



TETRA TECH

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Project Number 112G02125

Ms. Kymberlee Keckler, Remedial Project Manager
U.S. EPA Region I
1 Congress Street, Suite 1100
Boston, Massachusetts 02114-2023

Reference: CLEAN Contract No. N62470-08-D-1001
Contract Task Order No. WE020

Subject: Response to Comments, EPA Letter Dated July 1, 2009
Former Derecktor Shipyard, On - Shore Investigations
Naval Station Newport, Newport RI

Dear Ms Keckler:

On behalf of Ms. Winoma Johnson, US Navy NAVFAC, I am providing to you a response to the comment letter from USEPA dated July 1, 2009, which was in reference to the Derecktor Shipyard On-Shore Follow-up Investigation Proposal for the Former Derecktor Shipyard, dated May 21, 2009.

In order to keep this project moving forward, we ask that you please provide any final comments within two weeks of this letter, so that we can proceed with sampling plans and field work accordingly.

If you have any questions, please do not hesitate to contact me at 978-474-8404.

Very truly yours,

Thomas Campbell
Project Manager

Enclosures

c: G. Glenn, TINUS (w/encl.)
W. Johnson, NAVFAC (w/encl.)
P. Kulpa, RIDEM (w/encl.)
C. Mueller, NAVSTA (w/encl.)
S. Parker TINUS (w/encl.)
File 112G02125-3.1 (w/encl.)
AR, c/o Glenn Wagner, TINUS Pittsburgh (w/encl.)

**RESPONSES TO ENVIRONMENTAL PROTECTION AGENCY (EPA)
COMMENTS (DATED JULY 1, 2009) ON THE
DERECKTOR SHIPYARD ON-SHORE FOLLOW-UP INVESTIGATION PROPOSAL, NAVSTA NEWPORT
(MAY 21, 2009)**

Navy responses to the U.S. Environmental Protection Agency (EPA) comments on the Derecktor Shipyard On-Shore Follow-Up Investigation Proposal, NAVSTA Newport (May 21, 2009) are presented below. In addition, Navy responses are included on EPA's Attachment A titled "Derecktor Shipyard On Shore Cleanup Assessment" which was presented at the NAVSTA Newport meeting conducted on May 7, 2008. The EPA's comments are presented first (in italics) followed by Navy's responses.

Response to Comments on EPA letter (July 1, 2009)

***Letter Comment 1:** The document proposes resampling four wells in the Northern Waterfront and installing four new overburden wells. EPA does not remember agreeing to limit the groundwater analyses to VOCs. Please plan to analyze the groundwater for a full suite of analytes in all samples. While not expressly provided in the work plan, EPA is willing to consider the Navy's rationale for limiting the analyses to VOCs.*

Response: Contaminants of concern in the Northern Waterfront area are VOCs which were detected in groundwater samples at concentrations exceeding MCL criteria during the SASE investigation. No other contaminants exceeded MCL criteria.

***Letter Comment 2:** The proposal for a revised HHRA lists ingestion and inhalation of VOCs as the two exposure pathways for residents at the site. Dermal exposure for bathing/showering residents should be included as an exposure pathway.*

Response: The groundwater exposure route through dermal exposure was evaluated in the SASE report and will be included in the revised risk assessment. Navy proposes to update the SASE risk assessment showing additional receptors (including residential ingestion or groundwater and vapor intrusion scenarios) using existing and updated groundwater data.

Response to Comments on EPA Attachment A "Derecktor Shipyard On Shore Cleanup Assessment, Site walkover Wednesday, May 7, 2008"

Comment 1:

Subsurface soil:

From the 1997 SASE, although the number of samples might be sufficient for four designated areas – North Waterfront, Central Shipyard, South Waterfront, and Building 234 – not all of these samples were analyzed for a full suite of chemicals. For each area, only a subset of samples was analyzed for SVOCs.

Response: Soil borings were completed and samples collected in 13 target areas identified in the SASE work plan which was reviewed by regulatory agencies. A total of 41 subsurface (collected at and below 1 ft below ground surface) boring samples were collected and analyzed for SVOCs. In addition, 12 test pit and sump samples were collected in the subsurface sample interval. A total of 53 subsurface samples were analyzed for SVOCs as part of the SASE investigation. This data was used for the risk assessment in 1997 and was not identified as inadequate at that time.

Comment 2:

Groundwater:

From the 1997 SASE, there are no groundwater data for the South Waterfront area. For other areas, the number of groundwater samples is limited (5 samples at North Waterfront, 2 samples at Central Shipyard, and 2 samples

at Building 234 area) and would not be adequate to characterize groundwater risks at the site. Using a limited number of samples to conduct a risk assessment could pose high uncertainty in evaluating groundwater risk at the site.

