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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NEW YORK, NY 10007-1866

FEB 12 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Paul A. Rakowski, P.E., DEE
Head , Environmental Program Branch
Environmental Division,
Atlantic Division (LANTDIV), Code 182
Naval Facilities Engineering Command
1510 Gilbert Street
Norfolk, VA 23511-2699

Re: Naval Station Roosevelt Roads - EPA ID # PR2170027203

1) EPA Comments on the Navy's November 24, 1998 Response to EPA's September 15, 1998 letter regarding the May 1998 RFI Report on Additional Investigation Results for Operable Units 1, 6, and 7;

2) CMS Workplans for SWMU 13, SWMU 46/AOC C area, and SWMU 31/32 area.

Dear Mr. Rakowski:

The United States Environmental Protection Agency (EPA) Region 2 has completed its review of the Navy's November 24, 1998 response, submitted on your behalf by Baker Environmental, Inc., to my September 15, 1998 letter. EPA has the following comments:

AOC D Revised Risk Assessment (Attachment #6), SWMU #26, and Other Issues

EPA's contractor, TechLaw, Inc., has reviewed those portions of your response covering AOC D (Ensenada Honda sediments), SWMU #26 (Building 544 area), and several other issues. TechLaw's comments are enclosed. EPA will approve the determination, given in Attachment #6 of your response, that there are no unacceptable human health risks from AOC D. That determination is based on excluding the data from sediment samples adjacent to SWMU #2 (Langley Drive Disposal Site) and adjoining the old Power Plant cooling water tunnel entrance in Puerca Bay, from the AOC D risk evaluation. EPA concurs with that approach, provided that the sediments that adjoin SWMU #2 (Langley Drive Disposal Site) are addressed as part of the CMS for that SWMU, and the contaminated sediments adjoining the old Power Plant cooling water tunnel in Puerca Bay are addressed as part of the SWMU #45 (outside areas of old Power Plant and associated structures) CMS. Pursuant to my letter of November 24, 1998, CMS workplans for SWMUs #2 and #45 (and also SWMU #1, not discussed here) are required to be submitted by February 18, 1999.

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In addition, within 30 days of your receipt of this letter, please submit a written response addressing those issues discussed in the enclosed TechLaw comments concerning SWMU #26 (comment regarding page 7 of your response), site-wide dioxin detections (comments regarding page 9 and 10 of your responses), and Attachment #4 of your response.

CMS Workplans [Outlines] for SWMU 13, SWMU 46/AOC C area, and SWMU 31/32 area

EPA approves the "streamlined" CMS outlines [for presumptive remedies] for SWMUs #13, SWMU 46/AOC C area, and SWMU 31/32 area, submitted with your response (these were requested by my September 15, 1998 letter), as satisfying the CMS workplan requirements for those three areas. However, CMS [Final] Reports must still be submitted for those areas. The following modifications to the submitted CMS workplans [outlines] must be incorporated into the CMS [Final] Reports and/or the CMI [Corrective Measures Implementation] Design and Workplans for the three areas:

1. The CMS [Final] Reports should not include the [Presumptive] Remedy Design or Project Close-out Report. Pursuant to the requirements of Module III of the facility's 1994 RCRA operating Permit, and EPA guidance (refer to the Final RCRA Corrective Action Plan, dated May 1994, publication # EPA 520-R-94-004), those two items correspond respectively to the Corrective Measures Implementation (CMI) Design and Workplan and the CMI Final Report. The CMI Design and Workplan may either be submitted concurrently with the CMS Final Report, or, to avoid possible resubmittal if the remedy recommended in the CMS Final Report is not approved as submitted, following EPA's approval of the CMS Final Report. Public Notice of the proposed remedy would be done following submission of an acceptable CMS Report and CMI Design and Workplan.

2. Besides confirmatory environmental sampling (to confirm clean-up), the CMI Design and Workplans must include a discussion of sampling of the remediation wastes for waste characterization pursuant to 40 CFR Part 261 Subpart C requirements, and a discussion of how the remediation wastes will be managed and disposed of, or treated. The CMI Final report [Project Close-out report] should then include the results of such waste characterization, and documentation of that characterization and the disposal and/or treatment of the remediation wastes.

3. The CMI Design and Workplans must include a schedule for implementing and reporting. That schedule should conform with the generic requirements of Module III and Appendix C of the facility's 1994 RCRA Permit.

Please submit the CMS [Final] Reports for these three areas (SWMUs #13, SWMU 46/AOC C, and SWMU 31/32 area) within 60 days of your receipt of this letter. The submitted CMS Reports must set proposed final clean-up standards for each area, that are protective of human health and the environment, and evaluate whether the recommended presumptive remedies will achieve those standards.

