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July 24, 2009

U.S. Environmental Protection Agency - Region II
290 Broadway – 22nd Floor
New York, New York 10007-1866

Attn: Mr. Adolph Everett, P.E.
Chief, RCRA Programs Branch

Re: Contract N62470-07-D-0502
IQC for A/E Services for Multi-Media
Environmental Compliance Engineering Support
Delivery Order (DO) 0002
U.S. Naval Activity Puerto Rico (NAPR)
EPA I.D. No. PR2170027203
Revised Final Phase I RCRA Facility Investigation Work Plan for SWMU 76

Dear Mr. Everett:

Michael Baker Jr., Inc. (Baker), on behalf of the Navy, is pleased to provide you with one hard copy of the replacement pages for the Final Phase I RCRA Facility Investigation Work Plan for SWMU 76, Naval Activity Puerto Rico, for your review and approval. These replacement pages make up the Revised Final Phase I RCRA Facility Investigation Work Plan for SWMU 76. Directions for inserting the replacement pages into the Final Phase I RCRA Facility Investigation Work Plan for SWMU 76 are provided for your use. Also included with the copy of the replacement pages is one electronic copy provided on CD of the Revised Final Phase I RCRA Facility Investigation Work Plan for SWMU 76, Naval Activity Puerto Rico.

On June 16, 2009, a conference call was conducted between the Navy, EPA, PREQB, TRC (PREQB's consultant), and Baker to discuss the EPA April 23, 2009 and PREQB June 5, 2009 comments on the Final Phase I RCRA Facility Investigation Work Plan for SWMU 76. Based on that conference call, additional surface and subsurface soil samples would be incorporated throughout the document. Additional revisions would also be made to the work plan based on the EPA and PREQB comments. The Navy responses to these comments are attached for your review.

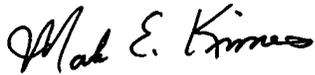
This document is being submitted in accordance with the agreed upon submittal date during the June 16, 2009 conference call.

This work plan may be implemented by the Army National Guard. As such, it's the Navy's understanding that the Army National Guard will enter into their own 7003 Order to conduct the work at SWMU 76. If this requires the development of a new QAPP, etc., the Army National Guard will be responsible to modify the work plan accordingly.

Mr. Adolph Everett, P.E.
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If you have questions regarding this submittal, please contact Mr. Mark Davidson at (843) 743-2124. Additional distribution has been made as indicated below.

Sincerely,
MICHAEL BAKER JR., INC.



Mark E. Kimes, P.E.
Activity Coordinator

MEK/lp
Attachments

cc: Ms. Debra Evans-Ripley, BRAC PMO SE (letter only)
Mr. David Criswell, BRAC PMO SE (letter only)
Mr. Mark E. Davidson, BRAC PMO SE (1 hard copy and 1 CD)
Mr. Pedro Ruiz, NAPR (1 CD)
Ms. Bonnie Capito, NAVFAC Atlantic – Code EV42 (1 hard copy for Admin Record)
Mr. Tim Gordon, US EPA Region II (1 hard copy and 1 CD)
Mr. Carl Soderberg, US EPA Caribbean Office (1 hard copy and 1 CD)
Ms. Willmarie Rivera, PREQB (1CD)
Ms. Gloria Toro, PREQB (1 hard copy and 1 CD)
Mr. Felix Lopez, US F&WS (1CD)
Mr. Michael Smith, TechLaw, Inc. (1 CD)

NAVY RESPONSES TO EPA COMMENTS DATED APRIL 23, 2009 AND PREQB COMMENTS DATED JUNE 5, 2009 ON THE FINAL PHASE I RCRA FACILITY INVESTIGATION REPORT FOR SWMU 76 (BUILDING 2300) DATED MARCH 31, 2009

EPA COMMENTS

(EPA comments are provided in italics, while Navy responses are provided in regular print)

1. *The Navy's March 31, 2009 response to General Comment #4 of TechLaw's Technical Review, transmitted with EPA's letter of October 18, 2007 states that "...the trench drain is an internal feature of the main maintenance bay. Its specific location ...is not known." Knowing the location of the trench drain is important in assessing the adequacy of the proposed sampling program, since the July 15, 2005 Phase I/II ECP Report prepared by the Navy, stated in Section 5.4.22, on page 5-277 (re ECP Site 22, which was subsequently defined as SWMU 76) that "...waste frequently exiting the facility either into the trench drain and associated oil water separator or to the ground surface immediately outside the building." Also, in response to General Comment #4 which requested that the Navy show the trench drain and oil/water separator, the Navy revised Figure 3-1 to show the oil/water separator, but it does not show the trench drain location. A site inspection of the facility should be made to determine the location of the trench drain, and Figure 3-1 should be revised to show it, or a diagram of the interior of Building 2300 be submitted showing the trench drain. Until the location of the trench drain is defined, it is difficult for EPA to assess the adequacy of the proposed sampling program.*

Navy Response to EPA Comment No. 1: A site inspection of Building 2300 was conducted on May 13, 2009. Two trench drains were identified during the site visit. One trench drain is located at the southwest bay opening, while the second trench drain is located at the northeast bay opening. The trench drains run the entire length of each bay opening and are designed to collect any storm water run-off that may enter the bay openings. The Final Work Plan will be revised to include photographs within Appendix A showing the location of each trench drain relative to the bay openings. The text within Section 1.2 also will be revised to acknowledge the presence of two trench drains and provide a description of their location.

2. *The Navy's March 2009 Response to Specific Comment #2 of TechLaw's Technical Review transmitted with EPA's letter of October 18, 2007, states that "Given that on-shore winds prevail at this portion of NAPR" and that "...the openings of the structure where operations are performed will result in preferential transport of particles associated with paint stripping and painting towards [the proposed] surface soil sampling locations". Please include the following to better support these assertions:*
 - a) *a wind-rose or other data to support the assertions regarding prevailing wind directions in the area of SWMU #76;*
 - b) *a revised Figure 3.1 which has is annotated to show where the "openings" in the building where the paint-stripping operations were performed are located.*
 - c) *Photographs of Building 2300 and/or a diagram of the building showing where the "openings" are located, and also documentation that the walls on the northwest and southeast sides of the structure are closed so that they would preclude likely air-borne or other releases to the soils surrounding those two sides of the structure.*

Navy Response to EPA Comment No. 2: Navy responses to items a) through c) are provided below. In addition, please see the Navy response to EPA Comment No. 3.

