

**Baker**

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March 7, 2003

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

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

Re: Contract N62470-95-D-6007  
Navy CLEAN, District III  
Contract Task Order (CTO) 0099  
U.S. Naval Station Roosevelt Roads (NSRR), Puerto Rico  
RCRA/HSWA Permit No. PR2170027203  
Final CMS Work Plan for SWMUs 53 and 54

Dear Mr. Everett:

Baker Environmental, Inc. (Baker), on behalf of the Navy, is providing you with two copies of the Final CMS Work Plan for SWMUs 53 and 54. This document is submitted in accordance with the EPA comment letter dated February 19, 2003 that provided comments on the Draft CMS Work Plan for SWMUs 53 and 54.

Attached please find the Navy Responses to your comment letter dated February 19, 2003 on the Draft CMS Work Plan for SWMUs 53 and 54. The Final CMS Work Plan has been modified as outlined in the attached response to comments.

It should be noted that the CMS Work Plan for SWMUs 53 and 54 has been developed in accordance with Module III, Appendix B, Scope of Work For A Corrective Measure Study of Naval Station Roosevelt Roads RCRA/HSWA Permit No. PR2170027203 dated October 20, 1994. The technical review of the Draft CMS Work Plan for SWMUs 53 and 54 was reviewed against the RCRA Corrective Action Plan, OSWER Directive 9902.3-2A, May 1994. The Navy has responded to the comments and revised the Draft CMS Work Plan in accordance with Naval Station Roosevelt Roads RCRA/HSWA Permit No. PR2170027203 dated October 20, 1994.

The Navy is requesting an expedited review of the Final CMS Work Plan for SWMUs 53 and 54 in order to consolidate the fieldwork associated with this work plan with other work planned for the week of March 24, 2003. The Navy can realize cost savings through the consolidation of the fieldwork for these two projects. Please notify Mr. Kevin Cloe, P.E. at (757) 322-4736 if you feel that an expedited review can be conducted in time to consolidate the fieldwork.

**ChallengeUs.**

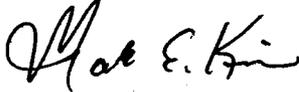
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Mr. Adolph Everett, P.E.  
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If you have questions regarding this submittal, please contact Mr. Kevin Cloe, P.E. at (757) 322-4736.  
Additional distribution has been made as indicated below.

Sincerely,

**BAKER ENVIRONMENTAL, INC.**



Mark E. Kimes, P.E.  
Activity Manager

MEK/lp  
Attachments

cc: Mr. Kevin R. Cloe, LANTDIV - Code EV23KRC (1 copy)  
Ms. Bonnie P. Capito, LANTDIV - Code EV32 (1 copy)  
Ms. Madeline Rivera, NSRR (2 copies)  
Mr. Tim Gordon, US EPA Region II (2 copies)  
Ms. Kathy Rogovin, Booz Allen & Hamilton (1 copy)  
Mr. Carl Soderberg, US EPA Caribbean Office (1 copy)  
Mr. Carmelo Vazquez, PR EQB (2 copies)  
Mr. John Tomik, CH2M Hill Virginia Beach (1 copy)

**NAVY RESPONSE TO EPA COMMENTS DATED FEBRUARY 19, 2003 ON  
DRAFT CMS WORK PLAN SWMUs 53 AND 54  
NAVAL STATION ROOSEVELT ROADS  
CEIBA, PUERTO RICO  
NOVEMBER 27, 2002**

**EPA COMMENTS**

*EPA has reviewed Booz Allen's Technical comments, which are enclosed, and concurs with those comments. Based on this review, EPA has the following comments:*

3. *For SWMU 53 and 54, the Draft CMS Work Plan, submitted November 27, 2002 is not fully acceptable, as discussed in the enclosed Technical Review, dated February 6, 2003. Within 35 days of your receipt of this letter, please submit a revised CMS Work Plan addressing comments in the enclosed Technical Review.*

*However, please note that although the enclosed Technical Review cites the May 1994 RCRA Corrective Action Plan as the applicable guidance for the contents of a CMS Work Plan, EPA has subsequently stated that the May 1, 1996 Advanced Notice of Proposed Rulemaking (ANPR) regarding Corrective Action for Releases From Solid Waste Management Units [Federal Register, vol. 61 No. 85, pp 19431 - 19464] may be utilized as guidance for implementing RCRA Corrective Action. Section III.C.4 [Evaluation of Remedial Alternatives] of the May 1996 ANPR states that "The CMS does not necessarily have to address all potential remedies ... EPA advises ... to focus corrective measures studies on realistic remedies and to tailor the scope and substance of studies to the extent, nature and complexity of releases and contamination at any given facility." Therefore, in developing a revised CMS Work Plan and/or responses to the enclosed Technical Review, you may base the revised CMS Work Plan, and/or those responses, on the May 1996 ANPR, where applicable, and/or the May 1994 RCRA Corrective Action Plan.*

**Navy Response to EPA Comments**

See the Navy responses below to the technical review comments generated by BAH.

