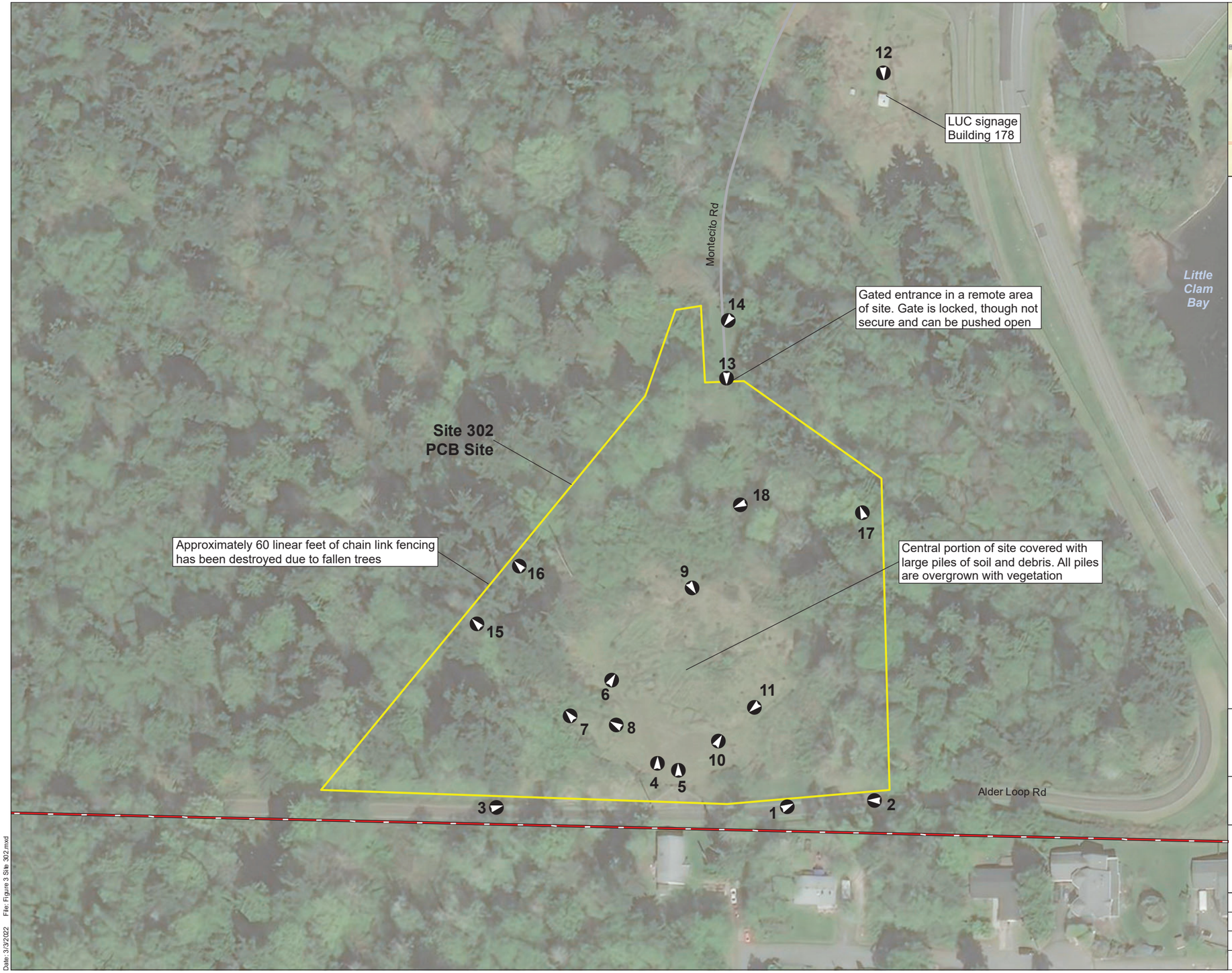

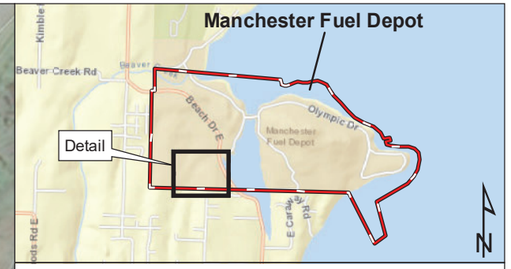

Legend

- Photo Location (number corresponds to the Photographic Log, Appendix D)
- Site Boundary
- Installation Boundary

Acronyms:
LUC = Land Use Control
PCB = polychlorinated biphenyl

Basemap Source: ESRI Online Streaming Service 2022

N

0 50 100 150 200
In Feet
1 Inch = 100 Feet

2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington

Site 302 - PCB Site

PROJECT NO.:	N4425521F4089
DATE:	March 2022
DRAWN BY:	JP
CHECKED BY:	JF

NAVFAC

FIGURE 3

Date: 3/3/2022 File: Figure 3 Site 302.mxd

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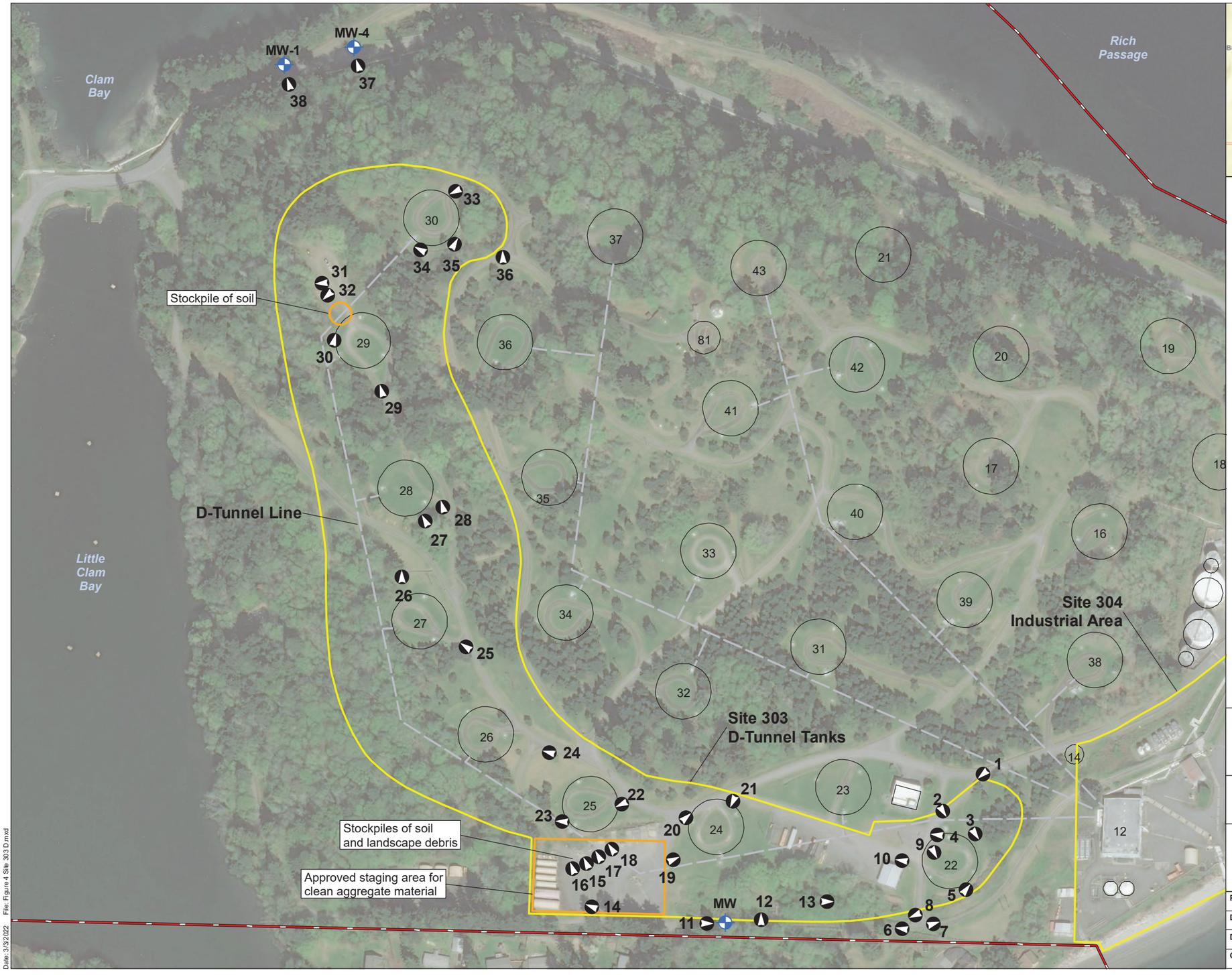
Clam Bay
Rich Passage
Little Clam Bay
MW-1
MW-4
38
37
33
30
34
35
36
31
32
Stockpile of soil
29
30
29
28
28
27
26
27
25
D-Tunnel Line
37
43
21
36
81
42
20
19
41
35
40
17
18
16
33
39
34
31
32
38
Site 304
Industrial Area
Site 303
D-Tunnel Tanks
26
24
25
22
21
23
20
24
23
Stockpiles of soil
and landscape debris
18
17
16
15
19
Approved staging area for
clean aggregate material
14
MW
12
13
11
1
2
3
4
9
10
22
5
8
6
7
14
12
Manchester Fuel Depot
Detail
Beaver Creek Rd
Olympic Dr
Manchester
Fuel Depot
N
Legend
Photo Location (number corresponds to the Photographic Log, Appendix D)
Monitoring Well
Stockpile Location
Tunnel Line
Fuel Tank
Site Boundary
Installation Boundary
Acronyms:
PCB = polychlorinated biphenyl
Basemap Source: ESRI Online Streaming Service 2022
0
110
220
330
440
In Feet
1 Inch = 220 Feet
2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington
Site 303 D-Tunnel Tanks
PROJECT NO.: N4425521F4089
DATE: March 2022
DRAWN BY: JP
CHECKED BY: JF
NAVFAC
FIGURE
4
File: Figure 4 Site 303 D.mxd
Date: 3/3/2022

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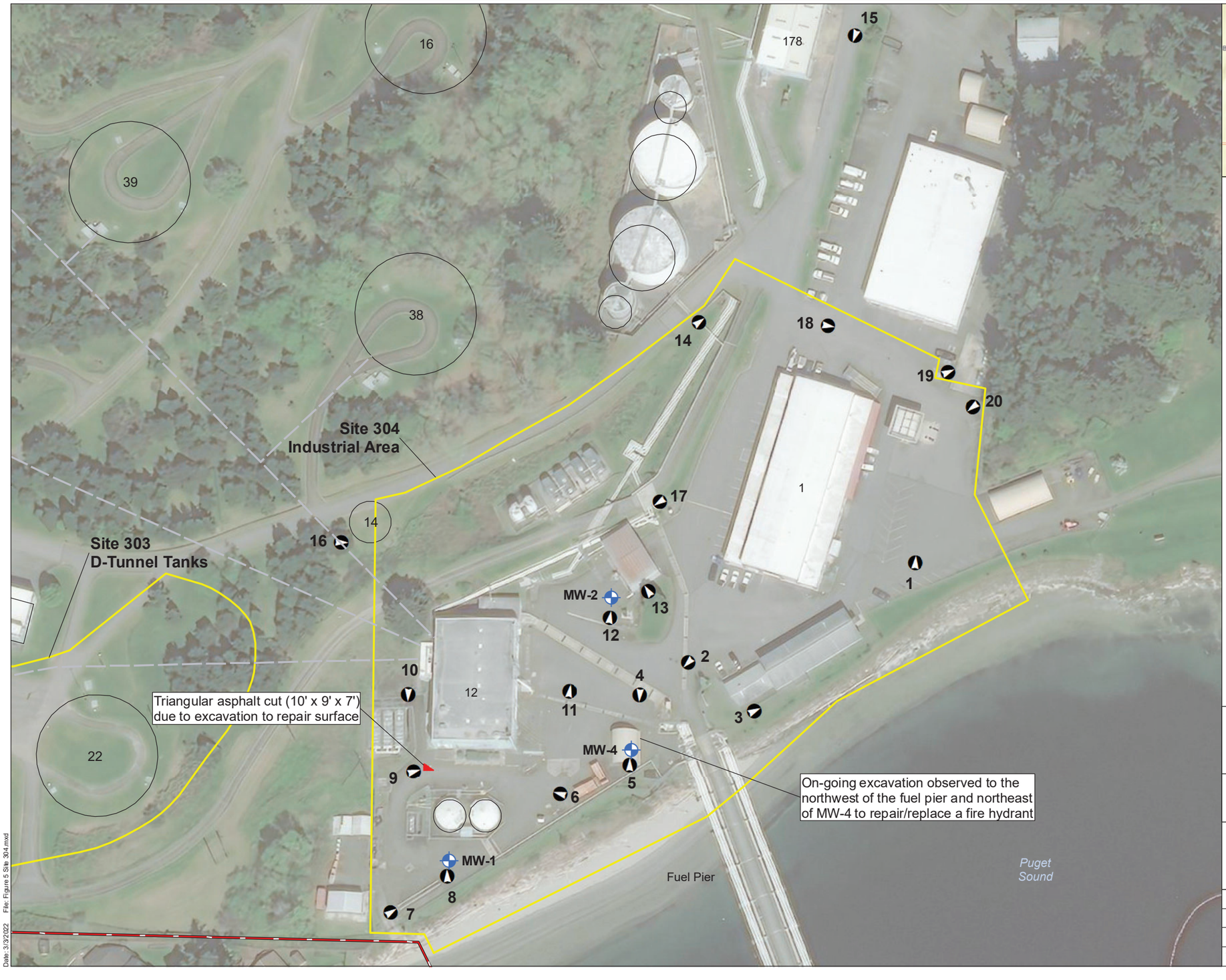

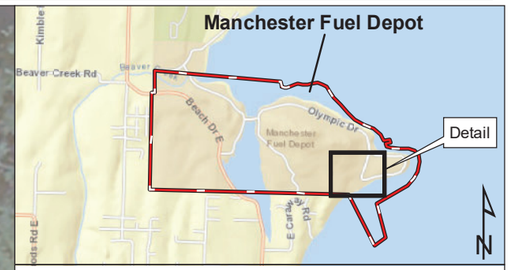

Legend

- Photo Location (number corresponds to the Photographic Log, Appendix D)
- Monitoring Well
- Tunnel Line
- Fuel Tank
- Site Boundary
- Installation Boundary