- a) The Final Work Plan will be revised to include wind data and a wind rose diagram obtained from the National Climatic Data Center (<http://www.ncdc.noaa.gov/oa/ncdc.html>) for a weather station located at NAPR (WBAN No. 11630; COOP ID: 668412). The wind data and wind-rose diagram will be included as Appendix B. It is noted that the data for the period from May 1, 2000 through December 14, 2007 show that prevailing winds at NAPR are predominantly out of the east, east-north-east, and east-south-east. These wind directions support the preferential transport of particles associated with paint stripping and painting operations toward the proposed surface soil sampling locations. Section 3.1 will be revised to reference the location of the wind data within the document (i.e., Appendix C). This section also will be revised to accurately reflect prevailing wind directions at NAPR.
 - b) Figure 3-1 will be revised to show where the northeast and southwest bay openings are located.
 - c) Appendix A of the Final Work Plan will be revised to include photographs showing the northeast and southwest bay openings. Photographs showing the southeast and northwest sides of Building 2300 also will be included within Appendix A to provide documentation that the maintenance bay walls have no openings that could serve as a transport pathway for particles associated with painting and paint stripping operations. Finally, Section 1.2 will be revised to provide a more detailed description of the maintenance bay.
3. *The surface soil sampling program proposed in the Phase I RFI work plan is predicated on the assumption that air-borne dispersal of particles associated with paint stripping and painting represents the only mechanism affecting hazardous waste/constituent deposition. However, other mechanisms such as overland storm water flow and/or past waste and/or product management/disposal practices at the site could have had significant impacts on other areas of this SWMU. Therefore, the proposed sampling program should be expanded to include other areas at the site that could have been potentially impacted by hazardous wastes and/or constituents resulting from either past waste and/or product management/disposal practices, and/or overland storm water flow.*

Navy Response to EPA Comment No. 3: The Work Plan will be revised to indicate that additional surface and subsurface soil samples will be collected at the locations agreed upon during the June 16, 2009 conference call between the EPA, PREQB, Navy, Baker, and TRC (PREQB Consultant) and depicted on a figure provided in an email from Mr. Mark Kimes (Baker) that same day. In addition to the agreed upon surface soil samples, one additional surface soil sample will be collected at proposed soil boring location 76SB01. This additional surface soil sample at soil boring location 76SB01 was requested by Mr. Timothy Gordon (EPA) in an email dated June 17, 2009.

4. *While a groundwater sample location has been proposed in the vicinity of the oil/water separator, no groundwater monitoring wells have been proposed downgradient of the Building 2300. It should be noted that, based on Figure 1-3, Site Layout and Previous Surface Water/Sediment Sample Location Map, the monitoring wells associated with the Tow Way Fuel Farm (SWMU 7/8) appear to be all upgradient (or side gradient) of SWMU 76. If the groundwater flow is toward the southwest, as reported, it is unclear how potential releases from the building itself will be evaluated. Please revise the Phase I RFI Work Plan to include installation of a monitoring well (and the collection of a groundwater sample) southwest of the main maintenance bay. This monitoring well should assist in evaluating whether releases from the trench drain may have impacted groundwater.*

Navy Response to EPA Comment No. 4: The Navy agrees with this comment. Figure 3-1 will be revised to specify that a groundwater sample will be collected at a proposed soil boring location that will be installed southwest of Building 2300 (boring location 76SB02). This location was agreed to during the June 16, 2009 conference call and email later that day showing the proposed location. The text in Sections 3.2 and 3.3, as well as Table 3-1 and Figure 3-1 also will be revised to reflect the collection of groundwater at this boring location.

5. *Section 3.0 (Scope of Investigation) states that implementation of this work plan will be completed by a third party (Army National Guard), and that the standard operating procedures (SOPs) for sampling and other field activities will be provided later by the Army National Guard. However, the schedule given in Figure 5-1 does not reflect this later submission of SOPs by the Army National Guard, nor does it reflect that subsequent time would be required for EPA review of those SOPs as well as for the Army National Guard to make any revisions to the SOP which may be needed to satisfy EPA requirements. Please revise the schedule given in Figure 5-1 to reflect this.*

Navy Response to EPA Comment No. 5: Figure 5-1 will be revised to reflect the submission of SOPs by the Army National Guard, review of the SOPs by the EPA, as well as any revisions to the SOPs which may be necessary to satisfy EPA requirements. It should be noted that the start date for this task is dependent on transfer of the property to the Army National Guard and the development of the third party order between the EPA and the Army National Guard. As such no specific date has been placed into the schedule at this time for this task and the follow on tasks.

6. *Also, please note, that unless and until a separate Consent Order between EPA and the Army National Guard becomes effective, pursuant to the 2007 RCRA Consent Order, the Navy shall remain responsible for completion of the corrective action requirements at SWMU 76, including submission of the draft Phase I RFI Report as described in Section 4.0 (Reporting) of the work plan.*

Navy Response to EPA Comment No. 6: The Navy agrees with this comment, the current plan is for the Army National Guard to enter into a third party order with the EPA. Implementation of this work plan along with subsequent work will then become the responsibility of the Army National Guard.

PREQB COMMENTS

(The original PREQB comments, the Navy's original responses to PREQB comments, and PREQB's evaluation of the Navy Responses are printed in italics, while the Navy responses to PREQB's evaluation of the original Navy responses are provided in regular print.)

GENERAL COMMENTS

1. *General Comment 1. Omission from the Work Plan of data from the 2002 surface water and sediment sampling and analysis program precludes a final determination as to the number and locations of additional sediment and surface water samples that should be collected in the Phase I RCRA Facility Investigation (RFI). But it is clear that the number and locations of previous samples are not adequate to fully evaluate potential historical releases into the subtidal habitats of Ensenada Honda. All but one of the prior sediment samples (7SDI3) appear to have been collected in near shore shallow waters of the inter tidal zone, where tidal flushing and wave action would have prevented the deposition and accumulation, over time, of contaminated sediments released from the site as suspended sediment loads in stormwater discharges and overland surface water runoff. Several additional, collected sediment and surface water samples should be collected from subtidal reaches of the three embayment at SWMU 76,*

since these are the depositional areas into which suspended sediments contained in surface water runoff are most likely to have settled out of the water column and accumulated since the facility was built.

