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U S NAVY RESPONSE TO U S EPA REGION I COMMENTS ON DRAFT SAMPLING AND
ANALYSIS PLAN DATA GAP INVESTIGATION FOR THE FORMER TANK FARM SITE 23
NSB NEW LONDON CT
10/15/2014
U S NAVY

**RESPONSES TO EPA'S AUGUST 25, 2014 COMMENTS ON
THE DRAFT SAMPLING AND ANALYSIS PLAN - DATA GAP INVESTIGATION FOR THE FORMER
TANK FARM (SITE 23) AT NAVAL SUBMARINE BASE – NEW LONDON
GROTON, CONNECTICUT**

Initial Issue: October 15, 2014

GENERAL COMMENTS -	<p>Comment: Please add a figure depicting the historical locations the OT-10 system, including the dump sump, tanks, separator, and piping. Since contaminant releases may have occurred from any of these components, it is necessary to understand where earlier samples were collected and where proposed samples should be collected relative to these components to ensure adequate characterization.</p> <p>Response: Figures from OT-10 closure reports show this information and will be added to the base map (Figure 17-1).</p> <hr/> <p>Comment: Please clarify how the OT-4 and the OT-10 system components will be located in the field so that samples can be collected from the intended locations relative to these features in the SAP. Please include documentation supporting the identified locations in the SAP.</p> <p>Response: The location of OT-4 is known from previous investigations and is identified on Site base mapping. OT-10 structures were located during closure activities and included on maps generated for the OT-10 UST Closure Reports. Nearby roads, parking, and field features have not changed significantly in the past 20 years and allow for consistent landmarks to locate former features such as the tank locations. GPS locations will be determined from base mapping with the former USTs depicted, which will support locations in the field. Revisions provided below for Page 14-3 (Surveying) and on Figure 17-1 further address this comment.</p> <hr/> <p>Comment: Please describe how the OT-10 system was modified (what piping was removed and added) when tanks NN-02 and NN-03 were closed so that the oil-water separator directly received stormwater from the dump sump rather than receiving pumped flow from NN-03.</p> <p>Response: The OT-10 system originally consisted of a sump (wet well sewage lift station), an oil/water separator (OWS), a 30,000 gallon oily waste storage tank (NN-03), and a 10,000-gallon waste oil tank (NN-02). CTDEEP UST records indicate NN-02 was installed in 1981 and was constructed of fiberglass reinforced plastic (FRP). NN-02 was removed in approximately September 1999 and replaced by a 3,000 gallon FRP UST (OT10-3) in approximately the same location.</p> <p>The OT-10 complex was closed in 2006, which included removal of the wet well, OWS, and associated piping. The 30,000 and 3,000 gallon USTs were closed in-place due to high groundwater conditions. An oil water treatment facility was constructed in a different location on the subbase for handling the oily bilge water, therefore the OT-10 area no longer receives waste water. The dump sump concrete pad remains in place and is used as a containment area for parking subbase fuel trucks. Stormwater from the sump is piped to an OWS for the nearby fuel system racks.</p> <p>The SAP will be revised to incorporate this information into the Executive Summary, Section 10.2.2 (as indicated below), and other applicable sections.</p>
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<p>p. 10-4, §10.2.1, ¶1</p>	<p>Comment: The second sentence states that OT-4 water used to store tank bottom wastes from OT-1. However, OT-4 was previously sampled for TCL organics and TAL inorganics and Fuss & O'Neill (September 1989) stated that OT-4 and OT-5 were used as oil reclamation tanks. Since the history of OT-4 is uncertain, change the sampling and analysis requirements at OT-4 to be identical to that required for the OT-10 complex.</p> <p>Response: Agreed, the SAP will be revised within in section 11.3, WS 17, and WS18 to include full analysis of the OT-4 samples.</p>
<p>p. 10-6, §10.2.2, ¶1</p>	<p>Comment: Please clarify whether tanks NN-02 and NN-03 were removed when closed under RCRA and whether soil samples were collected. Provide a copy of the closure report as an appendix.</p> <p>Response: Previous references indicating the closure was completed under RCRA were not correct. The USTs were registered with the CTDEEP and the closures were completed following CTDEEP UST Closure guidance documents. UST closure reports and registration forms are provided with these responses and will be included as an appendix to the SASE.</p> <p>The following summary information will be incorporated into the text of the SAP within this section (10.2.2), the Executive Summary, and any other applicable section:</p> <p>Tank NN-02, a 10,000 gallon waste oil UST (installed 1981) was removed in September 1999 when it was replaced by Tank OT10-3. No closure report for NN-02 has been identified.</p> <p>Tank NN-03, a 30,000 gallon oily water UST (installed 1981), was closed in place in April 2006. Tank OT10-3, the 3,000 gallon waste oil UST (installed 1999), was closed in place in January 2006. The USTs were closed in place due to high groundwater conditions (four feet below grade).</p> <p>The closure of OT10-3 included removal of the OWS, wet well, and piping. The closure report indicates that 263.47 tons of soil was removed from the area of these structures. The report includes laboratory results for four soil samples and one groundwater sample, each analyzed for extractable total petroleum hydrocarbons (ETPH), volatile organic compounds (VOCs), and poly-cyclic aromatic hydrocarbons (PAHs). The results were reported as not detected (ND) for the soil samples and low concentrations of ETPH and five VOCs were identified in the water sample.</p> <p>The closure report for NN-03 includes laboratory results for seven soil samples and one groundwater sample, each analyzed for ETPH, VOCs, and PAHs. The results were reported as not detected (ND) for ETPH and PAHs in the soil samples and water sample. Isopropyltoluene was reported at a concentration of 0.0355 mg/kg in one of seven soil samples analyzed for VOCs. Styrene was reported at a concentration of 2.1-µg/l in the water sample from the excavation.</p>
<p>10-8, §10.3, ¶2</p>	<p>Comment: Regarding the third bullet, define "RLs" and confirm whether this refers to laboratory reporting limits.</p> <p>Response: RLs refers to reporting limit as indicated in the notes for Table 2 of the SASE as follows: "<0.010 = Not detected above given laboratory reporting limit".</p>