Please telephone Mr. Tim Gordon of my staff at (212) 637- 4167 if you have any questions regarding any of the above.

Sincerely yours,

Nicoletta DiForte
Chief, Caribbean Section
RCRA Programs Branch

Enclosure:

cc: Mr. Israel Torres, PREQB, with encl.
Ms. Madeline Rivera, NAVSTA Roosevelt Roads, with encl.
Mr. Christopher Penny, LANTDIV, with encl.
Ms. Luz Muriel-Diaz, PREQB, with encl.

EVALUATION OF

NOVEMBER 24, 1998 RESPONSE TO EPA'S SEPTEMBER 15, 1998 LETTER REGARDING OPERABLE UNITS #1, 6, AND 7 RFI ADDITIONAL INVESTIGATIONS

NAVAL STATION ROOSEVELT ROADS
CEIBA, PUERTO RICO

Prepared for:

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February 10, 1999

EVALUATION OF

RESPONSE TO EPA'S SEPTEMBER 15, 1998 LETTER REGARDING OPERABLE UNITS #1, 6, AND 7 RFI ADDITIONAL INVESTIGATIONS

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NOVEMBER 24, 1998 RESPONSE TO EPA'S SEPTEMBER 15, 1998 LETTER REGARDING OPERABLE UNITS #1, 6, AND 7 RFI ADDITIONAL INVESTIGATIONS

NAVAL STATION ROOSEVELT ROADS
CEIBA, PUERTO RICO

1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) has requested support for technical review of documents associated with the RCRA Facility Investigation (RFI) of the U.S. Naval Station Roosevelt Roads (NSRR) located in Ceiba, Puerto Rico. TechLaw has assigned this project to TRC Environmental Corporation (TRC), a TechLaw Team member under the REPA Contract under Work Assignment No. R02020.

The NSRR is located on the east coast of Puerto Rico in the municipality of Ceiba, approximately 33 miles southeast of San Juan. The primary mission of NSRR is to provide full support for the Atlantic Fleet weapons training and development activities. NSRR is currently operating under a Draft RCRA Corrective Action Permit that includes varying degrees of work at 28 Solid Waste Management Units (SWMUs) and three Areas of Concern (AOCs).

EPA requested the TechLaw Team to review the Response to EPA's September 15, 1998 Letter Regarding Operable Unit #1, 6, and 7 RFI Additional Investigations. The method and objective of this evaluation are presented in Section 2.0. General comments are presented in Section 3.0. Specific comments are detailed in Section 4.0. Recommendations are presented in Section 5.0.

2.0 METHODOLOGY

Pursuant to the EPA Work Assignment Manager's (WAM's) Technical Directive dated December 1, 1998, the TechLaw Team reviewed the November 24, 1998 Response to EPA's September 15, 1998 Letter Regarding Operable Unit #1, 6, and 7 RFI Additional Investigations. This review focuses on the adequacy of responses regarding SWMU #26 and the useability of information in Attachment 4, the revised risk assessment of AOC D (Attachment 6), and the Navy's response regarding the site-wide dioxin study, including Attachments 7 and 8.

The following documents were considered during these reviews:

- Interim Final RCRA Facility Investigation Guidance, OSWER Directive 9502.00-60, EPA 530/SW-89-031, May 1989;
- EPA Region III Risk-Based Concentrations, October 1998.

3.0 GENERAL COMMENTS

SWMU #26 and Background Soil

The Navy proposes to defer resolution of SWMU 26 background issues until the OU3/5 RFI is completed. Such a deferral is acceptable since the review of the OU3/5 RFI will address background issues in detail and the maximum beryllium concentration detected at SWMU 26 was 1,200 ug/kg which is less than October 1998 risk-based level of 4,100 ug/kg.

AOC D and Revised Risk Assessment

The rationale for not including the SWMU 11/45 and SWMU 2 sediment samples results in the AOC D database is acceptable. The human health risk assessment for AOC D in Attachment 6 has been appropriately revised and indicates that there are no unacceptable risks posed by the AOC D sediments. However, the corrective measures study (CMS) for Puerca Bay sediments will need to consider and adequately address the SWMU 11/45 sediment samples. In addition, the SWMU 2 sediment results must be incorporated into the SWMU 2 assessment and appropriately addressed.