Navy Response to PREQB General Comment 1: The Navy respectfully disagrees with this comment and offers the following points of clarification. The subject Work Plan is for a Phase I RFI designed to determine through environmental sampling whether or not releases of hazardous waste and hazardous constituents have occurred at SWMU 76 and to determine whether or not a full RFI is required. The Phase I RFI is not designed to fully delineate any contamination within environmental media impacted by potential releases. This approach is consistent with EPA Region II guidance (Timothy Gordon, August 7, 2007 presentation to the Restoration Advisory Board on the RCRA Corrective Action stages). With this in mind, the Navy believes that existing surface water and sediment analytical data for samples collected during the 2002 additional data collection field investigation at the Tow Way Fuel Farm will adequately determine if chemicals associated with any releases at SWMU 76 have migrated to the Ensenada Honda with groundwater and/or storm water discharges through Outfall 011. Should the need be identified for a full RFI investigation, additional data collection will be proposed within a full RFI Work Plan for a more comprehensive assessment of surface and sediment quality within the Ensenada Honda. In summary, the Navy believes that existing surface water and sediment data are adequate to determine if site-related chemicals have migrated with groundwater and/or storm water to the Ensenada Honda. As such, revisions to the Work Plan are not deemed necessary.

It is noted that tidal influences within the Ensenada Honda are minor (i.e., the difference between high tide and low tide is less than 2.0 feet). Sediment sample locations are not located within intertidal zones of the Ensenada Honda (i.e., areas exposed to air during low tide). Sediment sample locations 7SD7, 7SD8, and 7SDI3 were accessed and sampled from a boat due to the depth of surface water at these locations (greater than 10 feet). Sediment sample 7SD05, located within a small inlet adjacent to Outfall 011, was collected during low tide. Water depth at the time of sampling exceeded one foot. Note that the shoreline of this small inlet is lined with rip rap. The "muddy" appearance of this inlet on Figure 1-3 and 3-1 can be attributed to sedimentation of eroded material (i.e., soil) conveyed by storm water through Outfalls 010 and 011.

PREQB Evaluation of Response: Although the clarification about surface water depths provided in the response adequately indicates that prior sediment samples were collected from shallow subtidal locations, the remaining spatial gaps in the prior sediment sampling could result in evidence of a release into near shore subtidal sediments being overlooked. Thus, the request for supplemental sediment samples was limited to assure that a few subtidal locations with the greatest potential to exhibit evidence of a historical release would be sampled. Because sediments integrate evidence of long-term historical releases that often are not detectable in samples of the overlying surface water column, adequate spatial coverage of sediment samples is critical to detecting historical releases. In addition, overland runoff across paved surfaces and/or spills while refueling docked vessels could have transported contaminants into the near shore marine environment at subtidal locations other than those adjacent to the stormwater outfalls, such as the embayments and docking locations. Thus, at a minimum, sediment should be collected from three subtidal locations at which only surface water samples were collected previously (i.e. 7SW2, 7SW4 and 7SW6). As originally requested (by both EQB and EPA), the existing data from prior samples of sediment and surface water should be provided in the revised Work Plan.

Navy Response to PREQB Evaluation of Response to Comment: As indicated by the EPA during the June 16, 2009 conference call between the EPA, PREQB, Navy, Baker, and TRC (PREQB consultant), additional sediment sampling within the Ensenada Honda will not be conducted as part of the Phase I RFI. If the Phase I RFI data determines that additional sediment sampling within the Ensenada Honda is necessary (i.e., a site-related release and subsequent migration to the Ensenada Honda has been established), sediments will be evaluated as part of the subsequent investigation (i.e., Full RFI or CMS).

2. General Comment 2. *Proposed surface soil sampling program does not provide adequate spatial coverage for what appears in the aerial photograph of Figure 3-1, to be a combined 30,000 to 40,000 sq ft. of bare soil and/or lawn areas flanking the west/northwest and east/southeast sides of Building 2300. Because these open lawn/soil areas are likely to represent potential foraging habitat for invertivorous birds, they should be described as potential ecological exposure zones and sampled at 3 or 4 locations on each side of the building for surface soils to a depth no greater than 2 feet, including one or two locations near the oil-water separator*

Navy Response to PREQB General Comment 2: *The Navy respectfully disagrees with this comment and offers the following points of clarification. As discussed in the Navy Response to PREQB General Comment No 1, the subject Work Plan is for a Phase I RFI designed to determine through environmental sampling whether or not releases of hazardous waste and hazardous constituents have occurred at SWMU 76 and to determine whether or not a full RFI is required. The Phase I RFI is not designed to fully delineate potential contamination within environmental media impacted by potential releases. With this in mind, the Navy believes that the proposed surface soil sampling program will adequately determine if chemical releases to surface soil have occurred*

On-shore winds prevail at this portion of NAPR; therefore, surface soil sample locations 76-SS03, 76SS04, 76-SS05 and 76SS-06 have been established on the Forrestal Road side of the main maintenance bay, down wind of paint stripping and painting operations (the openings of the structure where operations are performed will result in the preferential transport of particles associated with paint stripping and painting operations towards these surface soil sampling locations). Furthermore, owing to the presence of an opening on the southwestern end of the structure, these additional surface soil sampling locations have been established to account for other wind directions and the random distribution of particles from site operations. Should the need be identified for a full RFI investigation based on the evaluation of surface soil analytical data within the Phase I RFI report, additional data collection will be proposed within a full RFI Work Plan for a more comprehensive assessment of surface soil quality within upland areas contiguous to SWMU 76. In summary, the Navy believes that the surface soil sampling program depicted on Figure 3–1 and described in Section 3.1 will adequately determine if a release of hazardous waste and hazardous constituents to surface soil has occurred and revisions to the Work Plan are not deemed necessary.