Response: The Southern Waterfront area consisted of fill material that was placed on the beach area. The Navy and regulators agreed if the SASE test pit sample results indicated the presence of high concentrations of contaminants potentially leaching into the shallow overburden, monitoring wells would be installed in the Southern Waterfront area. The findings of the test pit excavations did not indicate the presence of drums or other evidence of gross contamination, therefore no groundwater monitoring wells were installed in the Southern Waterfront area. It should be noted that a third well was installed in the Building 234 area to assess immediately upgradient groundwater quality and one well proposed for the Central Shipyard area could not be installed due to shallow bedrock. Groundwater data collected from existing wells indicated exceedance of RIDEM criteria in only two wells that were located in the Northern Waterfront area. For this reason, Navy's proposed plan for a follow up investigation in the Northern Waterfront would include the installation of four additional groundwater monitoring wells. Additional groundwater data at the site is not warranted by previously collected data.

Comment 3:

South Waterfront:

Following removal of waste and debris from this area of the site, the removed material was disposed of at Tank Farms 4 and 5 or off site. No confirmatory sampling was performed in the South Waterfront following the removal of waste. The only data available to potentially characterize the residual soils are from the characterization done on the waste stockpiles themselves. The limited data collected are presented in Appendix A. Review indicates that the greatest lead and arsenic concentrations were found in Berm Section 6 with lead as high as 920 ppm and arsenic as high as 23 ppm. PCBs were reported not detected in the stockpile characterization samples.

This area was restored by grading the residual soil and mulching and seeding the area. Consequently there is no barrier to exposure to surface or subsurface soil in the South Waterfront area. In order to properly evaluate residual risk, sampling of the area will be required to confirm that the residual contaminants in soil do not pose an unacceptable risk to human health. Presumably the receptors of interest would be construction and utility workers under a restricted use scenario; however, the Navy will need to confirm that a residential use of the area will not be allowed; otherwise the receptors should also include residents. The media of concern would be surface and subsurface soil.

Groundwater data are not available for this area. If future resident is included as a receptor of concern, groundwater data are needed to evaluate exposure to this medium.

Response: Navy believes that soils in the Southern Waterfront area were adequately characterized during the SASE investigation. As part of the SASE investigation, six evenly spread test pits were excavated in the Southern Waterfront area. Samples were collected from test pits from surficial and subsurface intervals. The subsurface soils were collected from the material located directly above natural soils if it was identified by visual observations. Samples were analyzed for VOCs, SVOCs, butyltins, pesticides, PCBs, TAL metals, and TCLP metals. Visual observations of the test pits and analytical results indicated no evidence of gross contamination. In accordance with the work plan, no groundwater samples were collected from the Southern Waterfront area because of the lack of evidence of contamination. Analysis of soil samples from these test pits showed no elevated concentrations of contaminants. Therefore, Navy does not believe that it is necessary to collect groundwater samples from this area. Future residents are not considered to be a receptor of concern for this area. The area is currently landscaped and is utilized as a walking area.

Building 42 Sumps:

Comment 4:

S42-1 Sump Area:

Contaminated soil was removed from the soil within an approximate 11-foot by 11-foot by 1-foot deep area beneath the former sump. However, the 2002 Removal Action Report stated that the soil beneath the sump was a dense graded aggregate suggesting it was relatively impermeable. Multiple contaminants of concern were detected in the samples collected for the 1997 SASE; therefore, further characterization of the soil topographically down gradient from the sump discharge location is warranted to determine if runoff from the discharge point occurred and potentially impacted downgradient soil that has not been characterized. It should be noted that arsenic has historically been used as a paint additive and its presence at S42-1 is not necessarily natural.

Response: Observations made during the removal action indicated that the ground surface below Building 42 was relatively flat, so it is unclear where “topographically down gradient” soil would be located. During the removal action, moist soil and no pooled water were observed. The observation that the ground surface below the sump consisted of a dense graded aggregate was made, but it was also remarked that whether this soil supported water infiltration was not determined. The removal action excavated soils three feet outward of the sump pit sides. Confirmation sample analytical results did not indicate the presence of PAHs or PCBs which were detected in the SASE sample collected below the sump. Navy believes that the confirmation sample results indicate that residual contamination from discharges from the sump was adequately removed.

Comment 5:

S42-4 Sump Area:

No soil samples were collected from beneath this sump in the 1997 SASE due to access problems and no investigation or remediation was conducted during the 2002 Removal Actions. No discharge piping was found to be connected to this sump during the 1997 SASE investigation. Based on the sampling results at S42-1 and the nature of the soil surface beneath the building, additional characterization beneath the S42-4 sump and in the downgradient soil is warranted. It is recommended that soil along the western side of Building 42 be sampled and analyzed for a full suite of chemicals.