Acronyms:
PCB = polychlorinated biphenyl

Basemap Source: ESRI Online Streaming Service 2022

N

0 50 100 150 200
In Feet
1 Inch = 100 Feet

2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington

Site 304 - Industrial Area

PROJECT NO.:	N4425521F4089
DATE:	March 2022
DRAWN BY:	JP
CHECKED BY:	JF

NAVFAC

FIGURE 5

Date: 3/3/2022 File: Figure 5 Site 304.mxd

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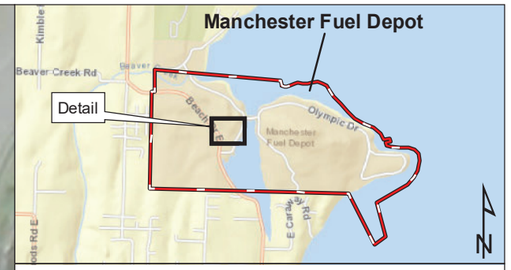

Legend

- Photo Location (number corresponds to the Photographic Log, Appendix D)
- Monitoring Well
- Fuel Tank
- Site Boundary
- Installation Boundary

Acronyms:
PCB = polychlorinated biphenyl

Basemap Source: ESRI Online Streaming Service 2022

N

0 30 60 90 120
In Feet
1 Inch = 60 Feet

2021 Land Use Control Inspections Technical Memorandum
Manchester Fuel Depot
Port Orchard, Washington

Tank 50 Release Site

PROJECT NO.:	N4425521F4089
DATE:	March 2022
DRAWN BY:	JP
CHECKED BY:	JF

NAVFAC

FIGURE 6

Date: 3/3/2022 File: Figure 6 Tank 50.mxd

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Appendix A:
LUC Inspection Checklists

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NBK Manchester
Site 302 - PCB Site
Naval Facilities Engineering Command Northwest

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY): 06/02/21

INSPECTOR(S): J. Santini, J. Fetters

COMPANY: Liberty JV

LUCs

- *ENSURE THAT SITE SIGNAGE IS READABLE AND ADEQUATE.*
- ENSURE THAT LAND USE REMAINS FOR INDUSTRIAL PURPOSES.
- ENSURE THAT THERE HAS BEEN NO UNAUTHORIZED SOIL EXCAVATION OR DISTURBANCE.
- ENSURE THAT THERE HAS BEEN NO UNAUTHORIZED PLACEMENT OF EXCESS SOIL FROM ANOTHER LOCATION.
- ENSURE INTEGRITY OF THE SOIL COVER VEGETATION, SO THAT ANY EXCAVATION OR IMPROPER DISPOSAL IS APPARENT.
- ENSURE THAT ANY SOIL EXCAVATED FROM THE SITE IS PROPERLY CHARACTERIZED AND DISPOSED OFF-SITE AND THAT ON-SITE WORKERS ARE PROTECTED DURING SUCH ACTIVITIES.
- ENSURE THAT SITE FENCING IS INTACT AND THAT GATES ARE SECURED AND LOCKED.

NOTE: LUCs THAT ARE ITALICIZED ARE REQUIRED LUCs FROM THE NFA LETTER.

LUCs INSPECTION ACTIONS

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ■ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER_____

FINDINGS: Industrial land use

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF SOIL EXCAVATION OR DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ■ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER_____

FINDINGS:

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF THE UNAUTHORIZED PLACEMENT OF EXCESS SOIL FROM ANOTHER LOCATION? ■ YES ☐ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ■ INTERVIEW W/ M. Hardiman ☐ SECURITY CHECK ☐ OTHER_____

FINDINGS: Central portion of site is covered with stockpiles. Soil sampled in January 2020.

HAS THE INTEGRITY OF THE VEGETATIVE COVER AT THE SITE BEEN MAINTAINED? ■ YES ☐ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER_____

FINDINGS: Central portion of site is covered with stockpiles, though the subject stockpiles are vegetated.

HAS ACCESS CONTROL BEEN MAINTAINED? ■ YES ☐ NO, EXPLAIN _____

SECURITY POC: N/A

IS SIGNAGE READABLE AND ADEQUATE? ■ YES ☐ NO ☐ NA

IS FENCING INTACT AND SECURE? ☐ YES ■ NO ☐ NA

ARE BOTH THE NORTH AND SOUTH GATES SECURED AND LOCKED ☐ YES ■ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER_____

FINDINGS: No lock on north gate. Approx. 60 total feet of broken fence along west central to site boundary

NBK Manchester
Site 302 - PCB Site
Naval Facilities Engineering Command Northwest

LUCs INSPECTION CHECKLIST (CONTINUED)

WERE PICTURES TAKEN? ■ YES ☐ NO

PHOTO IDs See Appendix D

ADDITIONAL NOTES:

South gate locked and new signage installed on gate fence. North gate is locked, but can be opened. Two broken sections of fence observed along the west central site boundary due to downed trees, approximately 50 feet and 10 feet in section lengths. Metal debris observed within the northeast area of the site, though appears to have been in place much longer than one year.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE:	DATE:
Jeremiah Santini	2 June 2021

NBK Manchester
Site 303 - D-Tunnel Tanks
Naval Facilities Engineering Command Northwest

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY):
06/02/21

INSPECTOR(S):
J. Santini, J. Fetters

COMPANY:
Liberty JV

LUCs

- *ENSURE THAT LAND USE REMAINS FOR INDUSTRIAL PURPOSES. COORDINATE WITH ECOLOGY PRIOR TO CHANGE IN PROPERTY OWNERSHIP OR LAND USE CONCERNING THE NEED FOR REMEDIAL ACTIONS.*
- *ENSURE THAT WARNINGS ARE POSTED FOR WORKERS TO GUARD AGAINST EXPOSURE TO RESIDUAL PETROLEUM CONTAMINATED SOIL.*
- *IDENTIFY REMAINING AREAS OF CONCERN ON FACILITY MAPS AND SPECIFY IN FACILITY EXCAVATION PERMIT INSTRUCTION.*
- ENSURE NO PRODUCTION WELLS ARE INSTALLED AND GROUNDWATER IS NOT USED EXCEPT FOR MONITORING AND/OR REMEDIATION.
- PROTECT EXISTING VAPOR MONITORING WELLS UNTIL FORMALLY ABANDONED.
- ENSURE THAT THERE HAS BEEN NO UNAUTHORIZED SOIL EXCAVATION OR DISTURBANCE.
- CONFINE AUTHORIZED REUSABLE MATERIAL* TO APPROVED STAGING AREA.
- ENSURE THAT ANY SOIL EXCAVATED FROM THE SITE IS PROPERLY CHARACTERIZED AND DISPOSED OFF-SITE AND THAT ON-SITE WORKERS ARE PROTECTED DURING SUCH ACTIVITIES.

NOTE: LUCs THAT ARE ITALICIZED ARE REQUIRED LUCs FROM THE NFA LETTER.
*THOSE MATERIALS FOR WHICH ONSITE PLACEMENT HAS BEEN COORDINATED WITH THE ECOLOGY SITE MANAGER AND THAT HAVE BEEN CHARACTERIZED IN COLLABORATION WITH THE ECOLOGY SITE MANAGER.

LUC INSPECTION ACTION

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: Industrial land use

DO FACILITY MAPS IDENTIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE: Contractor Environmental & Safety Guide

DOES THE FACILITY EXCAVATION PERMIT INSTRUCTION SPECIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE: Contractor Environmental & Safety Guide

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☐ WELL INSPECTIONS

FINDINGS:
☐ SEE WELL INSPECTION LOGS
☐ OTHER _____

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS) ☒ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☐ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☒ WELL INSPECTIONS

FINDINGS:
☒ SEE WELL INSPECTION LOGS
☐ OTHER _____

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF SOIL EXCAVATION OR DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☒ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: Well decommissioning activities.

NBK Manchester
Site 303 - D-Tunnel Tanks
Naval Facilities Engineering Command Northwest

LUCs INSPECTION CHECKLIST (CONTINUED)

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF THE UNAUTHORIZED PLACEMENT EXCESS SOIL, FILL, OR SEDIMENT FROM ANOTHER LOCATION? ■ YES ☐ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: Laydown area north of Tank 29

HAS ACCESS CONTROL BEEN MAINTAINED? ■ YES ☐ NO, EXPLAIN _____

SECURITY POC: N/A

IS SIGNAGE READABLE AND ADEQUATE? ■ YES ☐ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: _____

WERE PICTURES TAKEN? ■ YES ☐ NO

PHOTO IDs See Appendix D

ADDITIONAL NOTES:

Evidence of well abandonment and rehabilitation at Tanks 22, 24, 25, 26, 27, 29, 30, 33, and 48. Two old stockpiles on/covered by tarps: one in laydown area and one north of Tank 29 - previously reported. One new soil stockpile under tarp along with asphalt in laydown area, and new debris stockpiles.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE:	DATE:
Jeremiah Santini	2 June 2021

NBK Manchester
Site 304 - Industrial Area
Naval Facilities Engineering Command Northwest

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY):
06/02/21

INSPECTOR(S):
J. Santini, J. Fetters

COMPANY:
Liberty JV

LUCs

- *ENSURE THAT LAND USE REMAINS FOR INDUSTRIAL PURPOSES. COORDINATE WITH ECOLOGY PRIOR TO CHANGE IN PROPERTY OWNERSHIP OR LAND USE CONCERNING THE NEED FOR REMEDIAL ACTIONS.*
- *ENSURE THAT WARNINGS ARE POSTED FOR WORKERS TO GUARD AGAINST EXPOSURE TO RESIDUAL PETROLEUM CONTAMINATED SOIL.*
- *IDENTIFY REMAINING AREAS OF CONCERN ON FACILITY MAPS AND SPECIFY IN FACILITY EXCAVATION PERMIT INSTRUCTION.*
- ENSURE NO PRODUCTION WELLS ARE INSTALLED AND GROUNDWATER IS NOT USED EXCEPT FOR MONITORING AND/OR REMEDIATION.
- PROTECT EXISTING MONITORING WELLS UNTIL FORMALLY ABANDONED.
- ENSURE THAT THERE HAS BEEN NO UNAUTHORIZED SOIL EXCAVATION OR DISTURBANCE.
- ENSURE THAT ANY SOIL EXCAVATED FROM THE SITE IS PROPERLY CHARACTERIZED AND DISPOSED OFF-SITE AND THAT ON-SITE WORKERS ARE PROTECTED DURING SUCH ACTIVITIES.

NOTE: LUCs THAT ARE ITALICIZED ARE REQUIRED LUCs FROM THE NFA LETTER.

LUC INSPECTION ACTIONS

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS:
Industrial land use

DO FACILITY MAPS IDENTIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE:
Contractor Environmental & Safety Guide

DOES THE FACILITY EXCAVATION PERMIT INSTRUCTION SPECIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE:
Contractor Environmental & Safety Guide

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☐ WELL INSPECTIONS

FINDINGS:
☐ SEE WELL INSPECTION LOGS
☐ OTHER _____

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS) ☒ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☐ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☒ WELL INSPECTIONS

FINDINGS:
☒ SEE WELL INSPECTION LOGS
☐ OTHER _____

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF SOIL EXCAVATION OR DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☒ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS:
See photo log and field notes.

NBK Manchester
Site 304 - Industrial Area
Naval Facilities Engineering Command Northwest

LUCs INSPECTION CHECKLIST (CONTINUED)

HAS ACCESS CONTROL BEEN MAINTAINED? ☒ YES ☐ NO, EXPLAIN _____

SECURITY POC: N/A

IS SIGNAGE READABLE AND ADEQUATE? ☒ YES ☐ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ☒ SITE WALK ☐ SECURITY CHECK ☐ INTERVIEW W/_____ ☐ OTHER _____

FINDINGS: LUC signage is north of actual site boundary

WERE PICTURES TAKEN? ☒ YES ☐ NO

PHOTO IDs See Appendix D.

ADDITIONAL NOTES:

On-going excavation observed to the northwest of the fuel pier and northeast of MW-4 to repair/ replace a fire hydrant.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE:	DATE:
Jeremiah Santini	2 June 2021

NBK Manchester
Tank 50 Release Site
Naval Facilities Engineering Command Northwest

LAND USE CONTROLS (LUCs) INSPECTION CHECKLIST

DATE(S) (MM|DD|YY):
06/02/21

INSPECTOR(S):	COMPANY:
J. Santini, J. Fetters	Liberty JV

LUCs

- *ENSURE THAT WARNINGS ARE POSTED FOR WORKERS TO GUARD AGAINST EXPOSURE TO RESIDUAL PETROLEUM CONTAMINATED SOIL.*
- *IDENTIFY REMAINING AREAS OF CONCERN ON FACILITY MAPS AND SPECIFY IN FACILITY EXCAVATION PERMIT INSTRUCTION.*
- ENSURE THAT LAND USE REMAINS FOR INDUSTRIAL PURPOSES. COORDINATE WITH ECOLOGY PRIOR TO CHANGE IN PROPERTY OWNERSHIP OR LAND USE CONCERNING THE NEED FOR REMEDIAL ACTIONS.
- ENSURE NO PRODUCTION WELLS ARE INSTALLED AND GROUNDWATER IS NOT USED EXCEPT FOR MONITORING AND/OR REMEDIATION.
- PROTECT EXISTING MONITORING WELLS UNTIL FORMALLY ABANDONED.
- ENSURE THAT THERE HAS BEEN NO UNAUTHORIZED SOIL EXCAVATION OR DISTURBANCE.
- ENSURE THAT ANY SOIL EXCAVATED FROM THE SITE IS PROPERLY CHARACTERIZED AND DISPOSED OFF-SITE AND THAT ON-SITE WORKERS ARE PROTECTED DURING SUCH ACTIVITIES.

NOTE: LUCs THAT ARE ITALICIZED ARE REQUIRED LUCs FROM THE NFA LETTER.