PREQB Evaluation of Response: *It is understood that the Phase I RFI is intended to determine whether or not a release has occurred, rather than to map the nature and spatial extent of any surface soil contamination resulting from historical activities at the facility. However, potential evidence of past releases to surface soils cannot be ruled out nor detected without adequate spatial coverage of sampling on all sides of Building 2003, including all locations where historical activities may have resulted in a contaminant release to the ground surface. The proposed soil sampling focuses on air transport of particles from paint stripping and painting operations to downwind locations. Surface soil samples also should target locations that may have been impacted by other contaminant release pathways, such as direct spills to the ground surface and/or runoff onto soils from paved areas that do not or did not historically drain into the stormwater drainage system. In other responses to comments, Navy has acknowledged that: (a) the historical locations of petroleum, paint, solvent or waste storage areas are not known; (b) no information about past waste management practices is available; and (c) the location of the internal trench drain relative to the oil-water separator is not known. Given these key gaps in the site's historical information, it is even more important that the large lawn areas both East and West of Building 2300 be sampled to detect possible evidence of direct and/or indirect releases to the ground from petroleum, solvent, paint or waste spills, including potential discharges or leakage from the trench drain and/or oil-water separator. Surface soil also should be collected at the subsurface soil boring proposed near the oil-water separator (76SB-01).*

Navy Response to PREQB Evaluation of Response to Comment: The Final Work Plan will be revised to indicate that additional surface and subsurface soil samples will be collected at the locations agreed upon during the June 16, 2009 conference call between the EPA, PREQB, Navy, Baker, and TRC (PREQB consultant) and depicted on a figure provided in an email from Mr. Mark Kimes (Baker) that same day. In addition to the agreed upon surface soil samples, one additional surface soil sample will be collected at proposed soil boring location 76SB01. This additional surface soil sample was requested by Mr. Timothy Gordon (EPA) in an email dated June 17, 2009.

PAGE-SPECIFIC COMMENTS

1. *Page 1-2, Section 1.3 and Figure 1-3.* The locations of prior sediment and surface water samples in this figure appear to be spatially out of phase with the aerial photograph, such that some surface water samples appear to fall on paved surfaces (7SW4 and 7SW6) or perhaps on dry land (7SW2, 7SW3, and 7SW5). Please recheck these plots, discuss whether surface water locations 7SW4 and 7SW6 were sampled beneath piers, and explain why sediments were not sampled at these two locations. Please also further refine this figure for greater clarity by adding labels for (a) the boat launch, (b) the low tide mark, to illustrate subtidal reaches of the offshore habitats to be sampled, and (c) intertidal areas, including mud flats or vegetated habitats, and onshore lawns or bare soil areas.

Navy Response to PREQB Specific Comment 1: The aerial photo depicted on Figures 1-3 and 3-1 show a barge docked along the sea wall at surface water sample location 7SW6, which was not present during sample collection. Similarly, the docked vessel shown at surface water sample location 7SW4 was not present during sample collection activities. These surface water sample locations, as well as the remaining surface water and sediment sample locations are correctly depicted on the figure (i.e., they are not out of phase with the aerial photographs). Rational for the establishment of each surface water and sediment sample location is presented within the EPA-approved Final Work Plan for Additional Data Collection for Tow Way Fuel Farm, dated September 27, 2001.

With regard to refining Figure 1-3 for greater clarity, the following points of clarification are made. Figure 1-3 will be revised to include a label for the boat launch. As the low tide mark within this portion of the Ensenada Honda is not known, the figure cannot be revised with any accuracy to depict this feature. All sample locations were established within areas that are always covered by water (i.e., subtidal regions). Finally, the Navy believes that manicured lawns and bare soil areas can easily be ascertained from Figure 1-3 and data labels identifying their location are not necessary. It is noted that the Phase I RFI report will include a figure showing upland and marine habitats in the vicinity of SWMU 76.

PREQB Evaluation of Response: Response is accepted. Please plan to determine the low tide elevation during the investigation so that the boundaries of the intertidal and subtidal habitats can be depicted on the site figures in the Phase I RFI Report.

Navy Response to PREQB Evaluation of Response to Comment: As sediment sampling will not be conducted during the Phase I RFI (see Navy response to PREQB's evaluation of the original Navy response to General Comment No. 1), boundaries of the intertidal and subtidal habitats will not be determined as part of the Phase I RFI. If the Phase I RFI data determines that additional sediment sampling within the Ensenada Honda is necessary (i.e., a site-related release and subsequent migration to the Ensenada Honda has been established), this information will be provided as part of the subsequent investigation (i.e., Full RFI or CMS).

2. *Pages 1-2 and 1-3, Section 1.3 last paragraph.* Please add the sampling of surface water and sediment from additional subtidal locations, within 50 to 100 feet of the low tide elevation of the three embayment abutting SWMU 76 as an objective of the RFI. The previous investigation in 2002 failed to include

sample locations in subtidal locations most likely to have returned sediments with site-derived contamination

Navy Response to PREQB Specific Comment 2: Please see the Navy Response to PREQB General Comment No 1.

PREQB Evaluation of Response: Please see PREQB's evaluation of response to General Comment No. 1. As discussed in the evaluation of Navy RTC for General Comment No. 1, the remaining spatial gaps in the prior sediment sampling could result in evidence of a release into near shore subtidal sediments being overlooked. Thus, at a minimum, sediment should be collected from three subtidal locations at which only surface water samples were collected previously (i.e. 7SW2, 7SW4 and 7SW6).

Navy Response to PREQB Evaluation of Response to Comment: Please see the Navy Response to PREQB's evaluation of the original Navy Response to General Comment No. 1.

3. Page 1-2, Section 1.2. Please expand the site history to describe areas where petroleum/paint/ solvent product(s) and waste were stored. Additionally, please describe how and where waste paint (liquids as well as solids, such as chips) were managed.

Navy Response to PREQB Specific Comment 3: As no historical information is known regarding the location where petroleum/paint/solvent(s) and waste were stored or how and where waste paint (liquids as well as solids, such as chips) were managed, the requested revisions to Section 1–2 cannot be made. Note that the text in Section 2–1 acknowledges that limited information is available regarding operations at the site.