<p>p. 10-10, §10.4, ¶1</p>	<p>Comment: The COPC list should be re-evaluated using all the data not just the surface soil data. Subsurface soil samples collected just above the water table could identify additional COPCs and impact residential risk. Please clarify the intent.</p> <p>Please identify specifically what data the Navy intends to use to conduct the human health risk assessment.</p> <p>Response: This sentence will be changed to: “Once the supplemental data are collected and the COPC list is re-evaluated based on the DGI supplemental soil data, the recommendations made in the draft SASE will be reconsidered.”</p>
<p>p. 11-1, §11.2, ¶2</p>	<p>Comment: Please revise this sentence to refer to supplemental soil data rather than just surface soil data.</p> <p>Response: The referenced sentence will be revised to the following: “Once the supplemental data are collected and the COPC list re-evaluated based on the supplemental soil data, the recommendations made in the draft SASE will be reconsidered.”</p>
<p>p. 11-2, §11.2</p>	<p>Comment: Please replace the fourth bullet with: “Do target analyte concentrations in surface soil support the previous assumption of no ecological risk, which was based solely on the assumption that the setting was urban?”</p> <p>Response: The Navy proposes to remove the fourth bullet (PSQ4) since ecological risk will not be characterized based on the Site 23 industrial setting with low quality ecological habitat which presents an incomplete pathway for ecological receptors.</p>
<p>p. 11-2, §11.3</p>	<p>Comment: Edit the text in the first bullet to require the same sampling and analysis parameters for OT-4 as required for the OT-10 complex.</p> <p>Response: Agreed</p>
<p>p. 11-3, §11.3</p>	<p>Comment: First bullet: Supplemental data with concentrations less than those used in the human health risk assessment are not likely to impact the previously-calculated risk except for the fact that no surface soil data were previously available. Depending on the exposure details previously used, surface soil data may impact risk at lower concentrations than previously used for calculations.</p> <p>Response: This potential will be evaluated as part of the revised HHRA.</p>
	<p>Comment: Second bullet: When the data are evaluated, the latest RSLs will need to be used for screening purposes. Please revise the text accordingly. Identify any changes to the RSLs from those used in the SAP to ensure that the latest RSLs are used for screening.</p> <p>Response: The sentence will be modified to indicate that the latest RSL value will be used to evaluate the data set. In addition, the language will be revised to indicate that any variation in RSLs identified in the SAP and RSLs used in evaluating the data will be identified in the Report.</p>
	<p>Comment: Third bullet: An ecological risk screening evaluation (Steps 1 and 2)</p>