LUC INSPECTION ACTION

HAS SITE OR ADJACENT LAND USE CHANGED SINCE LAST INSPECTION? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: Industrial land use

DO FACILITY MAPS IDENTIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE: Contractor Environmental & Safety Guide

DOES THE FACILITY EXCAVATION PERMIT INSTRUCTION SPECIFY REMAINING AREAS OF CONCERN? ☒ YES ☐ NO

DESCRIBE: Contractor Environmental & Safety Guide

IS THERE VISUAL EVIDENCE OF UNAUTHORIZED ON-SITE WELL INSTALLATION OR GROUNDWATER USE? ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☐ WELL INSPECTIONS

FINDINGS:
☐ SEE WELL INSPECTION LOGS
☐ OTHER _____

ARE ALL MONITORING WELLS IN GOOD CONDITION AND ACCESSIBLE? (REFER TO COMPLETED MONITORING WELL INSPECTION CHECKLISTS) ☒ YES ☐ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☐ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____
☒ WELL INSPECTIONS

FINDINGS:
☒ SEE WELL INSPECTION LOGS
☐ OTHER _____

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF SOIL EXCAVATION OR DISTURBANCE? IF SO, DETERMINE IF SITE APPROVAL PROCESS HAS BEEN FOLLOWED. ☐ YES ☒ NO

INSPECTION PERFORMED? (CHECK ALL THAT APPLY)
☒ SITE WALK ☐ INTERVIEW W/_____
☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: _____

NBK Manchester
Tank 50 Release Site
Naval Facilities Engineering Command Northwest

LUCs INSPECTION CHECKLIST (CONTINUED)

IS THERE VISUAL OR ADMINISTRATIVE EVIDENCE OF THE UNAUTHORIZED PLACEMENT EXCESS SOIL, FILL, OR SEDIMENT FROM ANOTHER LOCATION? ☐ YES ■ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER _____

FINDINGS:

HAS ACCESS CONTROL BEEN MAINTAINED? ■ YES ☐ NO, EXPLAIN _____

SECURITY POC: N/A

IS SIGNAGE READABLE AND ADEQUATE? ☐ YES ■ NO ☐ NA

INSPECTION PERFORMED? (CHECK ALL THAT APPLY) ■ SITE WALK ☐ INTERVIEW W/_____ ☐ SECURITY CHECK ☐ OTHER _____

FINDINGS: No LUC signage observed at main access point to site, adjacent to MFD Main Gate.

WERE PICTURES TAKEN? ■ YES ☐ NO

PHOTO IDs See Appendix D.

ADDITIONAL NOTES:

MW-2 south of Tank 50 was removed as part of the well decommissioning activities in 2019. Only one LUC sign observed by Tank 50, therefore the extent of the site is not well defined.

I CERTIFY THAT THE CONDITIONS OF THE AREA ON THE INSPECTION DATES(S) WERE AS REPORTED ABOVE.

INSPECTOR SIGNATURE:	DATE:
Jeremiah Santini	2 June 2021

Appendix B:
Monitoring Well Inspection Checklists

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Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 14:30	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 303 D-Tunnel Tanks	**DESCRIPTION:** D-Tunnel Tanks	
WELL ID: MW-1, South of Tank 24	**NORTHING:** 64013.946	**EASTING:** 371485.35

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒ SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐

IS THE WELL CLEARLY LABELED? YES☒ NO☐

IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 3 bolts, 9/16 inch

OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES☐ NO☐

IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP, J-PLUG, EXPANSION, PRODUCTION W/TUBING, OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT, SULFIDE/ROTTEN EGGS, PETROLEUM, OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-1 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 12:43	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 303 D-Tunnel Tanks	**DESCRIPTION:** D-Tunnel Tanks	
WELL ID: MW-1, North of Tank 30	**NORTHING:** 64612.007	**EASTING:** 371179.515

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒ SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐

IS THE WELL CLEARLY LABELED? YES☒ NO☐

IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch

OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES☐ NO☐

IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP, J-PLUG, EXPANSION, PRODUCTION W/TUBING, OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT, SULFIDE/ROTTEN EGGS, PETROLEUM, OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-1 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 14:27	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 303 D-Tunnel Tanks	**DESCRIPTION:** D-Tunnel Tanks	
WELL ID: MW-3, North of Tank 30	**NORTHING:** 64625.423	**EASTING:** 371219.950

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒
SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐
IS THE WELL CLEARLY LABELED? YES☒ NO☐
IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch
OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____
IS THE CASING IN GOOD CONDITION? YES☐ NO☐
IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐
TYPE OF CAP: PVC SLIP CAP
J-PLUG
EXPANSION
PRODUCTION W/TUBING
OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐
IF YES, DESCRIBE ODOR: SOLVENT
SULFIDE/ROTTEN EGGS
PETROLEUM
OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-3 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 15:27	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 304 Industrial Area	**DESCRIPTION:** Industrial Area	
WELL ID: MW-1	**NORTHING:** 64019.596	**EASTING:** 371750.902

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒ SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐

IS THE WELL CLEARLY LABELED? YES☒ NO☐

IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch

OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES☐ NO☐

IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP, J-PLUG, EXPANSION, PRODUCTION W/TUBING, OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT, SULFIDE/ROTTEN EGGS, PETROLEUM, OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-1 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 15:10	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 304 Industrial Area	**DESCRIPTION:** Industrial Area	
WELL ID: MW-2	**NORTHING:** 64106.184	**EASTING:** 371804.246

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒
SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐

IS THE WELL CLEARLY LABELED? YES☒ NO☐

IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch

OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES☐ NO☐

IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP
J-PLUG
EXPANSION
PRODUCTION W/TUBING
OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT
SULFIDE/ROTTEN EGGS
PETROLEUM
OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-2 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 15:05	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Site 304 Industrial Area	**DESCRIPTION:** Industrial Area	
WELL ID: MW-4	**NORTHING:** 64054.635	**EASTING:** 371808.329

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒
SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐
IS THE WELL CLEARLY LABELED? YES☒ NO☐
IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch
OTHER _____
WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____
IS THE CASING IN GOOD CONDITION? YES☐ NO☐
IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP
J-PLUG
EXPANSION
PRODUCTION W/TUBING
OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT
SULFIDE/ROTTEN EGGS
PETROLEUM
OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-4 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY): 06/02/2021	**TIME (HH:MM):** 11:37	**WEATHER/TEMPERATURE:** Sunny, 80 degrees Fahrenheit
INSPECTOR: Jeremiah Santini and Jeff Fetters	**COMPANY:** Liberty JV	
SITE: Tank 50	**DESCRIPTION:** Tank 50 Release Site	
WELL ID: MW-1	**NORTHING:** 64407.051	**EASTING:** 370946.014

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER☒
SOIL VAPOR

MONITORING WELL LOCATED? YES☒ NO☐

IS THE WELL CLEARLY LABELED? YES☒ NO☐

IS THE MONUMENT IN GOOD CONDITION? YES☒ NO☐

TYPE OF WELL CASING: STICK-UP☐ FLUSH-MOUNT☒ SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: 2 bolts, 9/16 inch

OTHER _____

WERE PICTURES TAKEN? YES☒ NO☐ PHOTO IDs: See Appendix D

MONITORING WELL MONUMENT CAP OPENED? YES☐ NO☒ (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES☐ NO☐

IS THERE A CAP ON THE MONITORING WELL? YES☐ NO☐

TYPE OF CAP: PVC SLIP CAP
J-PLUG
EXPANSION
PRODUCTION W/TUBING
OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES☐ NO☐

ARE THERE ANY ODORS? YES☐ NO☐

IF YES, DESCRIBE ODOR: SOLVENT
SULFIDE/ROTTEN EGGS
PETROLEUM
OTHER _____

WERE PICTURES TAKEN? YES☐ NO☐ PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

Groundwater Monitoring Well MW-1 located, but not opened for inspection in accordance with the approved Field Change (FCR).

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION☒
MODERATE CONDITION Request☐
POOR CONDITION☐

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Appendix C:
Field Notes

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FIELD NOTES

Project Name: Manchester Fuel Depot, Naval Base Kitsap, WA
Project Number: 021-0095

Weather	Bright Sun	Clear	Overcast	Rain	Snow
Temp (F)	Under 32	32-50	51-70	71-85	Over 85
Wind	Still	Mod.	High		
Humidity	Dry	Mod.	High		

Date:	Time:	Notes:
2 June 2021	0720	MOBILIZE TO MANCHESTER FUEL DEPOT (MFD). JEFF FETTERS AND JEREMIAH SANTINI FROM NICKLAUS ENGINEERING, INC. (NEI), LIBERTY JV.
	0750	ARRIVE AT MFD AND MEET NAVAL FACILITIES ENGINEERING SYSTEMS COMMAND (NAVFAC) NORTHWEST JOY GREYZENTA.
	0800	DISCUSS LAND USE CONTROL (LUC) INSPECTIONS AND HEALTH AND SAFETY.
	0815	BRIEFLY TOUR MFD SITES (302, TANK 50, 303, AND 304)
	0830	MOBILIZE TO ENVIRONMENTAL BUILDING TO MEET CHIEF ENGINEER MIKE HARDIMAN.
	0920	PROCEED BACK TO SITE 302 AND HAVE GATE UNLOCKED BY MFD ENGINEER DOUG TAILLEUR
	0930	BEGIN LUC INSPECTION OF SITE 302. (SEE INSP. CHECKLIST)
	1055	COMPLETE SITE 302 LUC INSPECTION.
		MOBILIZE TO SITE TANK 50 FOR LUC INSPECTION.
	1120	BEGIN LUC INSPECTION AT SITE TANK 50.
	1155	COMPLETE LUC INSPECTION AT SITE TANK 50.
	1200	PROCEED TO SITE 303 D-TUNNEL TANKS FOR LUC INSPECTION.
	1215	BEGIN LUC INSPECTIONS AT SITE 303 D-TUNNEL TANKS.
	1430	COMPLETE LUC INSPECTION AT SITE 303 D-TUNNEL TANKS
	1440	MOBILIZE TO SITE 304 INDUSTRIAL AREA.
	1450	BEGIN LUC INSPECTIONS AT SITE 304 INDUSTRIAL AREA.
	1540	COMPLETE LUC INSPECTIONS AT SITE 304 INDUSTRIAL AREA.
	1620	Proceed to Environmental Building to meet with Chief Engineer, Mike Hardiman and to discuss LUC findings at each site.
	1630	Depart MFD.

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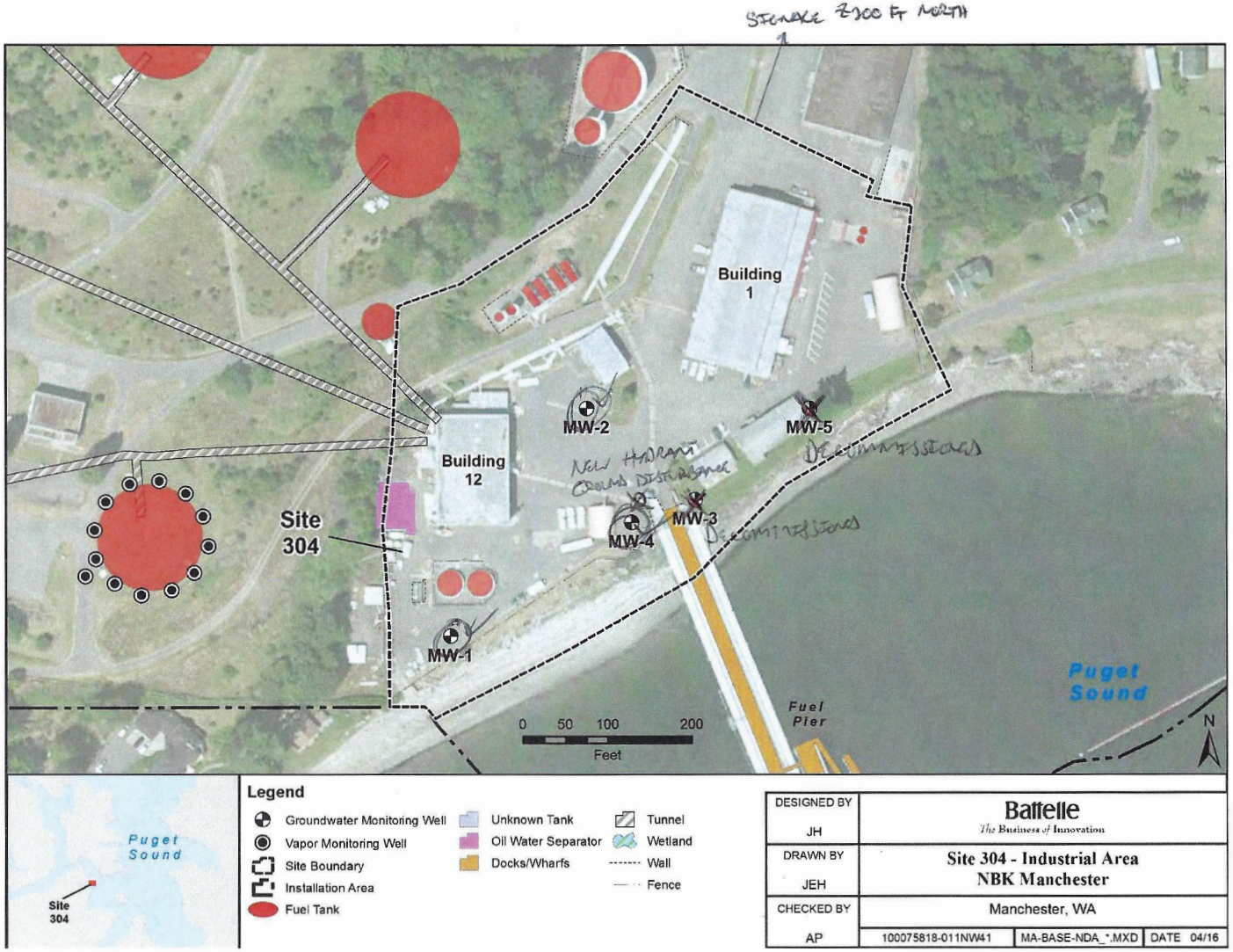