Response: A soil sample could not be collected during the 1997 SASE from the area beneath this sump because the section of crawl space beneath the sump was inaccessible. The sump was found to have a drain hole at its center. The SASE report did not specify the former use of the sump. Observations made during the removal action indicated that the ground surface below Building 42 was relatively flat, so it is unclear where “down gradient soil” would be located. Navy believes the collected samples beneath sumps S42-1, S42-2, and S42-5 adequately characterized the soil beneath Building 42. Based on the sample results, removal actions were conducted at locations S42-1 and S42-5.

In addition, Building 42 has been recently demolished. The floor and associated sumps have been removed. The soil beneath the floor structure has been rough graded in preparation for the placement of topsoil over the building footprint and subsequent seeding.

Comment 6:

Bldg 6, TP14 Excavation Area for PCBs:

The purpose of the excavations conducted in this area was to determine the extent of PCB contamination in the soil and to remove the PCB contaminated soil to achieve the RIDEM residential/industrial/commercial cleanup standard of 10 ppm PCBs. Based on the results of the analytical data provided in the 2002 Removal Action Report the Navy has not demonstrated that the objective has been achieved. Interpretation of the results presented indicate that some areas known to have PCB concentrations in excess of the cleanup threshold have not been adequately excavated and sampled and for other areas where PCB screening indicated exceedance of the cleanup threshold, no additional soil removal or confirmatory sampling was conducted. A No Further Action ROD cannot be approved for the site until an adequate characterization of the Building 6 TP-14 area for PCBs demonstrates that the PCB concentrations are in compliance with the cleanup threshold or that sufficient data on residual PCBs are available to determine that no unacceptable risk exists.

Review of Figure 7 in the 2002 Removal Action Report indicates that screening samples HS26, HS32, HS14, HS27, HS13, and EAETP14F1 (Figure 6) had PCB concentrations of 10 ppm or greater and were not remediated or resampled to confirm that cleanup has been achieved. Lastly, 40 CFR 761 requires a significantly denser sampling grid than was used to collect the PCB samples discussed in the 2002 Removal Action Report. To the extent that excavation to bedrock has been reached in some areas of the enlarged TP-14 excavation that information should be provided to support any proposal to forgo sampling in some areas of the excavation. The expectation is that a comprehensive sampling plan will be developed to confirm cleanup not only of PCB contamination but to confirm that concentrations of other COCs do not result in unacceptable risks for this area.

Response: The 2002 Removal Action conducted activities in the TP-14 area to determine extent of PCB contamination and to subsequently remove contaminated soils.

The 2002 Removal Action reports states that samples were collected to delineate the extent of PCB contamination detected and removed in the original TP-14 excavation. Sample results indicated that PCB contamination appeared to exist within the areas bordering the northern, southern, and eastern extents of the original samples and the TP-14 location. An expanded excavation was next completed that included extending the original TP-14 eastern, western, and southern borders and removing soils to a depth of 2 feet below ground surface (bgs). The center of TP-14 was further excavated to a depth of 5.5 feet bgs to the top of fractured bedrock. In addition, soils were excavated around the footing of the dock stairs at Building 6 to a depth of 2 feet bgs. A total of 101.66 tons of soil were removed.

Fourteen confirmation samples were collected from the floors and walls of the expanded area of excavation from locations selected based on Flame Ionization Detector (FID) and jar headspace readings. Results indicated that the potential zone of contamination extended further south and east. Based on these analytical results, further excavation was conducted. Soils were removed to a depth of 4 feet bgs or to the top of bedrock. Southern and eastern excavation limits were expanded an additional 29 feet and 10 feet, respectively. The depth of excavation in these expanded areas was to 3 feet bgs, where bedrock was encountered. Eight confirmation samples were collected from the sidewalls and floors based on results from immunoassay PCB test kits. Review of the confirmation sample results indicated one perimeter location with a criteria exceedance which was subsequently further excavated to a depth of 3 feet bgs. Excavation areas were subsequently restored.

Based on this review of the removal action report, soil contaminated with PCB was excavated. Excavations terminated when PCB concentrations of 10 ppm or less were confirmed, or bedrock was encountered. Excavation depths ranged from 2 feet to 6 feet bgs.

