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LETTER AND RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
EVALUATION OF RESPONSE TO COMMENTS ON DRAFT SAMPLING AND ANALYSIS
PLAN FORMER CARR POINT SHOOTING RANGE NS NEWPORT RI
3/27/2013
RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

235 Promenade Street, Providence, RI 02908-5767

TDD 401-222-4462

27 March 2013

Ms. Maritza Montegross
NAVFAC MIDLANT (Code OPTE3)
Environmental Restoration
Building Z-144, Room 109
9742 Maryland Avenue
Norfolk, VA 23511-3095

Re: Draft Sampling and Analysis Plan
Former Carr Point Shooting Range (MRP Site 01, OU9)
Former Carr Point Storage Area (IR Site 22, OU10)
Naval Station Newport, Newport, Rhode Island

Dear Ms. Montegross,

The Office of Waste Management at the Rhode Island Department of Environmental Management has conducted a review of the Navy's responses to RIDEM's comments on the *Draft Sampling and Analysis Plan* dated November 2012 for MRP Site 01- Former Carr Point Shooting Range and IR Site 22 - Former Carr Point Storage Area, Naval Station Newport, located in Portsmouth, RI. As a result of this review, this Office has generated the attached evaluation of responses.

If you have any questions in regards to this letter, please contact me at (401) 222-2797, extension 7020 or by e-mail at pamela.crump@dem.ri.gov.

Sincerely,

Pamela E. Crump, Sanitary Engineer
Office of Waste Management

cc: Matthew DeStefano, RIDEM
Richard Gottlieb, RIDEM
Gary Jablonski, RIDEM
Ginny Lombardo, USEPA Region I
Darlene Ward, NETC, Newport, RI
Melissa Cannon, Resolution
Ken Munney, USF&WS
Ken Finklestein, NOAA

RIDEM Evaluation (3/27/13) of the Navy's Responses (2/22/13)
to RIDEM's comments (1/10/13) on the Draft Sampling & Analysis Plan
for Former Carr Point Shooting Range (MRP Site 1, OU9)
and Former Carr Point Storage Area (IR Site 22, OU10)
Naval Station Newport, RI

Specific Comment 2: p. 43 (MRP Site 1), Operational History.

Please provide a separate figure showing the locations and configuration of the three firing arcs, as well as the three firing fans, showing the overlap of the firing fans. Also, please provide an additional large fold-out figure summarizing all previous activities at this Site, including all sample locations, test pits, associated sampling results which exceeded criteria, all former structures, pipes, outfalls, storage areas, etc. drawn on the figure. To ensure accuracy, the locations of the former structures, outfall, etc. should be based upon information obtained from historical plans and aerial photographs in conjunction with the figures from the previous Site Inspection Report.

Response: Because the Carr Point RI is site-specific for IR Site 22 and MRP Site 1, there are separate figures in the SAP for each site. Historical plans and aerial photographs, combined with available information related to previous activities, were reviewed as part of the SI phase, and are documented in the SI report (Tetra Tech, 2010). The figures presented in the SAP include the relevant sample locations, test pits, associated sampling results which exceeded criteria, former structures, pipes, outfalls, storage areas, etc. that were identified during the SI process and depicted in the SI report. These features provide the basis for the additional investigation planned for the RI.

Evaluation of Response: RIDEM understands that Sites 1 and 22 are separate areas, yet they are contiguous, and due to various transport mechanisms (dust migration, tidal movement of sediment, etc.), there is the possibility that there may be cross-contamination between the two sites. This office maintains that a comprehensive figure depicting historical features and sample locations, as suggested in our comment, will better support location of proposed soil and sediment samples. Please provide these figures as requested.

Specific Comment 3: p. 43 (MRP Site 1), Operational History.

Please provide a more detailed discussion of the uses of the Site buildings and how they may have or have not contributed to contamination at the Site. This discussion should note the function of the buildings, if they were serviced by underground storage tanks or leach fields, if there were any transformers located in the buildings, etc. Also, please review any existing condition maps, engineering plans and/or aerial photographs which may contain information concerning the locations of drainage structures, underground pipes, transformers, USTs, scrap yards, areas of disturbed soil, etc. These sources of information should be included in an appendix for review. If this review provides information concerning potential additional sources of contamination, it is recommended that appropriate samples be proposed for these additional areas.

Response: Please refer to the Navy's response to Specific Comment 2. Historical review was completed under the SI phase. No further historical review is planned as part of the RI phase. The SI report provides the basis for the additional investigation described in the SAP. Based on the proposed sampling plan relative to the size of the site, the sampling strategy should adequately capture any historical CERCLA release to the environment at the site.