4.0 SPECIFIC COMMENTS

Pages 6 and 7

The original comment suggested that background samples may not be representative of naturally occurring conditions since the presence of semi-volatile organic compounds (SVOCs) indicate impacts from anthropogenic activity. The original comment does not imply that true naturally derived, beryllium is not present at the subject location. The response does not provide any additional data to support the appropriateness of the specific background sample locations. The presence of SVOCs calls the appropriateness of the sample locations into question, which demands a stronger technical argument to support the assertion that the beryllium is non-anthropogenic. If data regarding the local geology support the argument that the beryllium is naturally occurring, then EPA is willing to consider such data and modify the current position on this issue, if warranted. Nonetheless, field notes and documentation/photographs regarding the specific location, matrix, and surrounding area of each sample should be provided for review. Any evidence which suggests anthropogenic impact should be described. The presence of anthropogenic materials associated with beryllium must also be considered.

Page 7

The response indicates that the Navy would like to reuse SWMU 26 with no conditions. The no action approach presented in the Additional Investigations Report is based on the restriction of no future residential use. The original comment simply noted the apparent contradiction in the document. The response provides the required clarification; however, the response is contrary to the best interests of the Navy as it would put naval personnel and their families at risk, should the area be developed for residential use with no further action. If the risk characterization results indicate that residential scenarios and exposure pathways present a risk, then this must not be ignored. Note that the presence of risk may not preclude development as residential housing as appropriate mitigative action can be implemented to allow such land use. Development of this site into residential land use with out appropriate mitigative action would be a mistake.

Pages 9 and 10

The response does not provide sufficient information to address concerns regarding the detection of dioxin at various sites at NSRR. The response indicates that the Navy agrees with EPA's assessment

that dioxin has been detected at levels suggesting risk and that the detections are not entirely consistent with historical uses of the sites. Therefore, consideration of the dioxin detections is appropriate.

Information is presented in Attachment 8 which suggests that dioxin may be linked to herbicides. The Navy hypothesizes that historic use of herbicides at NSRR and in the surrounding areas may have acted as the dioxin source. However, no supporting information is presented. Furthermore, the Navy has not considered all potential sources of dioxin. The information in Attachment 8 also indicates that dioxin may result from the burning or heating of chlorophenates and pyrolysis of polychlorinated biphenyls. Therefore, the incinerator formerly used at NSRR must be considered as a potential source and downwind areas of the incinerator may be impacted by dioxin deposition.

The response suggests that a basewide dioxin sampling program would be too costly and would not derive commensurate value. The response also indicates that an investigation would identify low levels of dioxin which would exhibit environmental risks, but would not require remediation based on a cost benefit analysis. EPA partially concurs with the statement concerning the value of a basewide sampling program as described in the response, since the program as described would not provide data that answers questions of interest to EPA. EPA is primarily concerned with the following: 1) the history of all potential onsite sources (e.g., on-site operation of the former incinerator, herbicide types and application practices), 2) environmental information affecting the migration and fate of dioxin (e.g., wind direction, soil type, etc.), and 3) an analysis of these historical and environmental information in the context of the existing dioxin database.

The results of this analysis would form the basis for a hypothesis concerning the likely presence of dioxin contamination and would form the basis for a sampling plan, if needed, to verify the hypothesis. It is very unlikely that a data gathering and analysis program structured in this way would be as costly as the plan for a site-wide approach as discussed by the Navy.

Once the conceptual model of dioxin contamination is established, then meaningful steps can be taken to address EPA's ultimate concern, the protection of site workers and/or future site users. As indicated in the information referenced by the Navy and presented in Attachment 8, workers potentially exposed to dioxin should be equipped with adequate protective equipment.

Attachment 4

Attachment 4 presents general information regarding concentrations in soil. The information describing selenium-rich conditions in Puerto Rico appears applicable to NSRR. The information, however, does not present selenium concentrations. In addition, the majority of soil information presented in Attachment 4 is for the conterminous United States and does not appear appropriate for assessment of conditions at NSRR. Additional data concerning the concentrations of native constituents in the environment in Puerto Rico would be helpful in bringing this issue to closure.

5.0 RECOMMENDATIONS

The following are recommended:

- Use a risk-based approach for evaluating site conditions or present soil data which are appropriate to conditions in Puerto Rico. Background information from other sites in Puerto Rico could be reviewed for applicability to the NSRR.

- Provide information to address concerns regarding the dioxin detections. Information should consist of site histories regarding all potential sources, physical information on the environment, the relationship of this information to the present dioxin database, and, if necessary, confirmatory analytical data.

- The corrective measures study (CMS) for Puerca Bay sediments will need to consider and adequately address the SWMU 11/45 sediment samples. The SWMU 2 sediment results must be incorporated into the SWMU 2 assessment and appropriately addressed.