Comment 7:

Huts 1 and 2 and TP-16 Area:

Huts 1 and 2 were formerly used as a vehicle maintenance facility. Based on this usage, contaminants associated with vehicle maintenance are expected to be present in this area. Prior investigations have not adequately investigated the area and the nearby TP-16 was found to have elevated TPH concentrations of 4,900 ppm and also TCLP lead of over 70 mg/L. Additional soil characterization is required for the area around Huts 1 and 2.

Response: Navy believes that Huts 1 and 2 were adequately investigated during the SASE. Three soil borings and two test pits (TP-16 and TP-17) were completed adjacent to the southern footprint of Huts 1 & 2. The SASE did identify elevated phenolic compounds and PAHs detected in the area around Huts 1 & 2. However, according to the Errata for the SASE (TiNUS 12/17/08) TCLP was measured at 71.8 µg/L not 71.8 mg/L. None of the detected compounds exceeded RIDEM DEC and therefore no further remedial activities were conducted in this area. TPH was measured using an outdated RIDEM-requested infrared spectroscopy analytical method (TPH by IR, EPA Method 418.1) which is no longer used because of poor accuracy and precision issues; therefore the result of 4,900 mg/kg is questionable.

Comment 8:

Areas of Surface Soil With Elevated Leachable Lead Concentrations:

Table 4-5B in the 1997 SASE identifies numerous investigation locations with elevated leachable lead concentrations in surface and subsurface soils. Areas of principal concern are those with elevated leachable lead in surface soil. These areas are: TP-16, TP-28, TP-8, TP-10, and MW-08. Note that soil is characterized hazardous if the TCLP lead concentration is greater than 5 mg/L. All these surface soil areas have TCLP lead concentrations ranging from 8 to 20 times the hazardous threshold. Consequently consideration should be given to excavating the soil in these areas for off site disposal to avoid future management of this hazardous material or potentially failing to manage it in the future as hazardous material. In addition, a monitoring well should be installed at or downgradient of TP-11 where elevated concentrations of leachable lead were detected in subsurface soil and a monitoring well does not currently exist.

Response: The SASE report incorrectly reported TCLP concentrations in mg/L rather than µg/L. TCLP lead concentrations with the corrected concentration units were below the RIDEM GA leachability criteria. An errata was prepared for the SASE report and distributed under a TtNUS letter dated December 18, 2008. This issue should be considered resolved.

Comment 9:

North Waterfront:

Elevated concentrations of TCE were detected in monitoring wells MW-03 and MW-12 in the North Waterfront Area in the vicinity of the former hazardous waste and bilge water outside storage area. This contamination may be due to a local source or an upgradient source; however, prior use of the area suggests a local source. Additional soil characterization is required in the area just north of Pier No. 1 and a monitoring well should be installed upgradient of MW-03 and MW-12 to determine if there is an upgradient source of TCE.

Response: Navy is proposing to conduct follow up sampling for groundwater in the northern waterfront area from four existing wells and four proposed wells.

Comment 10:

Disposal Pits Northeast of Building 6:

An investigation of the disposal pits located north or northeast of Building 6 was conducted during the removal actions of 2001. One east-west and two north-south trenches were dug to evaluate subsurface soil contamination. The trenches were located on the eastern half of the northern side of Building 42. Presumably this location was selected based on historical evidence as to the location of the disposal pits. There is some concern regarding the location of the trenches based on the approximate disposal pit location shown in Figure 4-1 of the 1997 SASE, which shows the disposal pits located off the northeastern corner of Building 42. If that location is correct then none of the three trenches installed for the 2001 removal actions would have intersected the disposal pits. Confirmatory of the disposal pit location and/or rationale for the 2001 removal action trench locations is needed to assess the adequacy of the trench investigations conducted in 2001. It is expected that some additional soil investigation will be required to clear this area for a NFA ROD.

Response: Navy believes that this comment is referencing Building 42 not Building 6. The location of the disposal pits adjacent to the northeast corner of Building 42 are noted in Figure 4-1 as "approximate". Observations made during soil sampling ("asphalt odor" and presence of artificial fill materials) at MW05 and TP 25, located slightly west of the disposal pit location in Figure 4-1, suggest that disposal pit was located west of the originally presumed location.

During the 2001 removal actions, soils observed in the easternmost portion of trench no. 1 did not exhibit any unusual odors or staining, further suggesting that "Area C" in SASE Figure 4-1 should be shifted west to an area

north of Building 42. Samples collected from the western end of trench no. 1 and from trench nos. 2 and 3 exhibited odors and elevated ambient air monitoring readings. The location DSOIL01 was selected for further excavation due to analytical results which reported SVOC detections above RIDEM DEC levels.

Navy believes that based on field observations and analytical results that the 2001 removal actions adequately investigated the disposal pits located north of Building 42.