Evaluation of Response: Please refer to evaluation of Navy's response to Specific Comment 2. As indicated in an e-mail sent by Pamela Crump on February 13, 2013 at 1:35 pm, including a historical figure provided as an attachment, information is not documented in the SI and therefore it appears that the historical uses and features of the site were not thoroughly researched and documented in the previous investigation. This office maintains that a more detailed discussion of Site buildings uses should be described in the SAP and that the historical review provided in the SI report be revisited, bolstered, and provided in the SAP, as suggested in Specific Comment 3, in addition to Specific Comment 2.

Specific Comment 9: p. 53 (IR Site 22), Operational History.

This SAP does not specify what types of materials were stored on the Site. Please provide a detailed discussion of what constituents were stored in the drums, the materials storage areas, and the scrap yard. Furthermore, please provide a more detailed discussion of the uses of the Site buildings and how they may have or have not contributed to contamination at the Site.

Response: Please refer to the Navy's response to Specific Comment 2. Historical review was completed under the SI phase. No further historical review is planned as part of the RI phase. The SI report provides the basis for the additional investigation described in the SAP.

Evaluation of Response: Please refer to evaluation of Navy's responses to Specific Comments 2 and 3. This office maintains that a more detailed discussion of Site buildings uses should be described in the SAP and that the historical review provided in the SI report be revisited, bolstered, and provided in the SAP, as suggested in Specific Comment 9, in addition to Specific Comments 2 and 3.

Specific Comment 10: p. 53 (IR Site 22), Operational History.

Please review the existing condition maps, aerial photos, etc. to ensure that all previous structures are included on the figures in this SAP. For example, Building 186, the scrap yard and the scrap bins (a possible PCB source) in between the rail line and the drum storage area are not shown on the figures in this SAP. Please update the figures as necessary, and include an additional large fold-out figure summarizing all previous activities at this Site, including all sample locations, test pits, associated sampling results which exceeded criteria, all former structures, pipes, outfalls, drain pits, and storage areas drawn on the figure.

Response: Please refer to the Navy's response to Specific Comment 2. Historical review was completed under the SI phase. No further historical review is planned as part of the RI phase. The SI report provides the basis for the additional investigation described in the SAP.

Evaluation of Response: Please refer to evaluation of Navy's response to Specific Comment 2. This office maintains that the historical review provided in the SI report be revisited, bolstered, and provided on the figures in the SAP, including a large fold-out figure, as suggested in Specific Comment 10, in addition to Specific Comment 2.

Specific Comment 11: p. 57 (IR Site 22), Nature and Extent of Contamination.

The SAP proposes to analyze petroleum hydrocarbons by volatile petroleum hydrocarbon (VPH) carbon ranges and extractable petroleum hydrocarbon (EPH) carbon ranges by the Massachusetts Department of Environmental Protection (MassDEP) methods. However, the RIDEM Direct Exposure Criteria (DEC) is for total petroleum hydrocarbons (TPH). Because the criterion of 500 mg/kg is for TPH as opposed to individual carbon ranges, please explain how Navy will use the VPH/EPH data to

compare to the RIDEM TPH standard. The concentrations of individual fractions will need to be summed to calculate a total TPH concentration. The laboratory TPH range will need to extend to C-44 and be capable of detecting all of the fuel oils that may have been used on the site including Navy Special. This comment also applies to p. 167, Table 15-1, Project Action Limits (PALs) – Soil.

Response: Analysis of petroleum hydrocarbons was initially included in the draft SAP at IR Site 22 for RIDEM (non-CERCLA) purposes. However, after further review, only one soil sample location, SB05 (0-1ft) at IR Site 22, contained petroleum hydrocarbon concentrations above state regulatory criteria (1,500 mg/kg DRO compared to a standard of 500 mg/kg). The location of SB05 is outside of the former drum storage area and not considered to be site-related. The Navy is thus planning to eliminate petroleum hydrocarbon analysis from the RI program.

Evaluation of Response: *RIDEM disagrees with Navy's conclusion to eliminate petroleum hydrocarbon analysis from the RI program. It is noted that the Navy states in the SAP "The primary sources of contamination in the former Carr Point Storage Area (IR Site 22) consist of potential petroleum, chlorinated solvents, and scrap material storage." As indicated in an e-mail sent to the group by Pamela Crump on February 13, 2013 at 1:35 pm, including a historical figure provided as an attachment, there is labeled an area in IR Site 22 as a "Drummed Petroleum Storage Area", which discharges to an oil separator pit. Therefore, sampling for TPH would be appropriate for this site. Also, if this information is not documented in the SI, then it appears that the historical uses and features of the site were not thoroughly researched and documented in the previous investigation.*

Furthermore, it appears as though one of the two former material storage areas (on the northwestern side of IR Site 22 through which runs the northwestern former drain line) has not been adequately characterized and is not proposed to be characterized in the SAP. Please add several sample locations in this area and include TPH analysis. Additionally, soil sample locations are proposed for the southeastern portion of the IR Site 22, in which SB05 is located. Because there is an exceedance of the RIDEM DEC for TPH in this area, please retain petroleum hydrocarbon analysis in the RI program and analyze these proposed samples for TPH.