PREQB Evaluation of Response: Please add text to this section that states that no historical information is known regarding the location where petroleum/paint/solvent(s) and waste were stored or how and where waste paint (liquids as well as solids, such as chips) were managed.

Navy Response to PREQB Evaluation of Response to Comment: Section 1.2 of the Final Work Plan will be revised to include the requested language.

4. Page 3-1, Section 3.0 Section 1.2 Indicates that waste was discharged to the ground surface immediately outside the building, but does not specify the locations of these discharges. The subsurface investigation should include subsurface soil samples in areas where waste was known or suspected to have been discharged to the ground.

Navy Response to PREQB Specific Comment 4: The waste materials referred to in Section 1.2 are particles associated with paint stripping (hydroblasting) and painting operations, which have exited the main maintenance bay and deposited onto the ground surface. There is no indication that liquid wastes have been released to the ground surface. Based on the nature of this waste material, the Navy does not believe subsurface soil samples are necessary. It is noted that two subsurface soil samples will be collected from a single boring (76-SB01) to evaluate whether subsurface soil releases from the oil/water separator have occurred.

PREQB Evaluation of Response: Based on the Navy's response to Specific Comment 3, there is no historical information on how waste paint (liquids as well as solids) were managed. Therefore, it is not known whether waste liquids were discharged to the ground. A subsurface investigation is needed to evaluate potential impacts associated with past releases in areas where waste was known or suspected to have been discharged to the ground surface.

Navy Response to PREQB Evaluation of Response to Comment: The Work Plan will be revised to indicate that subsurface soil samples will be collected at a total of four boring locations (76SB01 through 76SB04). The location and number of soil boring locations were agreed upon during the June 16, 2009 conference call between the EPA, PREQB, Navy, Baker, and TRC (PREQB consultant) and depicted on a figure provided in an email from Mr. Mark Kimes (Baker) that same day.

5. *Section 3.0.* Since Section 3-1 discusses only soil sampling, please provide a new, separate section on proposed sediment and surface water sampling. This new discussion should (a) summarize the analytical data from the surface water and sediment samples collected in 2002, (b) clearly distinguish which samples were collected from intertidal versus subtidal habitats, (c) explain why co-located sediment was not sampled at three surface water locations and why surface water was not sampled at 7SD13, and (d) describe the intertidal and subtidal habitats sampled in 2002 and proposed for additional sampling. Sampling and analysis details should include whether (a) paired samples of unfiltered and filtered surface water will be collected to analyze total and dissolved metals, and (b) whether sediments will be analyzed for factors that influence bioavailability, such as total organic carbon (TOC) and simultaneously extracted metal acid volatile sulfide ratios (SEMAVS).

Navy Response to PREQB Specific Comment 5: Please see the Navy Response to PREQB General Comment No. 1 and PREQB Specific Comment No 1.

PREQB Evaluation of Response: Although adequate clarification is provided that all sediment and surface water samples were collected from subtidal reaches, the responses to PREQB General Comment No. 1 and Specific Comment No. 2 do not address parts (a), (c) and (d) of this comment, requesting that the Final Work Plan present and discuss available analytical data, explain why sediment was not sampled from three previous surface water locations, and describe the subtidal habitats. While the offshore habitat descriptions may be deferred until the Phase I RFI Report is prepared, please revise the Work Plan to: (a) propose at least three supplemental sediment samples at 7SW2, 7SW4, and 7SW6; and (b) present and discuss available sediment and surface water analytical data. For example, please clarify whether the sediment and/or surface water data collected in 2003 indicated evidence for a historical release into the marine environment and at which of these prior subtidal sampling locations such evidence was found.

Navy Response to PREQB Evaluation of Response to Comment: As discussed in the Navy response to PREQB's evaluation of the Navy's response to General Comment No. 1, the EPA, PREQB, Navy, Baker, and TRC (PREQB consultant) agreed during a conference call on June 16, 2009 that additional sediment sampling within the Ensenada Honda will not be conducted as part of the Phase I RFI. If the Phase I RFI data determines that additional sediment sampling within the Ensenada Honda is necessary (i.e., a site-related release and subsequent migration to the Ensenada Honda has been established), sediments will be evaluated as part of the subsequent investigation (i.e., Full RFI or CMS). The available sediment and analytical data, as well as an evaluation of these data, can be found in the *Final Corrective Measures Study Task I Report, Tow Way Fuel Farm (SWMU 7/8)* dated April 23, 3003.

6. *Page 3-1, Section 3.0.* Please expand the sediment sampling program to include two (2) additional locations: (1) within the trench drain, and, (2) within the oil/water separator. Such samples would provide data with which to characterize the current contents of these features, as well as possibly identify past contaminants that were discharged to these systems. Should contaminants be identified in the system, a comprehensive sampling of the piping is indicated.

Navy Response to PREQB Specific Comment 6: The Navy respectfully disagrees with this comment and offers the following points of clarification. As discussed in Section 2.1, the oil-water separator discharges to an NPDES-permitted sanitary wastewater treatment plant. Any contaminants that may be present within the trench drain or oil-water separator that may reach the treatment plant are regulated under the treatment

plant's NPDES permit. As such, the Navy does not believe sampling within the trench drain and oil-water separator is necessary, nor does the Navy believe a sampling program of the sanitary sewer system is warranted. It is noted that a corrective action complete determination, without controls, has been made for SWMU 38 (see EPA letter dated January 27, 2009).

PREQB Evaluation of Response: Results of samples collected within the trench drain and oil/water separator provide data to meet Phase I RFI objectives to determine whether or not releases of hazardous waste/constituents have occurred and identify the contaminants. Responses presented to EPA and EQB Comments document lack of understanding of the location of the trench relative to the oil/water separator and of the former location(s) of material/waste storage at the site. Based on these data gaps, it is prudent to assess the current condition of the trench drain and oil/water separator and obtain analytical data from sediment samples from within each structure.