	<p>needs to be conducted to demonstrate no ecological risk - rather than relying on the assumption that there is no ecological risk because the setting is considered urban.</p> <p>Response: This section will be clarified to indicate that ecological risk will not be assessed because the industrial setting provides no ecological habitat.</p> <p>Comment: Regarding the middle paragraph, please change the second sentence to: "The PALs are used to develop project quantitation limit goals that establish the sensitivity that the laboratory will strive to achieve for each analyte."</p> <p>Response: Agreed, the edit will be incorporated</p>
p. 11-4, §11.5	<p>Comment: Please supplement both bullets to include ecological risk.</p> <p>Response: There will be no change to these bullets because there is no current habitat for ecological species.</p>
p. 14-2, §14, ¶2	<p>Comment: Regarding the penultimate sentence, surface soil samples shall be collected from the 0-1 foot interval and subsurface soil sample intervals may be up to two feet long. If additional soil is required to prepare samples for all analytical parameters, additional soil cores shall be collected adjacent to the original boring.</p> <p>Response: This sentence will be replaced by the following:</p> <p>"All soil samples will be collected as discrete grab samples using sampling techniques described in SOP-3-21. The surface soil sample interval will be from zero to one foot below surface grade. Deeper subsurface sample intervals will be no more than two feet. If extra soil is required to meet analytical requirements, additional borings will be installed adjacent to the original boring and more sample will be collected at equivalent depths to the original boring samples."</p>
p. 14-3, §14, ¶1	<p>Comment: Please edit the text here and modify SOP-3-07 to require that the GPS equipment used has an accuracy of one meter or better. Alternatively, conduct a survey by a licensed land surveyor.</p> <p>In addition to surveying the sample locations, the location of pertinent site features shall be surveyed so the sampling map accurately represents the sample locations relative to site features. Please revise the text accordingly.</p> <p>Response: The sentence will be modified as follows:</p> <p>"Soil sampling locations will be marked in the field using a wooden stake or brightly colored pin flag. Coordinates of each sample location will be determined by GPS with an accuracy of less than one meter in accordance with SOP-3-07. Pertinent nearby site features shall also be surveyed to corroborate proximity with historic mapping."</p>
p. 14-3, §14, ¶5	<p>Comment: Please revise the fourth sentence to refer to project quantitation limit goals rather than project action limits (PALs).</p> <p>Response: The sentence will be revised to the following:</p> <p>"The laboratory will strive to meet the screening criteria specified in Worksheet #15 and will perform the chemical analyses following the laboratory-specific SOPs</p>

	identified in Worksheet #23.”
p. 17-1, §17, ¶1	<p>Comment: Please modify the first sentence by: “... 1996; however, only three samples (SB/TW-11, HNUS-8, and HNUS-9) were analyzed for all the CERCLA contaminants of potential concern for the OT-4 site. All other samples were designed to detect only petroleum releases.”</p> <p>Response: The following sentence will be added following the first sentence: “All samples were analyzed for TPH and aromatic VOCs. Three samples, including SB/TW-11, HNUS-8, and HNUS-9, were also analyzed for other OT-4 CERCLA contaminants of potential concern including halogenated VOCs, SVOCs, Pesticide’s, PCBs, metals, and inorganics.”</p>
	<p>Comment: Please correct the fourth sentence to: “...ranging from 0 to 14 feet bgs.</p> <p>Response: Agreed, this edit will be incorporated.</p>
	<p>Comment: Please add a new penultimate sentence: “Only two of these samples (OT10-SO01 and OT10-SO05) were analyzed for all the CERCLA for the OT-10 site. All other samples were designed to detect only petroleum releases.</p> <p>Response: The following will be added prior to the final sentence of this paragraph: “These samples were analyzed for TPH and aromatic VOCs. Two samples, (OT10-SO01 and OT10-SO05) were also analyzed for other OT-10 CERCLA contaminants of potential concern including halogenated VOCs, SVOCs, pesticides, PCBs, metals, inorganics and TCLP Metals.”</p>
p. 17-1, §17, ¶3	<p>Comment: Please add a new third sentence: “Final sample locations will be approved by EPA and CTDEEP before samples are collected.</p> <p>Response: Following field confirmation and utility clearance of the proposed boring locations, a figure will be forwarded to EPA and CTDEEP at least 7 days before the beginning of boring installation for review and approval.</p>
p. 17-3, §17	<p>Comment: Regarding the second bullet, please edit the text to require the same sampling and analysis parameters for OT-4 as required for the OT-10 complex.</p> <p>Response: The last sentence of the second bullet item will be revised to the following: OT-4 soil samples collected from the 0- to 1-foot interval will be analyzed for ETPH, VOCs, SVOCs, pesticides, PCBs, metals, and cyanide.</p>
p. 18-1, §18	<p>Comment: Regarding the analyses, please edit the table to require the same analytical parameters for OT-4 as required for the OT-10 complex. Edit the MS/MSD and field duplicate analyses accordingly.</p> <p>Response: Agreed, the Table will be updated to include full analysis of OT-4 samples.</p>
p. 18-2, §18	<p>Comment: Edit Note 3 to refer to “semi-volatile organic compounds (SIM and full</p>