Specific Comment 15: p. 74 (MRP Site 1) Soil Sampling.

In addition to soil borings, RIDEM strongly recommends the installation of a number of test pits to fully evaluate the potential contamination near known structures of concern at this Site (i.e., oil/water separator, drum storage area, scrap bins). The use of test pits can be extremely useful in determining the best locations for sampling as it allows one to observe any staining, product, etc. Also, please ensure that any locations where test pits have previously been dug along with any associated sampling results above criteria are shown on a figure in this SAP.

Response: Test pitting was completed as part of the SI process to help identify the best locations for sampling. The test pit locations and exceedances of SI action limits are shown in the SAP figures.

Evaluation of Response: *There appears to have been no test pitting conducted for Site 1 (Figure 3 of the SAP does not show any test pit locations). Test pitting on Site 1 would assist Navy in identifying any former structures on MRP Site 1 that might have had piping, drains, etc. Also, please see evaluation of response for Specific Comment 11. No test pits have been installed on the southeastern portion of MRP Site 22 and only one test pit was installed on the western-most corner of the former drum storage area. Therefore, please install additional test pits on the southeastern portion of MRP Site 22 and in the former drum storage area.*

Specific Comment 22: p. 149, Sediment Coring.

The text states that sediments will be sieved and rinsed with seawater in order to separate out lead pellets and larger material. This process would remove many of the fines, which could potentially under-quantify the concentration of contaminants in a sample. It is not stated in the text whether sieved samples be allowed to settle prior to decanting rinse water; however, this is recommended to the extent practical to allow for settling of fines and small suspended particles.

In addition to the sieved samples, whole sediment samples (non-sieved samples) should be analyzed for both the human health and ecological risk assessments in order for the samples to be representative of actual conditions of the site.

Navy Response: The samples will be sieved using the minimal amount of water possible and allowed to settle prior to siphoning off the rinse water. As discussed during the conference call on 2/13/2013, the SAP proposes to sieve the samples utilizing a #10 (2 mm) sieve to remove lead shot, vegetation, debris, etc. This approach is consistent with protocols followed during the SI. For consistency and comparability to the SI data, which will be incorporated in the RI, the same protocol will be implemented as part of the upcoming field program.

Evaluation of Response: Sieving was discussed at the March 7th conference call. Consensus was reached that samples for chemical analysis would be dry-sieved, and samples for toxicological analysis would not be sieved. Only a subset of samples (10 surface locations) would be wet-sieved for use in translating results to the SI dataset. Please revise the SAP to reflect this.

Specific Comment 24: p. 149, Toxicity Testing.

This SAP notes that toxicity testing will be conducted to evaluate risk to invertebrate receptors. RIDEM concurs with the logic associated with the testing; however, in order to ascertain the risk at this Site, the test must be conducted on whole sediment samples in which the lead pellets have not been removed as a result of the sieving process. Since macro invertebrates as well as all of the other marine life on the sea floor will be exposed to an environment in which lead pellets are present, the toxicity testing should be representative of this environment. Please revise the SAP to meet this condition.

Response: Refer to the Navy's response to Specific Comment 22. In addition, as discussed on the conference call on 2/13/2013, the same protocols will be used for the samples being submitted for chemical analysis as well as toxicity testing so that the data are comparable.

Evaluation of Response: See evaluation of Comment 22.

Specific Comment 29: p. 156, Summary of Project Tasks.

Information from historical site plans and aerial photographs indicates that the site contained a scrap yard, a materials storage area and potential areas of disturbed soil. Contaminated soil and buried waste has been found at similar Naval storage areas found on this base, as well as the Naval Construction Battalion Center (NCBC). As an illustration, a materials storage area which contained similar concrete storage bins located south of the Fuel Loading Area was found to contain soils contaminated with PCBs, metals, SVOCs and TPH. In addition, buried waste and scrap was also found on the site. It is recommended that a geophysical investigation, magnetometer, ground-penetrating radar, be conducted in the materials storage area, the scrap yard, the area adjacent to the storage bins, the drum storage area, and the locations of the former dry wells, as well as the former buildings (the latter will aid in ascertaining whether they were serviced by USTs or contained

discharge pipes which went to leachfields or to the bay). Test pits should be excavated in these areas and appropriate samples should be collected. Please also collect concrete chip samples from the storage bins and analyze the samples for contaminants, including PCBs. It appears that the drum storage areas have been backfilled with soil and construction debris. Please propose additional investigation and sampling in this area.