Navy Response to PREQB Evaluation of Response to Comment: Two trench drains were identified in Building 2300 during a site inspection conducted on May 13, 2009. One trench drain is located at the southwest bay opening, while the second trench drain is located at the northeast bay opening. The trench drains run the entire length of each bay opening and are designed to collect any storm water run-off that may enter the bay openings. This information was discussed during the June 16, 2009 conference call between the EPA, PREQB, Navy, Baker, and TRC (PREQB consultant). Based on this discussion, it was determined that sampling within the trench drains and oil-water separator will not be conducted during the Phase I RFI. It is noted that the Final Work Plan will be revised to include photographs within Appendix A showing the location of each trench drain relative to the bay openings. The text within Section 1.2 also will be revised to acknowledge the presence of two trench drains and provide a description of their location and function.

7. Page 3-1, Section 3.1, Paragraph 1. The text, as well as the title of this section, indicates that sediment samples will be collected but Section 1.3 of the Work Plan states that sediment samples will not be collected because a previous investigation already included this media. In addition, Table 3-1 does not include sediment samples. Please clarify this section accordingly.

Navy Response to PREQB Specific Comment 7: As discussed in the Navy Response to PREQB General Comment No 1, the Navy does not believe additional sediment sampling is necessary to meet the objectives of the Phase I RFI. The title of Section 3-1, as well as associated text will be revised to eliminate any reference to sediment sampling.

PREQB Evaluation of Response: Please see PREQB's response to General Comment 1.

Navy Response to PREQB Evaluation of Response to Comment: Please see the Navy response to PREQB's evaluation of the original Navy response to General Comment No. 1.

8. Page 3-1, Section 3.1. This section indicates that a boring log will be prepared indicating blow counts, lithology, and water occurrence. However, blow counts are typically not collected when direct-push technology is used for soil sampling. Please clarify in the revised text.

Navy Response to PREQB Specific Comment 8: The Navy agrees that blow counts are not recorded/collected when direct-push technology is used for soil sampling. Section 3-1 will be revised to delete the reference to blow counts.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

9. *Pages 3-1 and 3-2, Section 3.1.* Additional surface soil samples are needed to determine if a release has occurred from Building 2300 and/or the oil-water separator into the two large areas of lawn/bare soil flanking the building on the west/northwest and east/southeast sides. Please recheck the overlay of the drainage boundaries, drainage system, and existing/proposed sample locations in Figure 3-1 and add the appropriate labels. Please consider removing the existing sediment and surface water locations from this figure and preparing a new figure, with the same base map labels, that is dedicated to the prior and newly proposed sediment and surface water sample locations.

Navy Response to PREQB Specific Comment 9: As discussed in the Navy Response to PREQB General Comments Nos 1 and 2, the Navy does not believe additional surface soil, surface water, and sediment sampling is necessary to meet the objectives of the Phase I RFI. With regard to Figure 3-1, the Navy feels that the drainage boundaries, drainage system, and exiting sample locations are accurately depicted on Figure 3-1. The commenter must keep in mind that, when aerial photography and the drawings of the facility are combined, slight discrepancies may be noticed due to scales and type of data.

PREQB Evaluation of Response: As explained in the Evaluation of Navy's RTC for General Comment No. 2, the proposed surface soil sampling plan is not adequate to conclusively document or rule out evidence for a release of contamination to the surface soils of areas on all sides of Building 2300 because: (a) the sampling design too narrowly focuses on particle deposition in areas downwind of painting and paint removal operations; (b) it thus ignores potential releases to the ground surface from other historical activities and chemical/waste management practices that remain unclear; and (c) the Navy has acknowledged that the historical locations of petroleum, paint, solvent, and waste storage areas are not known. Given this significant lack of historical information on potential contaminant sources, additional samples should be collected from the two large areas comprising nearly 40,000 sq. ft. of lawn along the NW and SE flanks of Building 2300. Also, since it should be possible to reconcile different scales in aerial images versus the base map for the site, please plan to do so when producing a revised site plan for inclusion in the Phase I RFI Report.

Navy Response to PREQB Evaluation of Response to Comment: Please see the Navy response to PREQB's evaluation of the original Navy response to General Comment No. 2. With regard to merging aerial photography with line drawings, minor discrepancies are unavoidable due to the differences in the source data. The scales have already been reconciled and the differences between the two data sources are caused when to data sources with different purposes are merged together on the same map.

10. *Pages 3-1 and 3-2, Section 3.1.* Please clarify the text to indicate whether only data from the 0 to 1 foot bgs interval will be used for surface soil in the ecological risk assessment (ERA). Please discuss whether the bare soil and/or lawn areas at SWMU 76 are considered unlikely to provide significant habitat for burrowing animals (e.g., land crabs), such that surface soil samples to be evaluated using ecological screening values (ESVs) need not be collected any deeper than 1 foot bgs based on site-specific conditions (e.g., fill overlain by shallow topsoil). However, if the biologically active zone does extend to 2 feet bgs (e.g., burrows of land crabs), then surface soil samples should be collected from 0-2 feet bgs

Navy Response to PREQB Specific Comment 10: The predominant land crab species encountered at NAPR is the blue land crab (*Cardisoma guanhumi*). Blue land crabs (or other land crab species) have not been observed at SWMU 76 or adjacent areas during previous investigations (well installations for investigations at the Tow Way Fuel farm). The ecology of the blue land crab also indicates that there is little potential for this species to occur at SWMU 76 and adjacent areas. As land crabs require water within their burrows for hydration, depth to ground water can be a limiting factor for this species. Given that burrow depths can range up to 6-feet below ground surface and the depth to groundwater measured at wells installed near SWMU 76 during investigations at the Tow Way Fuel Farm exceed this depth (6.91 to 820 feet below ground surface), land crabs are not likely to be present at SWMU 76 and adjacent areas. The absence of suitable

foraging habitat also limits their potential for occurrence at SWMU 76. Given that available terrestrial habitat at SWMU 76 is limited to manicured lawns, preferred foods, including tender leaves (red and white mangrove and buttonwood tree leaves), fruits, berries, and flowers, are not available. In summary, based on field observations, land crab biology, and the absence of suitable habitat, it is unlikely that land crabs are present at SWMU 76. Therefore, only data collected from the 0 to 1-foot depth interval will be used to define surface soil Section 3.1 will be revised to clarify that surface soil samples will be collected from the 0 to 1-foot depth interval.

It is noted that PREQB Specific Comment No 10 makes reference to an ecological risk assessment (ERA). An ERA will not be conducted as part of the Phase I RFI investigation.