	<p>scan).</p> <p>Response: Instead of (SIM and full scan), the following note will be provided (PAHs via SIM and remaining SVOCs via 8270D).</p>
p. 20-1, §20	<p>Comment: Based on maintaining the same sampling and analysis parameters for OT-4 and the OT-10 complex, the number of samples (20) for each analyte is correct as shown in this table. Please also ensure that one field duplicate is collected from OT-4 and OT-10, preferably from the surface soil samples.</p> <p>Response: Agreed. Field duplicate bias toward surficial samples will be documented in WS#12, WS#14 and WS#18</p>
p. 21-1, §21	<p>Comment: Modify SOP-3-07 for this project work to require GPS accuracy of less than one meter or require a survey by a licensed land surveyor</p> <p>Response: Agreed. Please see response to comment p. 14-3, §14, ¶1 above.</p>
23-1, §23	<p>Comment: Please also include CA-615 for aqueous mercury.</p> <p>Response: Agreed, the aqueous methods will be required for certain QC samples.</p>
p. 30-1, §30	<p>Comment: Correct the metals SOPs to “CA-627 and CA-611.” Please also list the aqueous samples</p> <p>Response: Agreed, this change will be incorporated.</p>
Figure 17-1	<p>Comment: Please edit the figure to show where previous soil borings were installed at OT-4 to collect soil samples for CERCLA contaminants. In particular, add HNUS-8, HNUS-9, and SB/TW-11 and also include the sample locations for any other samples that will be used for the risk assessment.</p> <p>Response: Agreed, the figure will be modified to show the location of previous borings including boring IDs.</p>
	<p>Comment: Please relocate the proposed boring locations to avoid re-sampling in the immediate vicinity of these prior soil borings. Suggested locations (red dots) for sampling at OT-4 are presented in the attached JPEG figure.</p> <p>Response: The revised figure has modified boring locations. It is noted however that locations to the north/northeast of former OT-4 may require further adjustment in the field due to the presence of underground electric infrastructure.</p>
	<p>Comment: Please edit the figure to show where previous soil borings were installed at OT-10 to collect soil samples for CERCLA contaminants and for any other samples that will be used for the risk assessment.</p> <p>Response: Agreed, the figure will be modified to show location of previous borings including boring IDs.</p>
	<p>Comment: EPA withholds comment on the suitability of the sample locations at OT-10 until details for the OT-10 system configuration are provided (see cover letter).</p>

	<p>Response: The figure has been updated with former system features and the proposed sample locations have been adjusted.</p>
	<p>Comment: Please clarify how OT-4 and the OT-10 complex were located on this figure. Provide supporting documentation for the locations in an appendix.</p>
	<p>Response: The OT-4 UST location was based on the base maps from previous investigations of the Site. The location of former OT-10 structures was based on UST installation figures and figures provided in the OT-10 closure reports. Nearby site features (concrete dump pad, buildings, ball fields, and roadways) have remained the same during this time and therefore the locations have been determined based on many of these features.</p>
	<p>Comment: Please add labeled lines of latitude and longitude to this figure using state plane coordinates.</p> <p>Response: Agreed, this change will be incorporated on the figure.</p>