Figure 2-3. Site 304 - Industrial Area

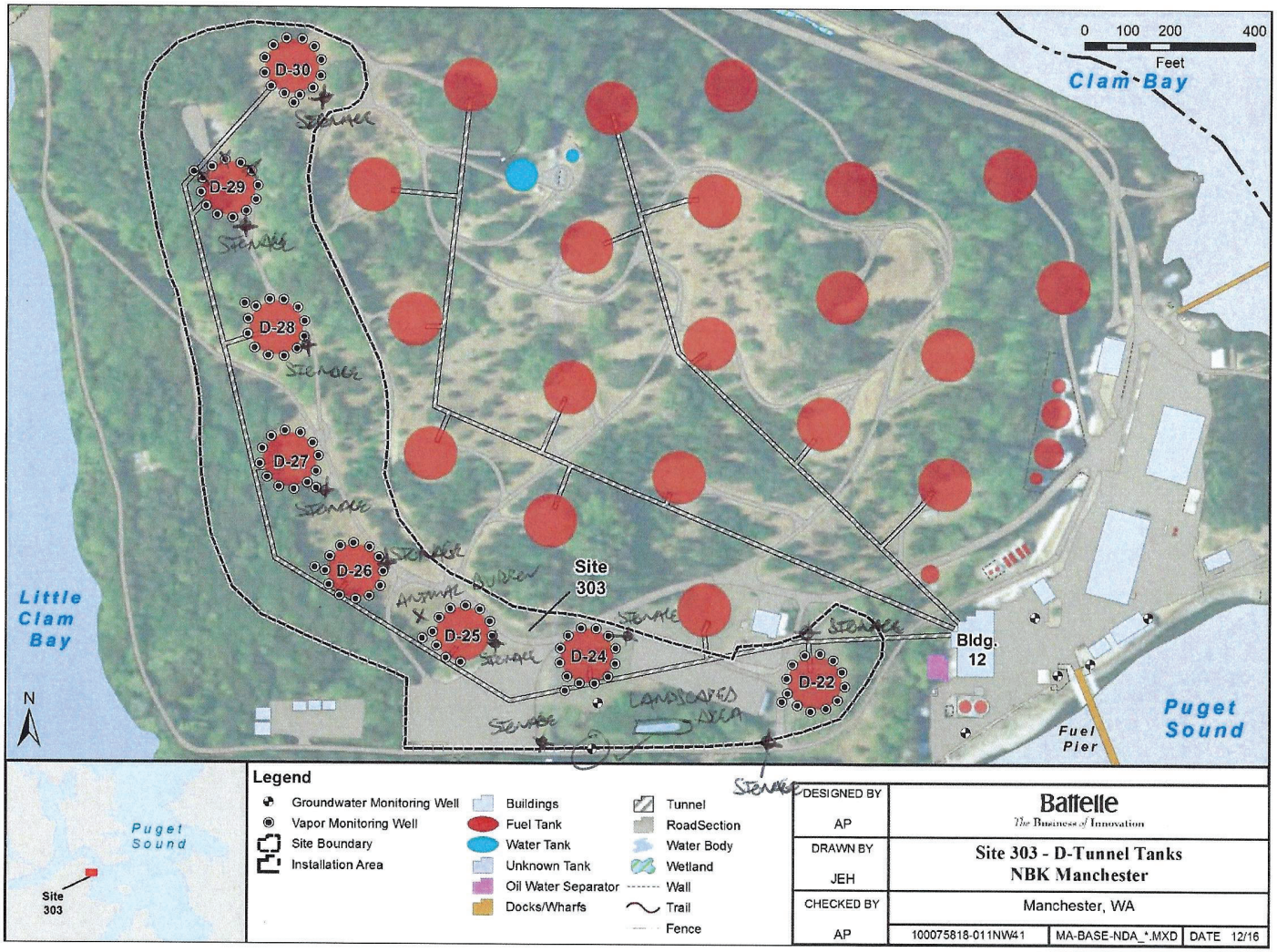

Figure 2-2. Site 303 - D-Tunnel Tanks

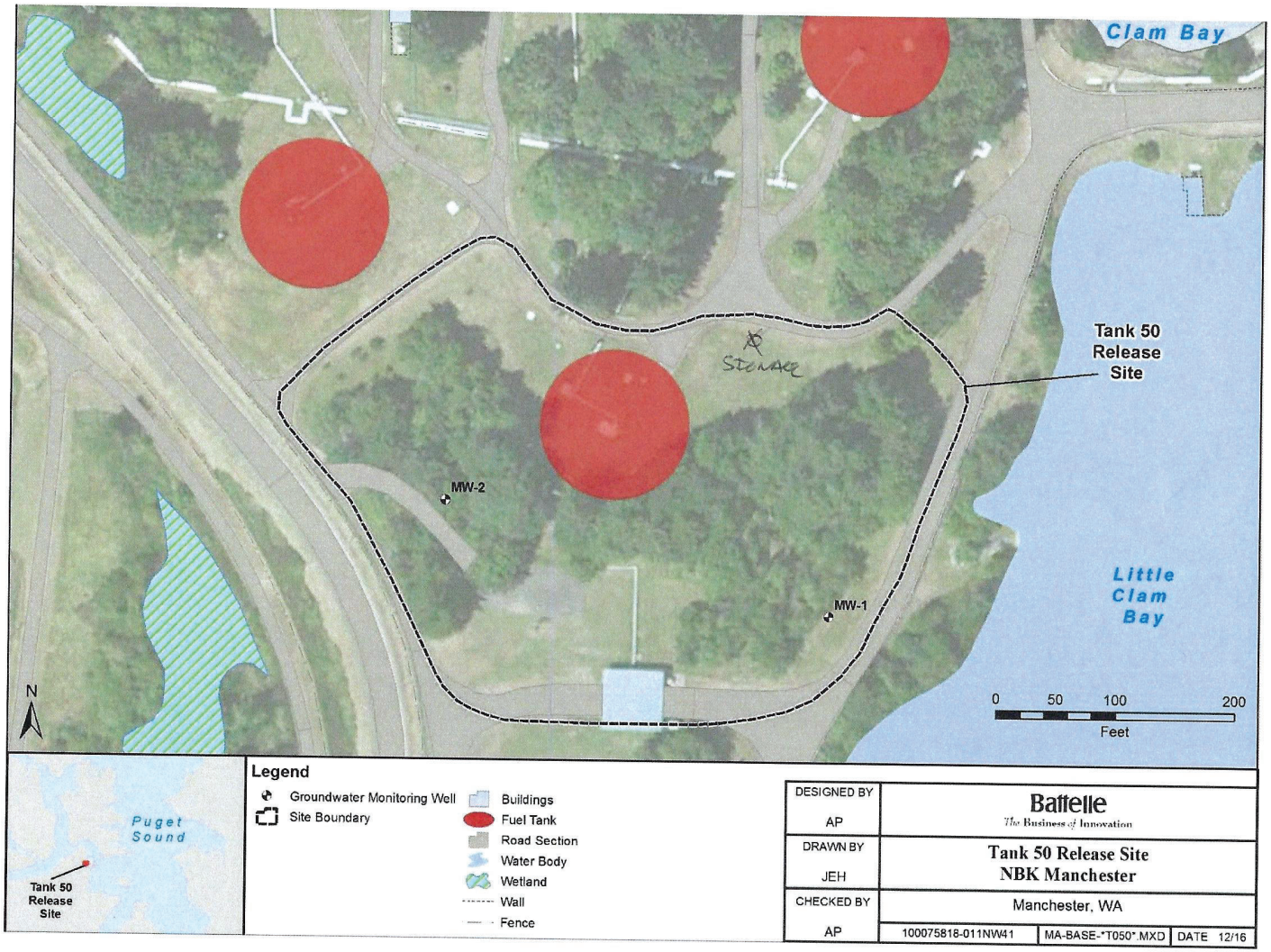

Figure 2-4. Tank 50 Release Site

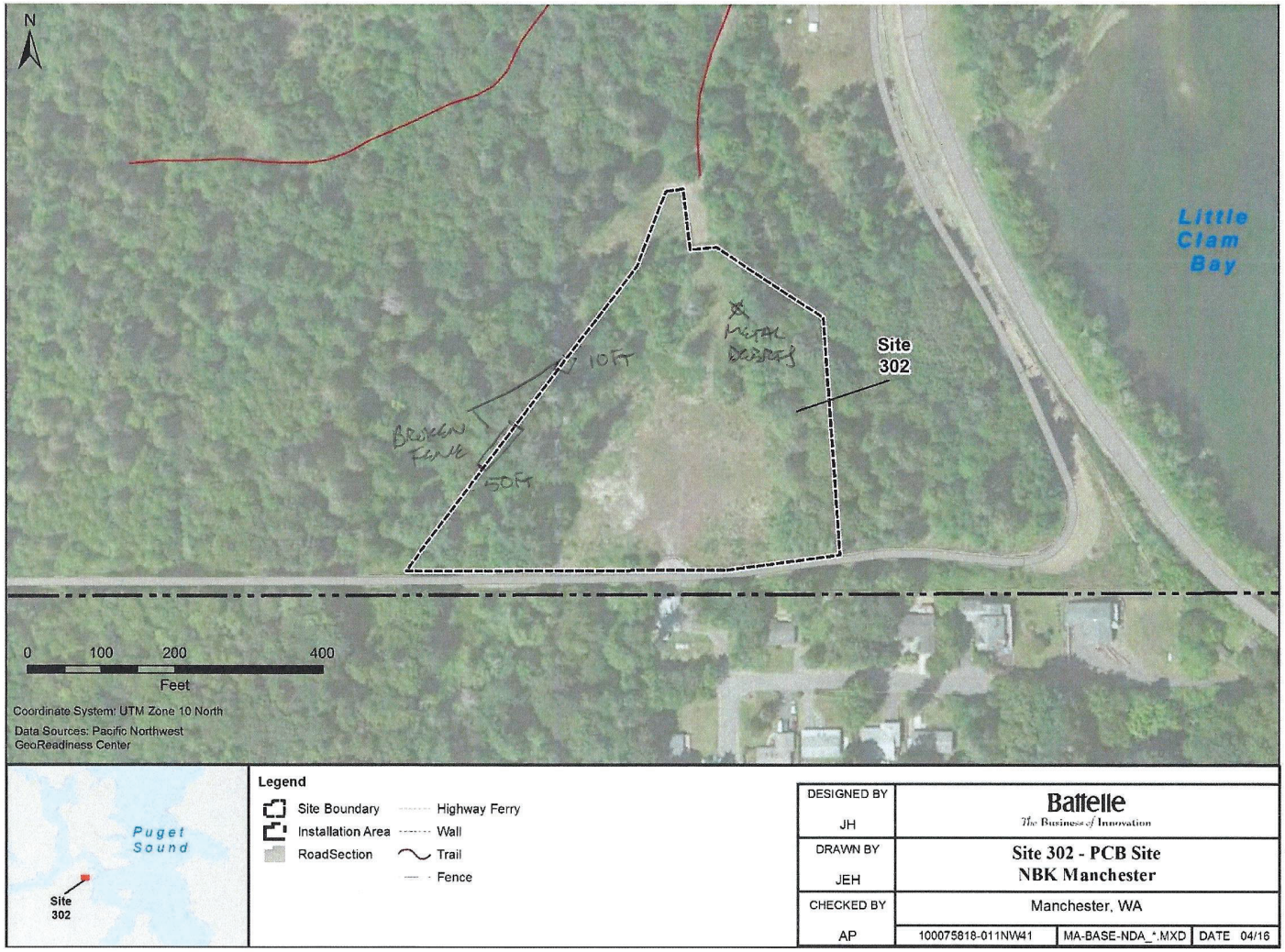

Figure 2-1. Site 302 - PCB Site

Appendix D:
Photographic Log

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Site 302 – PCB Site

Photograph 1
File Name: IMG_0004.JPG
Description: Land use control (LUC) signage along southeastern road boundary, facing northeast.

Photograph 2
File Name: IMG_0005.JPG
Description: LUC signage at southeast corner, facing west.

Photograph 3
File Name: IMG_0006.JPG
Description: Fencing along southwestern boundary of site, facing northeast.

Photograph 4
File Name: IMG_0007.JPG
Description: South central area of site, facing north.

Site 302 – PCB Site

Photograph 5
File Name: IMG_0008.JPG
Description: Locked main access gate and LUC signage located on south side of site, facing north.

Photograph 6
File Name: IMG_0009.JPG
Description: Stockpiles covered with vegetation, central area of site, facing northeast.

Photograph 7
File Name: IMG_0010.JPG
Description: South central area of site, facing northwest.

Photograph 8
File Name: IMG_0011.JPG
Description: South central area of site, facing northwest.

Site 302 – PCB Site

Photograph 9
File Name: IMG_0012.JPG
Description: Stockpiles covered with vegetation, central area of site, facing southeast. Structure in the background is a residential building located off of the installation.

Photograph 10
File Name: IMG_0013.JPG
Description: Stockpiles covered with vegetation, central area of site, facing northeast.

Photograph 11
File Name: IMG_0014.JPG
Description: Stockpiles covered with vegetation, central area of site, facing southwest. Structure in the background is a residential building located off of the installation.

Photograph 12
File Name: IMG_0015.JPG
Description: National Marine Fisheries Service well, northeast of site, facing south.

Site 302 – PCB Site

Photograph 13
File Name: IMG_0016.JPG
Description: Locked access gate and LUC signage located on north side of site, facing south. Gate locked but not secure.

Photograph 14
File Name: IMG_0017.JPG
Description: Northern corner fence line, facing southwest.

Photograph 15
File Name: IMG_0018.JPG
Description: Section of fence down (approximately 50 feet) due to treefall along southwest perimeter, facing northwest.

Photograph 16
File Name: IMG_0019.JPG
Description: Section of fence down (approximately 10 feet) due to treefall along west perimeter, facing northwest.

Site 302 – PCB Site

Photograph 17
File Name: IMG_0019.JPG
Description: Northeast perimeter fence line, facing northwest.

Photograph 18
File Name: IMG_0020.JPG
Description: Concrete and metal debris (fence posts) located within the northeast area of site, facing southwest.

Site 303 – D-Tunnel Tanks

Photograph 1
File Name: IMG_0034.JPG
Description: East site boundary, facing southwest.

Photograph 2
File Name: IMG_0035.JPG
Description: LUC signage at Tank 22, facing southeast.

Photograph 3
File Name: IMG_0036.JPG
Description: Abandoned vapor monitoring well locations, facing southeast.

Photograph 4
File Name: IMG_0037.JPG
Description: Abandoned vapor monitoring well locations, facing west.

Site 303 – D-Tunnel Tanks

Photograph 5
File Name: IMG_0038.JPG
Description Abandoned vapor monitoring well location, southeast corner of Tank 22, facing northeast.

Photograph 6
File Name: IMG_0039.JPG
Description: LUC signage along south site perimeter, facing west.

Photograph 7
File Name: IMG_0040.JPG
Description: Southeast area outside of site boundary, facing northeast.

Photograph 8
File Name: IMG_0041.JPG
Description: Location of abandonded groundwater monitoring well MW-3, facing southwest.

Site 303 – D-Tunnel Tanks

Photograph 9
File Name: IMG_0042.JPG
Description: Location of former vapor monitoring well, facing southeast.

Photograph 10
File Name: IMG_0043.JPG
Description: Parking lot and storage area, facing west.

Photograph 11
File Name: IMG_0044.JPG
Description: Groundwater monitoring well MW-1 south of Tank 24, facing east.

Photograph 12
File Name: IMG_0045.JPG
Description: Stairway to ravine south of Tank 24, facing north.

Site 303 – D-Tunnel Tanks

Photograph 13
File Name: IMG_0046.JPG
Description: Survey control point and access road south of Tank 24, facing east.

Photograph 14
File Name: IMG_0047.JPG
Description: Construction laydown and storage area south of Tank 25, facing northwest.

Photograph 15
File Name: IMG_0048.JPG
Description: Boulder stockpile in construction laydown and storage area south of Tank 25, facing northwest.

Photograph 16
File Name: IMG_0049.JPG
Description: Landscape material stockpile in construction laydown area south of Tank 25, facing northwest.

Site 303 – D-Tunnel Tanks

Photograph 17
File Name: IMG_0050.JPG
Description: Soil stockpile covered with tarp and asphalt debris south of Tank 25, facing northwest.