PREQB Evaluation of Response: Response is acceptable. Please add the discussion of this response to the revised Work Plan.

Navy Response to PREQB Evaluation of Response to Comment: The Final Work Plan will be revised to include the requested language.

11. Page 3-2, Section 3.2, Paragraph 2. The proposal to obtain a groundwater sample from an undeveloped well is consistent with "screening-level" data quality. Should higher-quality data be required, a program consistent with EPA Region 2 guidelines will be required (i.e., developed wells and low-flow sampling).

Navy Response to PREQB Specific Comment 11: The Work Plan will be revised to address the installation of a two (2.0)-inch inner diameter permanent monitoring well at 76-SB01 instead of the proposed one (1.0)-inch temporary well in order to comply with the Region 2 SOP for low flow sampling. Section 3.2 also will be revised to address drilling techniques and well development procedures for the two-inch permanent well.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

12. Page 3-3, Section 3.3, Paragraph 1. The groundwater program should be expanded to include analysis of volatile organic compounds (VOCs). Paragraph 1 on Page 1-3 indicates that subsurface soil and groundwater samples will be analyzed for VOCs, SVOCs, and metals.

Navy Response to PREQB Specific Comment 12: As discussed in Section 3.3 and shown within Table 3-1, the proposed groundwater sample will be analyzed for VOCs.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

13. Page 3-4, Section 3.4, Paragraph 3. The text states that soil sample field duplicates will be homogenized and split. Provide clarification in this section that this procedure will be performed for SVOCs and metals only. Soil samples for VOC analysis must not be homogenized.

Navy Response to PREQB Specific Comment 13: Section 3.4 will be revised to state that field duplicates will be homogenized and split for SVOCs and metals only.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

14. Page 4-1, Section 4.4. Please clarify if the USEPA Regional Screening levels, which have replaced the USEPA Region 9 Preliminary Remediation Goals, will be used for screening purposes. If so, please update the Work Plan accordingly.

Navy Response to PREOB Specific Comment 14: Section 4.4 will be revised to clarify that EPA Regional Screening Levels will be used to screen the Phase I RFI soil and groundwater analytical data, as well as the 2002 surface water and sediment analytical data.

PREOB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

15. Page 4-1, Section 4.4, last sentence. Please confirm that the surface water ESVs to be used for surface water will include the most recently updated national ambient water quality criteria (AWQC, USEPA, 2006).

Navy Response to PREOB Specific Comment 15: Surface water ecological screening values will include the most recently updated National Ambient Water Quality Criteria (NAWQC). Section 4.4 will be revised accordingly.

PREOB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

16. Page 4-2, Section 4.4 Comments regarding the statistical analysis process:

- Clarify how outlier data points are managed/accounted for in the suite of statistical tests proposed
- Clarify if the background datasets is comparable to the site data. Ideally, both datasets should be unbiased and representative of geochemically and anthropogenically similar domains. In addition, the two datasets should be nearly of the same size. In practice, site samples tend to be clustered toward areas of concern (as in this case), which may be a complicating factor. Describe how differences in the two data sets will be accounted for in the statistical comparisons.
- Clarify how the 95%-UCL is calculated and whether the distributions of the data are appropriately considered. Pro-UCL software is frequently used for such calculations because it takes the data distribution (normal, log-normal, etc) into consideration.

Navy Response to PREOB Specific Comment 16: The current approach used to evaluate analytical data for inorganics (i.e., metals) in Phase I RFI reports includes a comparison of data to background screening values. The background screening values used in this comparison are upper limit of the mean (ULM) concentrations contained in the EPA-approved Revised Final II Summary Report for Environmental Background Concentrations of Inorganic Compounds (Baker, 2008). Given that statistical comparisons to background analytical data will not be performed as part of the nature and extent of contamination discussion, Section 4.4 will be revised by deleting any reference to the statistical analysis process (i.e., the second paragraph will be deleted in its entirety). Figure 4-1 also will be deleted from the document. Finally, Section 4.4 will be revised to indicate that soil, surface water, sediment and groundwater analytical data for metals will be compared to ULM background concentrations.

PREOB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

17. Page 4-2, Section 4.4, 3rd paragraph. Please discuss whether an unimpacted reference habitat will be sampled for sediments and surface water, including intertidal and subtidal reaches resembling those at SWMU 76, to provide representative "background" concentrations of inorganics, so as to (a) help assess evidence for historical releases into the marine environment, and (b) provide data for use in a future ERA to assess any incremental, site-derived ecological risks separate from naturally-occurring metals in sediment and surface water at SWMU 76.

Navy Response to PREQB Specific Comment 17: A background data set for open water marine environments has already been established for NAPR. The background data are presented within the EPA-approved Revised Final II Summary Report for Environmental Background Concentrations, dated February 29, 2008. No additional background sampling will be conducted as part of the Phase I RFI investigation at SWMU 76.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

18. Figure 3-1. Please remove the 2002 sediment and surface water sample locations from Figure 3-1 and prepare a new figure to show the existing and proposed new sediment and surface water sample locations for both intertidal and subtidal habitats.

Navy Response to PREQB Specific Comment 18: Please see the Navy Responses to PREQB General Comment No. 1 and PREQB Specific Comment No. 1.

PREQB Evaluation of Response: As discussed in the evaluations of Navy Response to Comments for General Comment No. 1 and Specific Comment No. 2, supplemental sediment samples should be collected from at least those three subtidal locations at which only surface water samples were collected previously (i.e. 7SW2, 7SW4 and 7SW6), to assure that potential evidence for a release into sediments is not overlooked at these sample locations. Please revise Figure 3-1 to show these proposed new sediment samples.

Navy Response to PREQB Evaluation of Response to Comment: Please see the Navy response to PREQB's evaluation of the original Navy response to General Comment No. 1.