Please provide additional information concerning the two drain pits (i.e., What were they used for? Where did they drain to? Did they drain to the OWS? etc.) This information may be used to modify the existing SAP. If this information is not available, please include provisions for additional investigations of the drain pits in order to address this question, which may include a geophysical survey, test pits, etc. There are a number of buildings and fences on the site which may have been painted with lead paint. It is recommended that soil samples be collected from these locations and analyzed for lead.

This SAP proposes advancing the borings up to 16 feet. As it is known that the site was used for petroleum storage, it is recommended that all borings be advanced to a depth of three feet below the historic low water table or 16 feet, whichever is deeper. Finally, it is recommended that some wells be drilled into bedrock in order to assess whether chlorinated solvents are present.

Response: Relative to RIDEM's comment on additional historical review, please refer to the Navy's response to Specific Comment 2. Historical review was completed under the SI phase. No further historical review is planned as part of the RI phase. The SI report provides the basis for the additional investigation described in the SAP.

Relative to RIDEM's comment on depth-discrete groundwater sampling and potential bedrock groundwater sampling, please refer to the Navy's response to Specific Comment 4.

Evaluation of Response: Please refer to RIDEM's evaluation of Navy's responses to Specific Comments 2, 3, 9, 10, and 15. This office maintains that a more detailed discussion of Site buildings uses should be described in the SAP and that the historical review provided in the SI report be revisited, bolstered, and provided in the SAP, as suggested in Specific Comment 29. Furthermore, additional test pits are warranted (as discussed in evaluation of response for Specific Comment 15) as are the PCB and lead sampling requested by RIDEM.

Specific Comment 30: p. 156, Drilling Soil Sample Collection and Monitoring Well Installation.

This SAP proposes installing two borings at the terminus or discharge point of the discharge pipes located on the Site. RIDEM concurs with the rationale of collecting samples at the terminus of the discharge pipe. Please be advised that at other locations on the Navy base, as a result of storm action, simple decay, rerouting of the pipe, etc., the current terminus of a discharge pipe may not represent the historic or original terminus. It is therefore recommended that historical plans and aerial photographs be reviewed in an effort to ascertain the original terminus location. In addition, field efforts should be employed to locate the historic terminus, such as the use of a hand held metal detector. If as a result of this effort two different terminus points are located, then samples should be collected at each terminus point. One sample would be representative of current or recent discharge, the other would be indicative of historic discharges. Finally, prior to sample collection at the terminus it is recommend that a hand shovel be employed to probe the area for field evidence of any contamination.

Response: The SAP will be revised to include the use of a shovel and a metal detector to investigate the historic terminus of the discharge pipes. This will be reflected in Worksheet #14.

Evaluation of Response: Please confirm that Navy will install two borings and collect samples at the historic terminus of the discharge pipe in addition to the current terminus, if it is discovered that the historic terminus is in a different location from the current terminus.

Specific Comment 34: Figure 3 and Figure 8.

Please update this SAP to include additional soil sampling locations in the southern "Target Area" of the "Firing Fan", southwest of proposed sediment sample SD124, east of samples SD103 and SD102 and northeast of proposed soil boring SB301 (shown on Figure 8). This area is shown on Figure 5 as within the Target Area, but has not previously been characterized.

Response: As agreed during our meeting on to on 1/16/2013, please see the attached figure (Figure 5) for the proposed sampling locations.

Evaluation of Response: Please note that the additional proposed soil sampling locations, as requested by RIDEM, are provided on Figure 3, not Figure 5.

Specific Comment 44 (received via email from Pamela Crump on 2/13/2013):

I went back to look through several figures that I had copied for Resolution and the first one that I saw labeled an area in Site 22 as a "Drummed Petroleum Storage Area", which discharges to an oil separator pit. Therefore, it seems to me that sampling for TPH would be appropriate for this Site. Also, if this information is not documented in the SI, then it appears that the historical uses and features of the Site were not thoroughly researched and documented in the previous investigation.

Response: Please refer to the Navy's response to Specific Comment 2 and 11.

Evaluation of Response: Please refer to evaluation of responses for Specific Comments 2 and 11.