Photograph 18
File Name: IMG_0051.JPG
Description: Clean fill stockpile in construction laydown area south of Tank 25, facing northwest.

Photograph 19
File Name: IMG_0052.JPG
Description: Ponded water at base of fire hydrant, west of Tank 24, facing east.

Photograph 20
File Name: IMG_0053.JPG
Description: Abandoned vapor monitoring well near roadway at Tank 24, facing northeast.

Site 303 – D-Tunnel Tanks

Photograph 21
File Name: IMG_0054.JPG
Description: LUC signage at Tank 24, facing southwest.

Photograph 22
File Name: IMG_0055.JPG
Description: LUC signage at Tank 25, facing southwest.

Photograph 23
File Name: IMG_0056.JPG
Description: Abandoned vapor monitoring location at Tank 25, facing west.

Photograph 24
File Name: IMG_0058.JPG
Description: LUC signage east of Tank 26, facing northwest.

Site 303 – D-Tunnel Tanks

Photograph 25
File Name: IMG_0059.JPG
Description: LUC Signage southeast of Tank 27, facing northwest.

Photograph 26
File Name: IMG_0060.JPG
Description: Area between Tanks 27 and 28, facing northeast.

Photograph 27
File Name: IMG_0061.JPG
Description: Tank 28 site overview. facing northwest.

Photograph 28
File Name: IMG_0062.JPG
Description: LUC signage near Tank 28, facing northwest.

Site 303 – D-Tunnel Tanks

Photograph 29
File Name: IMG_0063.JPG
Description: LUC signage south of Tank 29, facing northwest.

Photograph 30
File Name:
Description: Abandoned vapor monitoring well locations near Tank 29, facing northeast.

Photograph 31
File Name: IMG_0065.JPG
Description: soil stockpile on tarp surrounded by degraded sorbent booms north of Tank 29, facing west.

Photograph 32
File Name: IMG_0066.JPG
Description: Wood pallet north of Tank 29, facing southeast.

Site 303 – D-Tunnel Tanks

Photograph 33
File Name: IMG_0068.JPG
Description: Tank 30 site overview, facing southwest.

Photograph 34
File Name: IMG_0069.JPG
Description: Location of former vapor monitoring well south of Tank 30, facing northwest.

Photograph 35
File Name: IMG_0070.JPG
Description: Drainage swale southeast of Tank 30, facing northeast.

Photograph 36
File Name: IMG_0071.JPG
Description: LUC signage southeast of Tank 30, facing north.

Site 303 – D-Tunnel Tanks

Photograph 37
File Name: IMG_0073.JPG
Description: Groundwater monitoring well MW-3, northwest of Tank 30, facing northwest.

Photograph 38
File Name: IMG_0074.JPG
Description: Groundwater monitoring well MW-1, nothwest of Tank 30, facing northwest.

Site 304 – Industrial Area

Photograph 1
File Name: IMG_0075.JPG
Description: Parking lot along eastern site boundary, facing north.

Photograph 2
File Name: IMG_0076.JPG
Description: Parking lot along south-central area of site, small excavation in progress, facing southwest.

Photograph 3
File Name: IMG_0077.JPG
Description: Southeastern site boundary adjacent to Administration Building, facing northeast.

Photograph 4
File Name: IMG_0078.JPG
Description: Parking lot along south-central area of site, small excavation in progress, facing south.

Site 304 – Industrial Area

Photograph 5
File Name: IMG_0079.JPG
Description: Groundwater monitoring well MW-4, located near center of southeastern site boundary, facing north.

Photograph 6
File Name: IMG_0080.JPG
Description: Facilities building, located near western site boundary, facing west.

Photograph 7
File Name: IMG_0081.JPG
Description: Southwestern site boundary, facing northeast.

Photograph 8
File Name: IMG_0082.JPG
Description: Groundwater monitoring well MW-1, facing north.

Site 304 – Industrial Area

Photograph 9
File Name: IMG_0083.JPG
Description: Former excavation through asphalt near the southwestern site boundary, facing east.

Photograph 10
File Name: IMG_0084.JPG
Description: View toward southwest corner of site, facing south.

Photograph 11
File Name: IMG_0085JPG
Description: Fueling area near center of site, facing northeast.

Photograph 12
File Name: IMG_0086.JPG
Description: Groundwater monitoring well MW-2, facing northeast.

Site 304 – Industrial Area

Photograph 13
File Name: IMG_0087.JPG
Description: Storage containers, facing northwest.

Photograph 14
File Name: IMG_0088.JPG
Description: Northeastern site boundary, facing northeast.

Photograph 15
File Name: IMG_0089.JPG
Description: LUC signage located along access road to site, located outside of site boundary, facing south.

Photograph 16
File Name: IMG_0090.JPG
Description: Location of former Tank 14, outside of site boundary, facing southeast.

Site 304 – Industrial Area

Photograph 17
File Name: IMG_0091.JPG
Description: North-central portion of the site, facing southwest.

Photograph 18
File Name: IMG_0092.JPG
Description: Northern site boundary, facing southeast.

Photograph 19
File Name: IMG_0093.JPG
Description: Chemical totes – ferric sulfate, hydrogen peroxide, liquid caustic soda – outside of site boundary, facing northeast.

Photograph 20
File Name: IMG_0094.JPG
Description: Northeast site boundary, facing southwest.

Tank 50 Release Site

Photograph 1
File Name: IMG_0022.JPG
Description: Land use control (LUC) signage on west-central portion of site adjacent to abandoned monitoring well MW-2, facing southeast.

Photograph 2
File Name: IMG_0023.JPG
Description: LUC signage adjacent to abandoned monitoring well MW-2, located on west-central portion of site, facing northwest.

Photograph 3
File Name: IMG_0024.JPG
Description: Southwest boundary of site, facing east.

Photograph 4
File Name: IMG_0025.JPG
Description: Oily rag storage (center of photo), facing northeast.

Tank 50 Release Site

Photograph 5
File Name: IMG_0026.JPG
Description: Southeast boundary of site, facing northeast.

Photograph 6
File Name: IMG_0027.JPG
Description: Monitoring well MW-1, located along the southeastern boundary, facing east.

Photograph 7
File Name: IMG_0028.JPG
Description: Monitoring well MW-1, located along the southeastern boundary, facing west.

Photograph 8
File Name: IMG_0029.JPG
Description: Northeastern site boundary, facing west.

Tank 50 Release Site

Photograph 9
File Name: IMG_0030.JPG
Description: LUC signage located along the northeast boundary, facing southwest.

Photograph 10
File Name: IMG_0031.JPG
Description: Tank 50 site overview, facing west.

Photograph 11
File Name: IMG_0032.JPG
Description: Former access road forming northwest site boundary, facing southwest.

Photograph 12
File Name: IMG_0033.JPG
Description: Former access road forming northwest site boundary, facing northeast.

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Appendix E:
Field Change Request Forms

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Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

FIELD CHANGE REQUEST (FCR) FORM

CONTRACT NO.: N4425520D5006	**TASK ORDER NO.:** N4425521F4089	**FCR NO.:** 01
NTR/RPM/COR: Joy Gryzenia	**LOCATION:** Manchester Fuel Depot, Port Orchard, WA	**DATE:** April 30, 2021

1. DOCUMENT TO BE CHANGED (IDENTIFY REVISION, DATE, SECTION, DRAWING, ETC.):

Final Abbreviated Accident Prevention Plan for Various Site Reconnaissance Activities, Naval Base Kitsap Manchester, Manchester,Washington (dated November 10, 2016).

Items to be updated:

1) Section 2.0 – Background Information, Description of Work to be Performed
2) Table 2. Project Contact List
3) Figure 2. Lines of Authority for Project Safety
4) Table 3. Emergency Notification/Contact List

2. DESCRIPTION OF EXISTING REQUIREMENT AND PROPOSED CHANGE (ATTACH SHEET IF NECESSARY):

Item 1:

- **EXISTING REQUIREMENT**: The Description of Work to be Performed states: “a. locate all vapor and groundwater monitoring wells at the site (using a metal detector as needed)”; "b. obtain global positioning system (GPS) coordinates for each well” and “d. open each well cover to collect depth-to-water and total depth measurements of each well.” Five definable features of work with associated activity hazard analyses (AHAs) are related to these activities: AHA #2 (Locate vapor and groundwater monitoring wells with metal detector); AHA #3 (Obtain global positioning system [GPS] Coordinates for Vapor and Groundwater Monitoring Wells); AHA #4 (Open, inspect, collect depth-to-water measurements, and closing vapor and groundwater monitoring wells); AHA #5 (Equipment decontamination); and AHA #6 (Investigation-derived waste [IDW] removal and disposal).
- **PROPOSED CHANGE:** Remove text in Section 2.0 that refers to obtaining GPS coordinates for the wells; opening and collecting depth-to-water and total depth measurements at the wells; equipment decontamination; and IDW removal and disposal. Groundwater monitoring wells at Sites 302, 303, 304, and Tank 50 will be located and photographed, but not opened during the 2021 land use control (LUC) inspections.

Item 2:

- **EXISTING REQUIREMENT:** Table 2 provides the name, title, and contact information for primary personnel involved with this project.
- **PROPOSED CHANGE:** In Table 2, add Joy Gryzenia as the Task Order Contracting Officer's Representative (TO COR), add Michael Hardiman as the Manchester Fuel Depot (MFD) Environmental Director, add Teresa Wilson as the Project Manager, add Matt Brookshire as the Quality Control Manager, add Stacy Gutierrez as Health, Safety and Environment Corporate Representative, add Jeremiah Santini as the Field Operations Lead (FOL), add Jeff Fetters as the Site Safety and Health Officer (SSHO), add Brad Closson as the Alternate SSHO. Remove Carlotta Cellucci as the Remedial Project Manager (RPM), COR, and Navy Technical Representative (NTR); remove Charles Escola as NTR; remove Dennis Faulk as the United States Environmental Protection Agency (USEPA) Region 10 Remedial Project Manager; remove Angela Paolucci as Project Manager; remove Ryan Moon as Health, Safety and Environment Corporate Representative; remove Derek Payne as the FOL; remove Samuel Moore as the SSHO; remove Max Zelenevich as the Alternate SSHO.

Item 3:

- **EXISTING REQUIREMENT:** Figure 2 provides the lines of authority for project safety.
- **PROPOSED CHANGE:** Update Figure 2 to reflect Teresa Wilson as Project Manager, Stacy Gutierrez as Health, Safety and Environment Corporate Representative, Jeremiah Santini as the FOL, and Jeff Fetters as SSHO.

Item 4:

- **EXISTING REQUIREMENT:** Table 3 provides a list of emergency phone numbers and phone numbers for primary project personnel.

- **PROPOSED CHANGE:** Table 3, add names and phone numbers for Joy Gryzenia, Michael Hardiman, Teresa Wilson, Matt Brookshire, Stacy Gutierrez as Health, Safety and Environment Corporate Representative, Jeremiah Santini, Jeff Fetters, and Brad Closson. Remove contact information for Angela Paolucci, Ryan Moon, Derek Payne, Samuel Moore, and Max Zelenevich.

☒ MINOR CHANGE
☐ MAJOR CHANGE

3. REASON FOR CHANGE (ATTACH SHEET IF NECESSARY):

Item 1: GPS coordinates will not be collected, and wells will not be opened to collect depth-to-water and total depth measurements during the 2021 LUC inspection activities. Since depth-to-water and total depth measurements will not be collected, equipment (oil-water interface probe) decontamination and IDW removal and disposal will not be required. Groundwater monitoring wells Sites 302, 303, 304, and Tank 50 will only be located and photographed, but not opened during the 2021 LUC inspections.

Item 2: Sites 302, 303, 304 and Tank 50 are regulated under the Model Toxics Control Act (MTCA) with oversight from Ecology; therefore, the USEPA is not a project stakeholder.

Items 2 and 4: Joy Gryzenia is not listed in Tables 2 or 3, but will be serving as the RPM and TO COR for this project. Michael Hardiman is not listed in Tables2 or 3, but is the Environmental Director at MFD and will be involved with this project. Carlotta Cellucci, Angela Paolucci, Ryan Moon, Derek Payne, Samuel Moore, and Max Zelenevich will not be involved with this project. Teresa Wilson will be serving as the Project Manager, Jeff Fetters will be serving as the SSHO, and Jeremiah Santini will be serving as the FOL for this project.

Item 3: Teresa Wilson will be serving as the Project Manager, Matt Brookshire will be serving as the Project Quality Control Manager, Stacy Gutierrerez will be serving as the Health, Safety and Environment Corporate Representative. Jeremiah Santini, and Jeff Fetters, will be the field personnel conducting the 2021 LUC inspections at the MFD.