The Navy has taken into consideration the May 1, 1996 ANPR regarding Corrective Action for Releases From Solid Waste Management Units [Federal Register, vol. 61 No. 85, pp 19431 - 19464] to be utilized as guidance for implementing RCRA Corrective Action.

It should also be noted that the development of the Draft CMS Work Plan for SWMUs 53 and 54 was developed in accordance with Final RCRA/HSWA Permit No. PR2170027203 dated October 20, 1994. Some of the comments in the technical review reference the Final RCRA Corrective Action Plan dated May 1994. Due to the similarities in the documents the CMS Work Plan is continuing to follow Module III Appendix B Scope of Work For A Corrective Measure Study at U.S. Naval Station Roosevelt Roads of RCRA/HSWA Permit No. PR2170027203. The following responses to comments reflect this response.

**BOOZ ALLEN HAMILTON COMMENTS**

*Booz Allen Hamilton. reviewed the Naval Station Roosevelt Roads (NSRR) November 27, 2002 Draft*

*Corrective Measures Study (CMS) Work Plan for solid waste management units (SWMUs) 53 and 54 (CMS Work Plan) for completeness and technical content. The review focused on the adequacy of the approach for additional investigation, ecological risk assessment, and corrective measures evaluation. The document was reviewed against the recommended content of the CMS Work Plan outlined in the RCRA Corrective Action Plan, OSWER Directive 9902.3-2A, May 1994.*

## **I GENERAL COMMENTS**

### **BAH General Comment No. 1:**

1. *The RCRA Corrective Action Plan specifies that if a CMS Work Plan is required, it shall include the following items:*
  - *A description of the specific corrective measure technologies and/or alternatives that will be studied.*
  - *A section on project organization. The section should identify key personnel, their responsibilities, lines of communication, and the required qualifications for the personnel performing the work. An organizational chart should be included.*

*The CMS Work Plan should be expanded to include these elements. This information is necessary to ensure that appropriate corrective measures technologies are considered in the CMS and that the personnel responsible for performing the evaluation are adequately qualified.*

### **Navy Response to BAH General Comment No. 1:**

Section 8.1.3 of this document references the Pre-Investigation Corrective Measures Screening Report. This document has been referenced to provide a description of the specific corrective measure technologies and/or alternatives that will be studied.

A section on Project Organization has been added to the CMS Work Plan as Section 10.0. This section identifies the key personnel, their responsibilities, and lines of communication. An organizational chart is part of this section.

### **BAH General Comment No. 2:**

2. *The CMS Work Plan provides historical data for pesticides at SWMU 53 to justify the locations of the data gap samples. However, historical data has been omitted for metals at SWMU 53 and no historical data is provided for SWMU 54. Section 1.0 (Introduction) of the CMS Work Plan should be expanded to describe the distribution and concentration of contaminants that exceeded screening criteria at each site, and should be supported by figures that graphically present this information. This information is necessary to assess the adequacy of the proposed sample locations and the appropriateness of the proposed corrective measures technologies.*

**Navy Response to BAH General Comment No. 2:**

Additional data tables and figures from the previous investigations for SWMUs 53 and 54 have been added to Section 1.0 of the CMS Work Plan as requested.

**BAH General Comment No. 3:**

3. *In general, the ecological risk assessment (ERA) portion of the CMS Work Plan (Section 5) is in accordance with current EPA guidance. However, the ERA description is very generic and only provides a framework for assessing ecological risks. The CMS Work Plan should be revised to include a preliminary conceptual site model, proposed assessment and measurement endpoints, and ecological receptors. This would be more consistent with previous NSRR work plans that have included this information, and is beneficial in allowing EPA review and approval of more specific aspects of an ERA.*

**Navy Response to BAH General Comment No. 3:**

As stated in the comment the ERA portion of the CMS Work Plan is in accordance with current EPA guidance. The information being requested will be provided in Step 1 of the ERA. Providing the information requested is basically providing Step 1 in the work plan and then again in the ERA. Due to budgetary constraints the information requested will be provided in the ERA not the CMS Work Plan. It should be noted that the ERA will take into account all applicable comments and responses on previous ERAs conducted at NSRR.

**BAH General Comment No. 4:**

4. *Corrective Action Objectives (CAOs; Section 6) appear to consider only human health, but should also be based on risks to ecological receptors (e.g., plants, soil invertebrates, wildlife). The CMS Work Plan should be revised to include CAOs that address ecological receptors as well, as the final remedy must be protective of both human health and the environment.*

**Navy Response to BAH General Comment No. 4:**

Section 5.0 of the CMS Work Plan has been modified to explain how ecological risks will be evaluated and utilized in the determination of the final remedy.