19. Figure 4-1. USEPA guidance does recommend substitution of a result below the detection limit with DL/2 (or DL or zero) (e.g. section 4.7 of "Data Quality Assessment Statistical Methods for Practitioners", EPA 2006). However, in other documents (e.g. "ProUCL Version 4.0 Technical Guide", April 2007 or "On the Computation of a 95% Upper Confidence Limit of the Unknown Population Mean Based Upon Data Sets with Below Detection Limit Observations", March 2006), the USEPA (Office of Research and Development) has recommended avoiding substitution methods when determining UCLs or hypothesis testing in favor of tests such as Gehan or Wilcoxon-Mann-Whitney. Please revise this figure to reflect the updated approach the USEPA uses which does not recommend substitution for non-detects and includes the more robust approaches provided by ProUCL or other peer-reviewed, public domain software packages. Also, some of the possible paths in the flow chart seem to have no resultant. For example, there are no statistical tests leading to the "Determination of Significance" portion of the flow chart from the branches ending at "Do Not Perform Right-Tail Test" or "Do Not Perform Proportional Statistics". Do these paths end with the assumption that there is no statistical difference between background and site samples?

Navy Response to PREQB Specific Comment 19: As discussed in the Navy Response to PREQB Specific Comment No 16, Section 4.4 will be revised by deleting the discussion pertaining to the statistical analysis process. Revisions to Section 4.4 will include the removal of Figure 4-1 from the document.

PREQB Evaluation of Response: Response is acceptable.

Navy Response to PREQB Evaluation of Response to Comment: Evaluation of response noted.

20. Appendix C Quality Assurance Project Plan

- Sections 4.1 and 5.1 of the QAPP should also mention that the PID will be used for soil screening and not just for ambient air monitoring. In addition, Section 3.1 of the Work Plan mentions that a flame ionization detector (FID) may be used. Therefore, these sections should include an FID also.
- Section 4.2.1 of the QAPP provided details on tuning and calibration of the GC/MS for VOCs. Tuning information for the GC/MS for SVOCs as well as calibration information for the GC/AIS for SVOCs and the ICP and CVAA for metals must also be provided.
- Section 4.2.1 of the QAPP states that the USEPA specifies the internal standard to be used on a compound-by-compound basis. This statement is true for CLP methods but not SW-846 methods. Since SW-846 methods are being used for this program (as per Table 3-2 of the Work Plan), this statement should be removed.
- Section 5.2 of the QAPP states that solid IDW will be analyzed for ICL VOCs. However, Table 3-3 of the Work Plan states that solid IDW will be analyzed for benzene and RCRA metals. Please clarify.
- Section 5.2 of the QAPP states that solid IDW will be analyzed for CLP VOCs, SVOCs, metals, pesticides, and herbicides. However, Table 3-3 of the Work Plan states that solid IDW will be analyzed for benzene and RCRA metals. Please clarify.
- Section 6.1 of the QAPP cites older laboratory validation guidelines to be used for the validation of field data. The use of laboratory validation guideless to validate field procedures for this program is inappropriate. The reference to these guidelines should be removed.
- Section 6.3 of the QAPP is very unclear as to what validation guideless will be followed. One statement refers the reader to the Region 2 validation worksheets and another statement refers the reader to an older version of EPA validation guidelines. As per Section 3.5 of the Work Plan, the Region 11 validation SOP, should be followed for this program. If EPA validation guidelines are also used (for parameters where Region II SOPs do not exist), then the most recent versions of these guidelines should be cited (October 1999 for organics and October 2004 for inorganics).
- Section 7.1 of the QAPP discusses the collection of field duplicates for water samples. A discussion on the collection of field duplicates for soil samples should also be included.
- Section 7.1 of the QAPP includes a discussion on using passive diffusion bags for groundwater MS/MSDs. This should be removed as it does not apply to this program.
- Section 7.3 of the QAPP provides details on method blank criteria for VOCs. This section should also include criteria for SVOCs and metals.
- Section 7.3 of the QAPP includes details on corrective action when surrogates are outside criteria in a VOC method blank. This section should also include corrective action for when surrogates are outside criteria in samples for both VOCs and SVOCs.
- The surrogate corrective action is repeated twice in Section 7.3 of the QAPP. Please delete the second iteration.
- Section 9.1.1 of the QAPP states that field duplicates are collected at a rate of 1 per 20 samples per matrix. However, Section 3.4 of the Work Plan and Section 7.1 of the QAPP state that the field duplicates are collected at a rate of 1 per 10 samples per matrix. Please clarify.

- Section 9.5 of the QAPP should provide specific information on any data that will be used that was generated under other investigations or by other parties. The potential limitations on these data should be noted.

Navy Response to PREQB Specific Comment 20: The Work Plan was originally prepared with the understanding that an as yet undetermined third party would be responsible for implementation of the activities; consequently, the Work Plan was written in an open-ended fashion to allow the third party entity the flexibility of identifying DQOs, SOPs, and QAPP requirements for EPA approval. The Navy has implemented previous investigations at NAPR in accordance with the EPA approved Master Project Management Plan (PMP), Master Data Collection Quality Assurance Plan (DCQAP), Data Management Plan (DMP), and Master Health and Safety Plan (HSAP) for NAPR. These Master Plans define acceptable data requirements and error levels associated with the field and analytical portions of this investigation. Therefore, to maintain consistency with past Navy work under the Consent Agreement, the Work Plan will be revised using the Navy's EPA-approved Master Plans for this facility. In addition, the QAPP provided in Appendix C will be removed from the Work Plan.

It is noted that the approach described above was presented by the Navy in a letter dated April 17, 2008 addressing EPA comments (dated February 26, 2008) on Final Phase I Work Plans for SWMUs 57, 60, 62, 67, 70, 71, and 75. The approach presented in the Navy's April 17, 2008 response letter was approved by the EPA in a subsequent comment letter dated May 13, 2008.

PREQB Evaluation of Response: Please clarify whether the Master Plans provide the sampling and analytical methods that will be employed for this investigation as well as the required quantitation limits to ensure that all project action levels will be achieved. If the work plan is approved in an open ended fashion, a way to assure that the responsible party who implement it will submit a QAPP for revision after starting field work should be established.

Navy Response to PREQB Evaluation of Response to Comment: The Master Plans do not provide the specific sampling and analytical methods, nor do they provide the project-specific quantitation limits that will be employed for this investigation. However, specific sampling methodology, analytical methodology, and quantitation limits are presented within the Work Plan. Section 3.0 of the Final Work Plan will be revised to indicate that the third party implementing the work plan will ensure that quantitation limits meet project action limits.