4. ORIGINATOR (PRINT NAME AND SIGN) Jeremiah Santini Jeremiah Santini		**TITLE** Liberty JV FOL	**DATE** 5/24/21
REVIEWED BY (PRINT NAME AND SIGN) Jeff Fetters Jeff Fetters Digitally signed by Jeff Fetters Date: 2021.05.24 14:06:51 -07'00'		**TITLE** Liberty JV SSHO	**DATE**
SITE SUPERINTENDENT (PRINT NAME AND SIGN) Jeremiah Santini Jeremiah Santini	**DATE** 5/24/2021	**TASK ORDER MANAGER (PRINT NAME AND SIGN)** Teresa Wilson	**DATE** 5/24/21
PROGRAM QC MANAGER (PRINT NAME AND SIGN) Stacy Gutierrez Stacy Gutierrez PE, CIH Digitally signed by Stacy Gutierrez PE, CIH Date: 2021.05.25 08:49:30 -07'00'	**DATE**	**RPM ACKNOWLEDGEMENT (PRINT NAME AND SIGN)** Joy Gryzenia GRYZENIA.JOY.T.1537987290 Digitally signed by GRYZENIA.JOY.T.1537987290 Date: 2021.05.25 13:07:09 -07'00'	**DATE**

Table 2 – Project Contact List

Name and Title	Organization	Contact Information
Joy Gryzenia RPM, TO COR	NAVFAC Northwest	(360) 396-1115 (office) (360) 900-7701 (mobile) joy.gryzenia@navy.mil
Michael Hardiman Environmental Director	MFD	(360) 476-5737 (office) michael.hardiman@navy.mil
Mahbub Alam Ecology Site Manager	Ecology	(360) 407-6913 (office) mala461@ecy.wa.gov
Denice Taylor Suquamish TribeRepresentative	Suquamish Tribe	(360) 394-8449 (office) dtaylor@suquamish.nsn.us
Teresa Wilson Project Manager	Liberty JV	(360) 936-8639 (mobile) teresa.wilson@woodplc.com
Matt Brookshire Quality Control Manager		(858) 740-6268 (mobile) matthew.brookshire@woodplc.com
Stacy Gutierrez Health, Safetyand Environment Corporate Representative / SHM		(928) 344-8374 (Office) stacyg@neiaw.com
Jeremiah Santini FOL		(619) 592-1183 (mobile) jsantini@neiaw.com
Jeff Fetters SSHO		(360) 981-6817 (mobile) jfetters@neiaw.com
Brad Closson Alternate SSHO		(928) 919-1776 (mobile) bclosson@neiaw.com

Notes:
COR = Contracting Officer's Representative; Ecology = Washington State Department of Ecology; FOL = Field OperationsLead; Liberty JV = Liberty Joint Venture; MFD = Manchester Fuel Depot; NAVFAC = Naval Facilities Engineering Systems Command; NTR = Navy Technical Representative; RPM = Remedial Project Manager; SHM = Safety and Health Manager; SSHO = Site Safety and Health Officer; TO = Task Order

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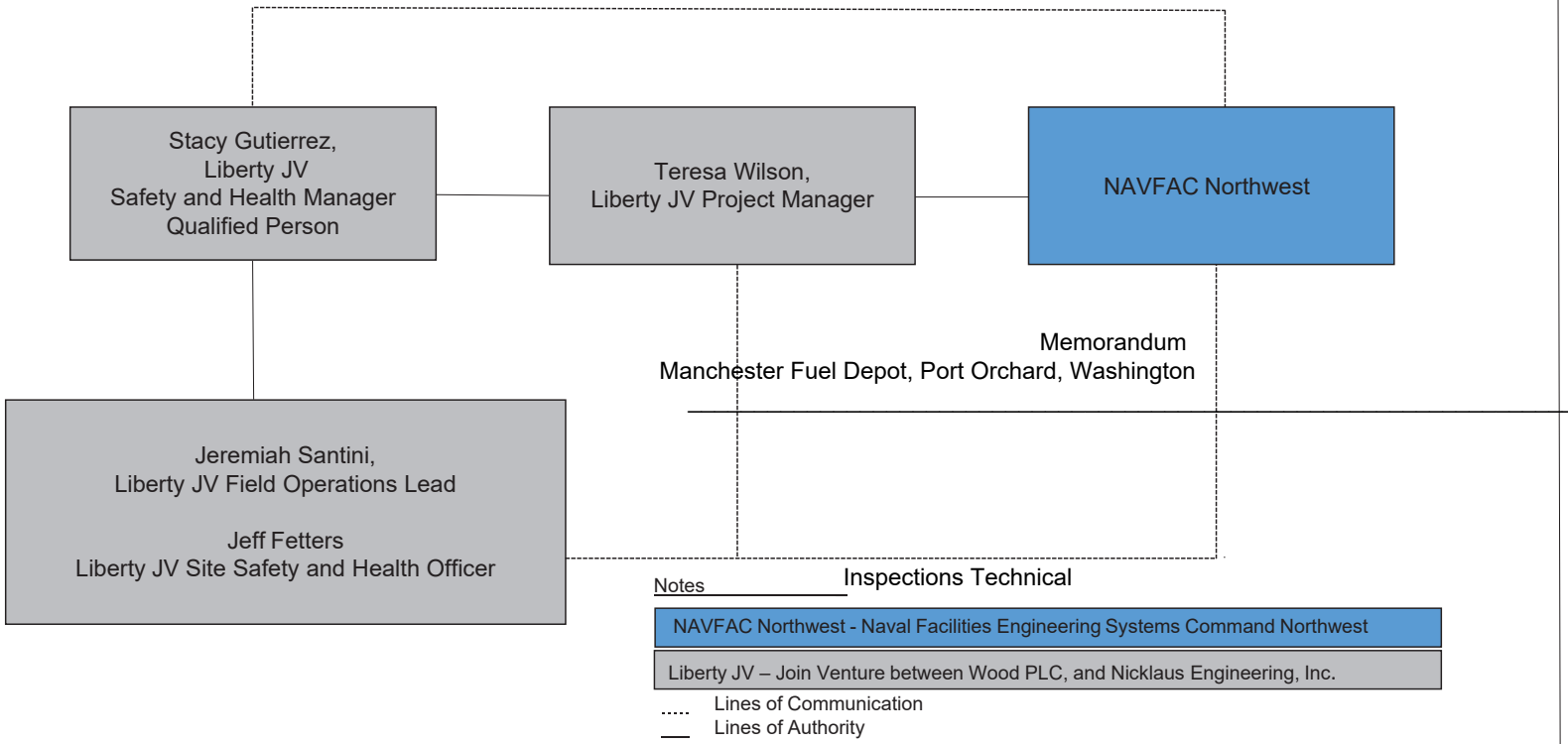
Figure 2 – Lines of Authority for Project Safety



2021 Land Use Control

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Table 3. Emergency Notification/Contact List

Emergency Services	
FOR ALL EMERGENCIES	911
South Kitsap Fire and Rescue – Station 9	(360) 871-2411
Agency for Toxic Substances and Disease Registry Poison Control Center	(888) 422-8737
National Response Center, Toxic Chemicals and Oil Spills	(800) 424-8802
Medical Centers	
St. Anthony Hospital Emergency Services	(253) 530-2000
Regulatory Agencies	
Washington State Department of Labor and Industries	(800) 423-7233
Navy Points of Contact	
Joy Gryzenia, Task Order (TO) Contracting Officer's Representative(COR)	Mobile: (360) 900-7701
Michael Hardiman, Environmental Director	Office: (360) 476-5737
Brice Frey, Project Manager/Engineer	Office: (360) 476-0446
Doug Tailleur, Environmental Specialist	Office: (360) 476-2664
Liberty JV Personnel	
Teresa Wilson, Project Manager	Mobile: (360) 936-8639
Jeremiah Santini, Field Operations Lead (FOL)	Mobile: (619) 592-1183
Jeff Fetters, Site Safety and Health Officer (SSHO)	Mobile: (360) 981-6817
Brad Closson, Alternate SSHO	Mobile: (928) 919-1776
Stacy Gutierrez, Safety and Health Manager (SHM)	Office: (928) 344-8374

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

FIELD CHANGE REQUEST (FCR) FORM

CONTRACT NO.: N4425520D5006	**TASK ORDER NO.:** N4425521F4089	**FCR NO.:** 02
NTR/RPM/COR: Joy Gryzenia	**LOCATION:** Manchester Fuel Depot, Port Orchard, WA	**DATE:** April 30, 2021

1. DOCUMENT TO BE CHANGED (IDENTIFY REVISION, DATE, SECTION, DRAWING, ETC.):

Final Abbreviated Accident Prevention Plan (APP) for Various Site Reconnaissance Activities, Naval Base Kitsap Manchester, Manchester, Washington – Attachments

Items to be updated:

1) Attachment 1

- **A)** Section 1.3: Key Personnel;
- **B)** Section 2.0: Project Tasks;
- **C)** Section 4.0: Site Control; and
- **D)** Table 1. Activity Hazard Analysis

2) Attachment 2

- **A)** Competency Verification Documentation

3) Attachment 3

- **A)** APP Acknowledgement & Safety Compliance Agreement Form
- **B)** Safety Inspection Checklist

2. DESCRIPTION OF EXISTING REQUIREMENT AND PROPOSED CHANGE (ATTACH SHEET IF NECESSARY):

Item 1A:

- **EXISTING REQUIREMENT:** Section 1.3 lists key Battelle personnel for this project.
- **PROPOSED CHANGE**: Replace all Battelle key personnel with Liberty JV key personnel. Liberty JV key personnel are Teresa Wilson, Project Manager; Jeremiah Santini, Field Operations Lead (FOL); Jeff Fetters, Site Safety and Health Officer (SSHO); Brad Closson, Alternate SSHO; and Stacy Gutierrez, Health, Safety and Environment Corporate Representative.

Item 1B:

- **EXISTING REQUIREMENT:** Section 2.0 lists the major project tasks and their associated activity hazard analyses (AHA). The project tasks listed as work to be performed during the 2021 land use control (LUC) inspections include: site inspection; locate vapor and groundwater monitoring wells with metal detector; obtain global positioning system (GPS) coordinates of vapor and groundwater monitoring wells; open, inspect, collect depth-to-water measurements, and close vapor and groundwater monitoring wells; equipment decontamination; and investigation-derived waste (IDW) removal and disposal.
- **PROPOSED CHANGE:** Remove text in Section 2.0 that refers to obtaining GPS coordinates of monitoring wells, opening wells, collecting depth-to-water and total depth measurements, decontaminating equipment, and managing IDW. Groundwater monitoring wells Sites 302, 303, 304, and Tank 50 will be located and photographed but not opened during the 2021 LUC inspections.

Item 1C:

- **EXISTING REQUIREMENT:** Sections 4.2.2 and 4.3 describe procedures for the decontamination of equipment and disposal of decontamination waste, respectively.
- **PROPOSED CHANGE:** Remove text in Sections 4.2.2 and 4.3.

Item 1D:

- **EXISTING REQUIREMENT:** AHA #1 (Site Inspection); AHA #2 (Locate Vapor and Groundwater Monitoring Wells with Metal Detector); AHA #3 (Obtaining GPS Coordinates for Vapor and Groundwater Monitoring Wells); AHA #4 (Opening, Inspecting, Collecting Depth-to-Water Measurements, and Closing Vapor and Groundwater Monitoring Wells); AHA #5 (Equipment Decontamination); and AHA #6 (IDW Removal and Disposal). AHAs #1 through #6 list competent/qualified personnel for the equipment to be used.
- **PROPOSED CHANGE:** Remove AHAs #3 through #6. In AHAs #1 and #2, remove Derek Payne and replace with Jeremiah Santini, as a competent/qualified person.

Item 2:

- **EXISTING REQUIREMENT:** Attachment 2 lists competency verification documentation for key Battelle personnel for this project.
- **PROPOSED CHANGE:** Information in Attachment 2 does not apply. Competency information for Liberty JV personnel will be made available upon request.

Item 3 A and B:

- **EXISTING REQUIREMENT:** The APP Acknowledgement & Safety Compliance Agreement Form and Safety Inspection Checklist list key Battelle personnel for this project, as well as previous contract and task order numbers.
- **PROPOSED CHANGE:** Remove Derek Payne and Samuel Moore as SSHO and replace with Jeff Fetters, remove Max Zelenevich as Alternative SSHO and replace with Brad Closson, and update both contract and task order numbers.

☒ MINOR CHANGE
☐ MAJOR CHANGE

3. REASON FOR CHANGE (ATTACH SHEET IF NECESSARY):

Items 1B – 1D: GPS coordinates will not be collected, and wells will not be opened to collect depth-to-water and total depth measurements during the 2021 LUC inspection activities. Since depth-to-water and total depth measurements will not be collected, equipment decontamination and IDW management will not be required. Groundwater monitoring wells at Sites 302, 303, 304, and Tank 50 will be located and photographed, but will not opened during the 2021 LUC inspections.

Items 1A, 2 and 3: Angela Paolucci, Ryan Moon, Derek Payne, Samuel Moore, and Max Zelenevich will not be involved with this project. Teresa Wilson will serve as the Project Manager, Matt Brookshire will serve as the Quality Control Manager, Stacy Gutierrez will serve as the Health, Safety and Environment Corporate Representative, Jeremiah Santini will serve as the FOL, Jeff Fetters will serve as the SSHO, and Brad Closson will serve as the Alternate SSHO. Jeremiah Santini and Jeff Fetters will be the field personnel conducting the 2021 LUC inspections at the MFD.

4. ORIGINATOR (PRINT NAME AND SIGN) Jeremiah Santini Jeremiah Santini		**TITLE** Liberty JV, FOL	**DATE** 5/24/2021
REVIEWED BY (PRINT NAME AND SIGN) Jeff Fetters Jeff Fetters Digitally signed by Jeff Fetters Date: 2021.05.24 14:06:10 -07'00'		**TITLE** Liberty JV, SSHO	**DATE**
SITE SUPERINTENDENT (PRINT NAME AND SIGN) Jeremiah Santini Jeremiah Santini	**DATE** 5/24/2021	**TASK ORDER MANAGER (PRINT NAME AND SIGN)** Teresa Wilson	**DATE** 5/24/21
PROGRAM QC MANAGER (PRINT NAME AND SIGN) Stacy Gutierrez Stacy Gutierrez PE, CIH Digitally signed by Stacy Gutierrez PE, CIH Date: 2021.05.25 08:50:14 -07'00'	**DATE**	**RPM ACKNOWLEDGEMENT (PRINT NAME AND SIGN)** Joy Gryzenia GRYZENIA.JOY.T.1537987290 Digitally signed by GRYZENIA.JOY.T.1537987290 Date: 2021.05.25 13:08:03 -07'00'	**DATE**

ACCIDENT PREVENTION PLAN (APP) ACKNOWLEDGEMENT &SAFETY COMPLIANCE AGREEMENT FORM

Site: NBK Manchester, Manchester, Washington
Contract No.: N4425520D5006
Task Order No.: N4425521F4089
SSHO: Jeff Fetters
Alternative SSHO: Brad Closson

I acknowledge that I have read the information in this APP and SSHP. By signing below, the undersigned certify they have had the opportunity to read and ask questions about this APP and SSHP, and that they understand the procedures, equipment, site hazards, and restrictions of this plan and agreeto abide by them.

Signature & Printed Name	Company	Date

SAFETY INSPECTION CHECKLIST

Site: NBK Manchester, Manchester, Washington
Contract No.: N4425520D5006
Task Order No.: N4425521F4089
SSHO: Jeff Fetters
Alternative SSHO: Brad Closson

HEALTH & SAFETY REQUIREMENTS	YES	NO	NA
Is a hardcopy of the APP/SSHP available on site?			
Have all on-site personnel reviewed and signed-off on the APP/SSHP?			
Has the daily tailgate safety meeting been conducted?			
Are all on-site personnel wearing the appropriate PPE:			
Traffic Vest			
Steel-Toed Boots			
Protective Eye Wear			
Hard Hat, if overhead hazards			
Ear Protection, if near air field			
Gloves, for special purposes			
Are all necessary tools on site and in good condition:			
Flathead Screwdriver			
Socket Wrench			
Other Health & Safety Requirements Available On Site:			
First-Aid Kit			
Hydrating Fluids (e.g., water, Gatorade)			
Sunscreen			

If any of the requirements noted above are missing/incomplete, please documentcorrective actions taken:

_____

_____

_____

_____

_____

_____

Inspection Conducted by: _____

Signed by: _____

Date: _____

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

FIELD CHANGE REQUEST (FCR) FORM

CONTRACT NO.: N4425520D5006	**TASK ORDER NO.:** N4425521F4089	**FCR NO.:** 03
NTR/RPM/COR: Joy Gryzenia	**LOCATION:** Manchester Fuel Depot, Port Orchard, WA	**DATE: April 30, 2021**

1. DOCUMENT TO BE CHANGED (IDENTIFY REVISION, DATE, SECTION, DRAWING, ETC.):

Final Land Use Control Plan for Sites 302, 303, 304 and Tank 50, Naval Base Kitsap Manchester, Manchester, Washington (dated December 9, 2016).

Items to be updated:

1) Section 1.3 - Roles and Responsibilities
2) Table 1-1 - Contact Information and Roles and Responsibilities for NBK Manchester
3) Section 3.3 - LUC Inspections
4) Section 3.5 - LUC Modification and Termination
5) Appendix B - Monitoring Well Visual Inspection Checklist

2. DESCRIPTION OF EXISTING REQUIREMENT AND PROPOSED CHANGE (ATTACH SHEET IF NECESSARY):

Item 1:

- **EXISTING REQUIREMENT:** Section 1.3 describes roles and responsibilities of all project stakeholders.
- **PROPOSED CHANGE:** Remove the United States Environmental Protection Agency (USEPA) as a project stakeholder and update text to state: "NAVFAC Northwest will communicate the land use control (LUC) status by providing a LUC inspection Technical Memorandum, with completed LUC checklists for each site, on an annual basis to the project stakeholders, specifically Ecology and the Suquamish Tribe."

Item 2:

- **EXISTING REQUIREMENT:** Table 1-1 provides the contact information and roles and responsibilities of all project stakeholders.
- **PROPOSED CHANGE:** Remove Carlotta Cellucci as the Naval Facilities Engineering Systems Command (NAVFAC) Northwest, Remedial Project Manager (RPM); remove Charles Escola and Steven Skeehan, Navy Technical Representatives (NTRs); remove Dennis Faulk USEPA RPM, Region 10; add Joy Gryzenia as the RPM and Task Order (TO) Contracting Officer's Representative (COR); add Michael Hardiman as the Manchester Fuel Depot Environmental Director; update roles/responsibilities of Mahbub Alam (Washington State Department of Ecology [Ecology] Cleanup Project Manager) to include "To review and provide comment on the LUC Inspection Technical Memorandum on an annual basis"; and update roles/responsibilities of Denice Taylor (Suquamish Tribe) to include "To review and provide comment on the LUC Inspection Technical Memorandum on an annual basis."

Item 3:

- **EXISTING REQUIREMENT:** Section 3.3 describes the LUC inspection procedures.
- **PROPOSED CHANGE:** Update text to state: "The results of the LUC inspections (i.e., as documented in the LUC Inspection Technical Memorandum, with completed LUC checklists for each site) will be submitted to all project stakeholders, specifically Ecology and Suquamish Tribe, to communicate the status of the LUCs on an annual basis.

Item 4:

- **EXISTING REQUIREMENT:** Section 3.5 describes the process for modification or termination of LUCs.
- **PROPOSED CHANGE:** Update text to state: "The LUC Inspection Technical Memorandum, including completed LUC checklists for each site, will be the basis for evaluating the effectiveness of the LUCs as part of this five-year review process."

Item 5:

- **EXISTING REQUIREMENT:** Appendix B provides a monitoring well visual inspection checklist.
- **PROPOSED CHANGE:** Updated the checklist to include a provision to indicate if the monitoring well monument cap was opened during the inspection.

☒ MINOR CHANGE
☐ MAJOR CHANGE

3. REASON FOR CHANGE (ATTACH SHEET IF NECESSARY):

Items 1, 2, and 3: Sites 302, 303, 304 and Tank 50 are regulated under the Model Toxics Control Act (MTCA) with oversight from Ecology; therefore, the USEPA is not a project stakeholder.

Item 2: Through the fourth five-year review process, Ecology requested to review and provide comment on the annual LUC Inspection Technical Memorandum.

Items 1, 2, 3, and 4: A LUC Inspection Technical Memorandum, including completed LUC checklists, completed monitoring well inspection checklists, field notes, and photographic log, will be prepared and submitted to all project stakeholders on an annual basis (i.e., not solely completed checklists).

Item 5: Monitoring wells will not be opened as part of the 2021 LUC Inspections. The monitoring well visual inspection checklist was updated to include a provision to indicate whether or not the monitoring well monument cap was opened during the inspection.

4. ORIGINATOR (PRINT NAME AND SIGN)		**TITLE**	**DATE**
Jeremiah Santini Jeremiah Santini		Liberty JV, Field Operations Lead (FOL)	5/24/2021
REVIEWED BY (PRINT NAME AND SIGN) Jeff Fetters Jeff Fetters Digitally signed by Jeff Fetters Date: 2021.05.24 14:05:23 -07'00'		**TITLE** Liberty JV, Site Safety and Health Officer (SSHO)	**DATE**
SITE SUPERINTENDENT (PRINT NAME AND SIGN) Jeremiah Santini Jeremiah Santini	**DATE** 5/24/2021	**TASK ORDER MANAGER (PRINT NAME AND SIGN)** Teresa Wilson	**DATE** 5/24/21
PROGRAM QC MANAGER (PRINT NAME AND SIGN) Stacy Gutierrez Stacy Gutierrez PE, CIH Digitally signed by Stacy Gutierrez PE, CIH Date: 2021.05.25 08:50:41 -07'00'	**DATE**	**RPM ACKNOWLEDGEMENT (PRINT NAME AND SIGN)** Joy Gryzenia GRYZENIA.JOY.T.1537987290 Digitally signed by GRYZENIA.JOY.T.1537987290 Date: 2021.05.25 13:08:31 -07'00'	**DATE**

Table 1-1 – Contact Information Roles and Responsibilities for MFD Manchester

Name and Title	Organization	Contact Information	Roles/Responsibilities
Joy Gryzenia RPM, TO COR	NAVFAC Northwest	(360) 396-1115 (360) 900-7701 (mobile) joy.gryzenia@navy.mil	• To ensure the effectiveness of the LUCs by performing annual LUC inspections. • To coordinate with MFD Manchester regarding any LUC maintenance or corrective actions, as required.
Charlie Escola NTR		(360) 315-5401 (503) 201-5020 (mobile) charles.escola@navy.mil	
Steve Skeehan NTR		(253) 279-0212 steve.skeehan@navy.mil	
Michael Hardiman Environmental Director	MFD	(360) 476-5737 michael.hardiman@navy.mil	• To coordinate with NAVFAC Northwest regarding LUC maintenance or corrective actions, as required. • To educate site personnel and contractors on the LUC requirements.
Brice Frey Project Manager/ Engineer		(360) 476-0446 brice.frey@navy.mil	
Doug Tailleur Environmental Specialist		(360) 476-2664 douglas.tailleur@navy.mil	
Mahbub Alam Ecology Site Manager	Ecology	(360) 407-6913 mala461@ecy.wa.gov	• To provide regulatory review of the LUC requirements detailed inthe NFA letters at each five-year review. • To provide review of this Plan. • To review and provide comment on the LUC Inspection Technical Memorandum on an annual basis.
Denice Taylor Suquamish Tribe Representative	Suquamish Tribe	(360) 394-8449 dtaylor@suquamish.nsn.us	• To provide review of this Plan. • To review and provide comment on the LUC Inspection Technical Memorandum on an annual basis.

Notes:
COR = Contracting Officer's Representative; Ecology = Washington State Department of Ecology; LUC = land use control; MFD = Manchester Fuel Depot; NAVFAC = Naval Facilities Engineering Systems Command; NFA = no further action; NTR =Navy Technical Representative; RPM = Remedial Project Manager; TO = Task Order

Manchester Fuel Depot, Port Orchard, WA
Naval Facilities Engineering Systems Command Northwest

MONITORING WELL CHECKLIST FOR LUC INSPECTION

DATE (MM|DD|YY):	**TIME (HH:MM):**	**WEATHER/TEMPERATURE:**
INSPECTOR:	**COMPANY:**	
SITE:	**DESCRIPTION:**	
WELL ID:	**NORTHING:**	**EASTING:**

Part 1: TYPE OF MONITORING WELL AND MONUMENT CONDITION

TYPE OF MONITORING WELL: GROUNDWATER / SOIL VAPOR

MONITORING WELL LOCATED? YES NO

IS THE WELL CLEARLY LABELED? YES NO

IS THE MONUMENT IN GOOD CONDITION? YES NO

TYPE OF WELL CASING: STICK-UP FLUSH-MOUNT SIZE & NUMBER OF BOLTS ON FLUSH-MOUNT LID: _____

OTHER _____

WERE PICTURES TAKEN? YES NO PHOTO IDs: _____

MONITORING WELL MONUMENT CAP OPENED? YES NO (IF NO, SKIP TO PART 3)

Part 2: MONITORING WELL CONDITION

CASING DIAMETER 2" 4" 6" 8" OTHER _____

IS THE CASING IN GOOD CONDITION? YES NO

IS THERE A CAP ON THE MONITORING WELL? YES NO

TYPE OF CAP: PVC SLIP CAP / J-PLUG / EXPANSION / PRODUCTION W/TUBING / OTHER _____

IS THERE ANY EVIDENCE OF TAMPERING WITH THE WELL CASING OR CAP? YES NO

ARE THERE ANY ODORS? YES NO

IF YES, DESCRIBE ODOR: SOLVENT / SULFIDE/ROTTEN EGGS / PETROLEUM / OTHER _____

WERE PICTURES TAKEN? YES / NO PHOTO IDs: _____

Part 3: ADDITIONAL NOTES OR COMMENTS

GENERAL CONDITION (CHECK ONE):
GOOD CONDITION
MODERATE CONDITION
POOR CONDITION

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Appendix F:
Response to Stakeholder Comments and Minutes from 15 February 2022 Stakeholder Meeting

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Document Title: 2021 Land Use Control Inspections Technical Memorandum
Comments by: Mahbub Alam, Ecology
Comments Received: 09/10/21

#	Doc/Para No.	Comment (9/10/2021)	Comment Response (9/27/2021)
1	Page 2-3	**Older stockpile at Site 302**. "*A decision on how to handle the stockpiles is pending and the Navy anticipates having a plan by summer 2022*.". "*Once the central portion of the site is regraded and seeded or stockpiled soil is removed, it will be easy/efficient to identify if additional soil or debris has been placed in the area (it should not be, per LUC requirements)*.". It should be noted that the stockpile soil was characterized for site COCs (PCBs and TPH) only, not for any general characterization for other chemicals, such as, metals, PAHs, SVOCs, Dioxins, etc. While the stockpile soil was below MTCA method A cleanup level for PCBs and TPH, there is no indication that the soil qualifies as clean material for use as a capping material (grading) for the site. It should also be noted that Ecology was provided a copy of the 2020 Kane Environmental characterization report, but Ecology was not consulted during the SAP/QAPP preparation. Ecology believes the stockpile should be removed unless it qualifies as a clean material for capping through proper characterization.	Text has been added to indicate that soils were analyzed for only PCBs and TPH. Text has been added to indicate that a decision on how to handle the stockpile is being made in consultation with stakeholders and is pending.

Document Title: 2021 Land Use Control Inspections Technical Memorandum
Comments by: Mahbub Alam, Ecology
Comments Received: 09/10/21

#	Doc/Para No.	Comment (9/10/2021)	Comment Response (9/27/2021)
2	Page 2-4	**Stockpiles at Site 303:** The LUC inspections found an old stockpile and two new stockpiles in the site 303 LUC area. There is no clear description of where from these debris came? Are these from any previous site excavation or disturbance? Any unauthorized excavation would be a violation of LUC requirements. The old stockpile is present since 2017 inspection but no action has been taken. Why it is taking so long to characterize and dispose of properly. The two new stockpiles are assumed to be "authorized clean reusable material" per 1st paragraph of page 2-5. But in the conclusions and recommendation section (page 3-2), these stockpiles are referred as "mixed debris" and are recommended for characterization and disposal. This is confusing. Provide details of the origin of the all the stockpiles. In addition, please describe the authorized excavation or disturbance process.	The old stockpile is not affecting protectiveness of the LUC remedy at Site 303, and is a low priority item for the Navy to address. As stated in the LUC Inspection Report, the Navy is aware that the stockpile remains on site and will take actions to address the stockpile in coordination with installation personnel. Text has been updated on page 2-5 and 3-2 for clarity and consistency. Both stockpiles consist of landscape rock (red lava rock) and pieces of landscape fabric that originated from landscaped areas of the site. Text has been added to page 2-1 to describe the authorized excavation or disturbance process.

Document Title: 2021 Land Use Control Inspections Technical Memorandum
Comments by: Mahbub Alam, Ecology
Comments Received: 09/10/21

#	Doc/Para No.	Comment (9/10/2021)	Comment Response (9/27/2021)
3	Page 2-4	**Authorized reusable material:** The definition of the *"Reusable material" refers to those materials for which on-site placement has been coordinated with the Ecology Cleanup Project Manager and that have been characterized in collaboration with the Ecology Cleanup Project Manager.* Ecology believes this coordination primarily should happen between project proponent and Navy RPM. Navy RPM should make the decision whether a stockpile should be authorized to be placed in the LUC area and the Navy's internal process/procedure should document that. Navy RPM may choose to coordinate with Ecology CPM on a case by case basis.	Text has been revised to reflect that on-site placement is coordinated with the Navy RPM, and the Navy may choose to coordinate with the Ecology Cleanup Project Manager on a case-by-case basis.
4	Page 2-6,7	**Site 304 excavation area:** The LUC report says it was an authorized excavation. What is the policy for excavated material? ESG; NAVSUP (2015) was referenced but who is responsible for the enforcement. As part of the excavation permit, was there a requirement to properly characterize and dispose of excavated soil? Who checks the permit requirements? Excavated soil should not be beneficially reused at the site unless testing shows it is clean. Has this been properly followed? This should be stated in the LUC inspection report.	Text has been added to page 2-1 to describe the authorized excavation or disturbance process. The MFD Environmental Manager is responsible for compliance with excavation permit requirements and confirmed the requirements were followed.

Document Title: 2021 Land Use Control Inspections Technical Memorandum
Comments by: Mahbub Alam, Ecology
Comments Received: 09/10/21

#	Doc/Para No.	Comment (9/10/2021)	Comment Response (9/27/2021)
5	Table 3-1	**Stockpile characterization:** Several recommendations include stockpile characterization. Ecology offers the following general guidance: when a stockpile (source material is outside of the site or unknown) is characterized, it should be characterized for the end use in mind. If it should be disposed offsite, usually a waste characterization is performed. If there is a plan to reuse at the site, it should go through a general characterization and knowledge from the source area, not based on site COCs only. If the stockpile is from the site excavation or disturbance activity, then it should be characterized for site COPCs found during RI.	Noted.

Document Title: 2021 Land Use Control Inspections Technical Memorandum

Additional Comments by: The Suquamish Tribe

Response to Comments Received: 9/15/21

	Doc/Para No.	Comment (9/15/21)	Comment Response (9/27/21)	Suquamish Tribe Response (01/31/22)	Navy Response (2/8/2022)
1	General	As stated in the tech memo, LUCs are required at several sites at MFD due to remaining contaminated soil and/or groundwater that prevent unlimited use and unrestricted exposures. The tech memo conclusions and recommendations should focus on the degree to which LUCs are being implemented as required. Given longstanding issues related to stockpiled soils, it is not apparent that the Navy can document there has been no unauthorized soil excavation or disturbance, no unauthorized placement of soil, the proper characterization of any excavated soil, or the integrity of thesoil cover vegetation over time (not just since the last LUC inspection).	Noted. It should be clarified, however, that not all stockpiles at MFD represent a LUC deficiency. The central stockpile at Site 302 and the two new stockpiles at Site 303 were not from excavations within the LUC boundaries and are staged for future reuse.	Requires additional discussion. The Tribe believes engineering controls (i.e. fences and caps) should be maintained as designed unless formally changed. Soil piles at Site 302 continue to be a LUC deficiency because they interfere with the inspection and maintenance of the LUC cap.	The Navy agrees with this statement. The central stockpile at Site 302 is a LUC deficiency. Stockpiles at Site 303 do not represent a LUC deficiency, as this area is designated for material storage.

Document Title: 2021 Land Use Control Inspections Technical Memorandum

Additional Comments by: The Suquamish Tribe

Response to Comments Received: 9/15/21

	Doc/Para No.	Comment (9/15/21)	Comment Response (9/27/21)	Suquamish Tribe Response (01/31/22)	Navy Response (2/8/2022)
2	General	Compliance with LUC requirements should be evaluated based on present conditions and documented corrections of previously identified issues, not on actions theNavy proposes to take in the future. To date, the Navy does not have a good track record of addressing LUC requirementsat this site and has not met milestone dates established in thelast 5YR.	The following text was deleted from Section 2.2.1 to clarify that LUC requirements are not being evaluated based on future actions "*Once the central portion of thesite is regraded and seeded or stockpiled soil is removed, it will be easy/efficient to identify if additionalsoil or debris has been placed in the area (it should notbe, per LUC requirements). These actions taken are consistent with the recommendations stated in the Fourth Five-Year Review (FYR) (U.S. Navy, 2020).*"	Accept deletion and text changes	Noted.
3	General	Delete statements implying LUC requirements are "housekeeping/maintenance issues" that do not affect protectiveness. The Tribe does not agree this was a finding of the last 5YR. The LUCs in place at the site are requirements that ensure protectiveness. If the Navy is not implementing LUCs as intended, the protectiveness of the remedies comes into question. If the Navy desires to change or remove LUCs, there is a process in place to enact changes.	The Navy did not intend to imply that LUC requirements are housekeeping issues. This language was used to characterize conditions that are <u>not</u> LUC requirements, but rather are housekeeping or maintenance issues. We deleted "housekeeping/maintenance issues" to avoid any confusion.	Deletion accepted. Maintaining the fence and keeping the cap clear of anything that interferes with inspections and maintenance are LUC requirements and should be addressed/mitigated in 2022.	Noted.

Document Title: 2021 Land Use Control Inspections Technical Memorandum
Additional Comments by: The Suquamish Tribe
Response to Comments Received: 9/15/21

	Doc/Para No.	Comment (9/15/21)	Comment Response (9/27/21)	Suquamish Tribe Response (01/31/22)	Navy Response (2/8/2022)
4	New Comment	----------	----------	References should be at the end of the document, not the end of the executive summary.	References for the main text are provided at the end of the document in Section 4.0, but the focused set of references has been removed from the Executive Summary to avoid confusion.
5	New Comment	----------	----------	Table ES-1, Site 302: Was the downed fence noted in 2020 repaired or not? Why add language "if not previously repaired" to the third recommendation?	The downed fence that was identified in 2020 was not accessible for inspection in 2021; repair could not be confirmed, and likely it has not been repaired. The Navy will recommend that a repair be budgeted for and completed in 2023.
6	New Comment	----------	----------	It is not acceptable to change the text in a citation from another document. Please remove the words "LUC area" from the 4th bullet in Section 2.2.1 • Ensure that there has been no unauthorized placement of excess soil from another ~~LUC area~~ location.	The addition of "LUC area" will be removed.

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7	New Comment	----------	----------	Throughout document: Suggest changing sentences that note whether deficiencies do or do not "affect the protectiveness of the LUC remedy". Instead suggest focusing on the purpose of the LUC inspections and change it to: "does" or "does not affect the LUC as designed" for engineering controls, and "as written" for institutional controls.	This wording has been revised throughout the technical memorandum as indicated. Conclusionary statements regarding protectiveness of LUCs have been removed.

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	Doc/Para No.	Comment (9/15/21)	Comment Response (9/27/21)	Suquamish Tribe Response (01/31/22)	Navy Response (2/8/2022)
8	New Comment	----------	----------	Section 3 Conclusions and Recommendations: Conclusions should be limited to the purpose of the inspection. For engineering controls the purpose is to inspect if the LUCs are intact and being maintained as designed. For institutional controls the purpose is to verify if the LUCs have been followed since the date of the last inspection. Determining the protectiveness or effectiveness of the LUCs, intact or otherwise should not be a consideration.	See response to Comment #7 above.

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LIBERTY JV

STAKEHOLDER MEETING MINUTES

Manchester Fuel Depot, Land Use Control and Site 302 PCB Data Gaps Study Technical Memorandums

Manchester Fuel Depot, Port Orchard, Washington

CONTRACT NO. N44255-20-D-5006, TASK ORDER N4425521F4089

Tuesday, 15 February 2022, 1400 Pacific Daylight Time

Attendees:

- Ms. Joy Gryzenia, NAVFAC NW, Remedial Project Manager (RPM)
- Mr. Ronald Malec, NAVFAC NW
- Mr. Mahbub Alam, Washington State Department of Ecology (Ecology)
- Ms. Bonnie Brooks, Ecology
- Ms. Denice Taylor, Suquamish Tribe
- Mr. Andrew Schmeising, Suquamish Tribe
- Ms. Teresa Wilson, Liberty JV Task Order Manager (TOM)
- Mr. Sean Gormley, Liberty JV
- Ms. Chelsea Foster, Liberty JV
- Mr. Jeremiah Santini, Liberty JV
- Ms. JoAnn Grady, Grady & Associates

Project Objectives:

The Land Use Control (LUC) Technical Memorandum (TM): 1) provides documentation that the LUCs have not been modified or terminated and land use has not been modified (without regulatory approval) at any site; and 2) communicate the status of the LUCs to the project stakeholders (i.e., Ecology and Suquamish Tribe).

The Site 302 Polychlorinated Biphenyl (PCB) Data Gaps Study TM: 1) provides an evaluation of whether additional sampling and analysis of sediment, surface water, and seep/groundwater discharge is needed along the western shoreline of Little Clam Bay to evaluate the potential presence of PCBs above background levels; and 2) outlines an investigation program that would assess Site 302 as a potential residual source of PCBs impacting Little Clam Bay from surface water runoff and seep/groundwater discharge.

1) **Introductions**
   a. NAVFAC NW
      1. Joy Gryzenia is the current RPM for this Manchester Fuel Depot (MFD) Task Order (TO) and will be transferring these duties to Ron Malec during 2022.
      2. Ron Malec is the upcoming RPM for this TO.
   b. Regulators/Stakeholders
      1. Mahbub Alam is the current Ecology project manager (PM) for MFD and will be transferring these duties to another individual yet to be decided.
      2. Bonnie Brooks is a sediment specialist at Ecology and will be temporarily supporting Mr. Alam on this project until a PM is identified.

3. Denice Taylor is the current Suquamish Tribe PM for MFD and will be transferring duties to Andrew Schmeising.
4. Andrew Schmeising is a geologist for the Suquamish Tribe and is the upcoming PM for MFD.

c. Liberty JV
   1. Teresa Wilson is the TOM and primary point of contact for Liberty JV and will ensure resources are available for project completion.
   2. Sean Gormley is the Liberty JV Program Manager, a senior chemist, and a specialist in PCBs and emerging contaminants.
   3. Chelsea Foster is a geologist with Liberty JV supporting this project.
   4. Jeremiah Santini is a geologist with Liberty JV supporting this project.

d. Grady & Associates
   1. JoAnn Grady is the mediator and facilitator for MFD discussions.

2) Purpose of Meeting

The purpose of this meeting was to provide stakeholders the opportunity to provide additional input and recommendations related to the response to comments on the two TMs. In order to ensure that comments, questions, and/or concerns for each memorandum were discussed, each comment where change was requested by stakeholders was reviewed.

3) LUC Technical Memorandum

A summary of the discussion regarding the LUC TM follows.

a. Mr. Alam confirmed that there will not be a second round of comments from Ecology on the LUC TM, and the Navy responses from the first round of comments are acceptable.
b. There was discussion of the language in the LUCs on soil and material stockpiles. Ms. Gryzenia stated that the deficiencies have been communicated to the installation each year after inspections take place. Mr. Malec confirmed he will continue to communicate these deficiencies and the potential for regulatory actions (such as revocation of No Further Action [NFA] determinations) if the LUCs are not followed properly.
c. Mr. Alam confirmed that the deficiencies documented in the LUC TM are a violation of the LUC implementation plan and therefore an indirect violation of the NFA.
d. Mr. Schmeising noted that the source of stockpiled material is not relevant to whether the material presents a LUC violation.
e. Upon discussion, the group agreed that references to protectiveness of LUCs do not belong in this TM; Mr. Schmeising suggested that those statements should be reserved for an e-mail or document cover letter. The Navy RPMs agreed, although cover letters are not typically prepared for these documents. There was general agreement that references to protectiveness and LUC violations will be recorded in these meeting minutes and possibly e-mail transmittals of the TM.
f. Ms. Taylor proposed that the potential regulatory actions for repeated violations of LUCs could be added to the conclusions of the LUC TM and Ms. Gryzenia concurred.
g. Mr. Schmeising stated on behalf of the Suquamish Tribe that the Navy Responses to Comments (RTCs) were acceptable.

h. Ms. Gryzenia confirmed that repair of the downed fence at Site 302 will be included in the NAVFAC budget for future site activities, but that stockpile disposition should be handled by the facility, and she and Mr. Malec will continue to pursue resolution with the installation managers.

4) Site 302 PCB Data Gaps Study Technical Memorandum

A summary of the discussion regarding the Site 302 PCB Data Gaps Study TM follows. The discussion references the comments in the RTC tables provided by Ecology and the Suquamish Tribe.

a. In reference to Suquamish Tribe Comment #1 regarding removal of specific details on the proposed sampling approach, such as the number and location of potential samples, Ms. Gryzenia noted that the Navy is trying to avoid specifying sampling names and locations for the purposes of this TM. These details will be discussed and determined during development of the Sampling and Analysis Plan. The TM and figures will be modified to clarify flexibility in sampling media, quantities, and locations.

b. In general, the Suquamish Tribe and Ecology were in agreement that the conceptual site model (CSM) as presented in the Navy's 1989 Remedial Investigation (RI)/Feasibility Study (FS) was not based on sufficient data to accurately characterize potential contaminant migration pathways at Site 302 and is not accurate. Specific topics raised by the Suquamish Tribe and Ecology were:

    1. The conclusion that PCBs have not migrated to groundwater, based on the presence of a 150-foot-thick silt layer that is laterally continuous beneath the site, is inaccurate and based on regional data that likely do not apply locally to this site, and on-site data that are incomplete; Mr. Schmeising believes there is no evidence to support the presence of such a silt layer or other regional aquitard;
    2. The conclusion that streams and seeps are "interflow" (shallow water migrating laterally just below the surface as opposed to true groundwater) is not supported by the data presented; Mr. Schmeising expressed that this terminology is misleading;
    3. The potential migration pathway between Site 302 and Franco Pond, particularly where holding ponds were located on the west side of Site 302, may be complete and the RI did not adequately investigate this connection;
    4. The technology used in the late 1980s could not have generated the level of certainty about subsurface conditions that is implied in the RI/FS conclusions;
    5. The RI/FS conclusions, as well as those in the 1980 Site Conditions Report, have been restated in subsequent reports at face value without additional interpretation, research, or data collection to verify them;
    6. Both streams to the west of Site 302 are identified as perennial, which indicates the presence of shallow groundwater; and
    7. The CSM as presented in the TM, based on the CSM presented in the 1989 RI/FS report, is incomplete.

c. The Navy RPMs agreed that the previous investigation and evaluation were limited and further investigation and evaluation are warranted. However, the results from the 1989 RI/FS and subsequent sampling events comprise the current data set and must be referenced for the purposes of this TM.

d. Ms. Gryzenia noted that the scope of the Liberty JV TO and this TM did not include a comprehensive evaluation of the CSM or a critical look at existing data. However, she agreed that language should be added to the TM to clarify that the current CSM is based on limited information and previous conclusions that may not accurately represent site conditions.
e. Ms. Gryzenia noted that the per- and polyfluoroalkyl substances (PFAS) Site Inspection (SI) that is currently contracted under a separate Navy TO will generate data to improve site characterization and the CSM, and that wells installed for the PFAS SI will likely be useful for groundwater sampling during the PCB data gaps investigation.
f. Ms. Taylor suggested adding a statement to the end of the TM to indicate that the CSM will be further developed as part of the PCB data gaps investigation and PFAS SI work. Ms. Gryzenia agreed.
g. Mr. Schmeising requested that all references to the regional aquitard be removed or qualified.
h. Ms. Taylor requested edits to Section 4 of the TM indicating the CSM needs to be re-evaluated. Liberty JV and the Navy RPMs indicated that the current RTC tables and TM text revisions have incorporated this language, but that the language will be revisited and revised to further emphasize the limitations of the RI data and conclusions.
i. Ms. Gryzenia noted the Navy will include Franco Pond in scoping discussions for the PCB data gaps investigation.

5) Action Items

The following action items were agreed upon at the close of the meeting.

a. The Navy and Liberty JV will revise the RTC tables for both TMs to better reflect the Navy's stance on selected comments based on discussions from today's meeting;
b. Liberty JV will revise figures in the PCB Data Gaps Study TM to emphasize that the number of samples is preliminary and that the final plan, to be developed in conjunction with stakeholders, will govern sampling locations and media; and
c. The Navy and Liberty JV will revise language in the PCB Data Gaps Study TM to reflect uncertainty in the CSM, and at Ms. Taylor's request will provide a redlined version of Section 4 to stakeholders to preview the language in the Final TM.