**II SPECIFIC COMMENTS**

**BAH Specific Comment No. 1:**

***Section 2.1 Objectives, Page 2-1***

1. *The last paragraph indicates that a highly focused CMS is appropriate for SWMU 53 and a screening of technologies will not be performed because the site has straightforward remedial solutions. This approach may be appropriate; however, it contradicts information provided in Section 8.1.3 of the CMS Work Plan, which indicates that a*

*screening of alternatives will be performed for both sites. This discrepancy should be corrected. If the screening of alternatives will be omitted for SWMU 53, this should be stated in Section 8.1.3, and the straightforward remedial solutions should be identified and justified. The justification should ensure that the proposed remedies will be protective of human health and the environment; attain cleanup standards, control sources of release, and comply with waste management standards.*

**Navy Response to BAH Specific Comment No. 1:**

Section 8.1.3 has been modified to state that screening of alternatives for SWMU 53 will not be performed. The straightforward remedial solution is identified.

**BAH Specific Comment No. 2:**

***Section 2.2 Corrective Measures Standards, Page 2-2***

- 2. It is unclear how the corrective measures standards discussed in this section differ from the quantitative corrective action objectives-(CAO) that will be calculated using the methodology discussed in Section 6.0. Revise the CMS Work Plan to differentiate between corrective measures standards and CAOs and provide a discussion of how each set of values will be used to evaluate the effectiveness of the various corrective measures alternatives.*

**Navy Response to BAH Specific Comment No. 2:**

Section 2.2 has been modified to provide the reader with a better understanding of how the corrective measure standards and corrective action objectives correlate to each other.

**BAH Specific Comment No. 3:**

***Section 3.2 Laboratory Analyses, Page 3-2***

- 3. This section states that additional pesticide analyses will only be triggered if surface soil samples exceed criteria specified in Figure 3-3, including ecological screening values (ESL). Figure 3 indicates that no ESL is available for heptachlor. In the absence of an alternative value, the EPA Region 5 ecological data quality level (EDQL) for heptachlor should be used ([www.epa.gov/reg5rera/ca/edgl.htm](http://www.epa.gov/reg5rera/ca/edgl.htm)). The EDQL of 0.006 mg/kg for soil considers risks to both wildlife and soil organisms, and is higher than the proposed detection limit shown in CMS Work Plan Table 3-2.*

**Navy Response to BAH Specific Comment No. 3:**

The Navy was unable to obtain the information from the reference provided. A table was found by going directly to EPA Region 5 web site, which contains the value provided in the comment. It should be noted that no documentation of how the value was derived could be located from the table located on the EPA Region 5 web site. The Navy is requesting that the proper reference be provided along with any documentation on how the value was derived.

The Navy agrees to utilize the value pending an acceptable review of the requested information. The EPA Region 5 EDQL for heptachlor of 0.006 mg/kg for soil will be utilized pending the outcome of the Navy review and has been added to Figure 3.

**BAH Specific Comment No. 4:**

***Section 6.4.2 Quantitative CAOs, Page 6-4***

4. *This section indicates that industrial workers may be exposed to contaminants in groundwater via inhalation of volatile organic compounds- emitted through the soils into buildings. To evaluate this potential exposure pathway, NSRR proposes to use the Johnson and Ettinger model. While the use of this model is appropriate, it is recommended that the CMS Work Plan be revised to utilize the methodology outlined in EPA's November 29, 2002 Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance), which includes the Johnson and Ettinger model. This guidance includes a three-tiered approach for determining whether the subsurface vapor intrusion pathway is complete and, if so, whether vapors are present at levels that may pose unacceptable exposure risk. The three tiers involve increasing levels of complexity and specificity, and generic screening levels allow for a simple quantitative screen of contaminant concentrations.*

**Navy Response to BAH Specific Comment No. 4:**

This new guidance will be used and the text of the CMS Work Plan has been modified to incorporate reference to the guidance.

**BAH Specific Comment No. 5:**

***Section 6.6 Background Concentrations as CAOs, Page 6-7***

5. *This section indicates that background concentrations may be used as quantitative CAOs when they exceed risk-based CAOs. It should be noted that the use of background concentrations as quantitative CAOs is most often limited to inorganic contaminants. The CMS Work Plan should be revised to indicate that background concentrations will only be used as quantitative CAOs for inorganic constituents when they exceed risk-based CAOs.*

**Navy Response to BAH Specific Comment No. 5:**

The text has been revised to state that only inorganic background concentrations will be used as quantitative CAOs for inorganic constituents when they exceed risk-based CAOs. It should be noted that it is true that the use of background concentrations as quantitative CAOs is most often limited to inorganic constituents except when certain organic background chemical levels are present from naturally occurring and anthropogenic sources. Such as from routine applications of manufactured products in accordance with manufactures recommendations.

Reference: Navy Interim Final Policy on the Use of Background Chemical Levels. Ser

**BAH Specific Comment No. 6:**

***Section 8.2 Evaluation of the Corrective Measure Alternative or Alternatives, Page 8-2***

6. *The elements of the evaluation of alternatives described in this section are generally appropriate. However, the evaluation should be structured as described in the Final RCRA Corrective Action Plan, OSWER Directive 9902.3-2A, May 1994. As described in this guidance, the primary factors for remedy selection are:*
  1. *Protect human health and the environment*
  2. *Attain cleanup standards*
  3. *Control sources of releases*
  4. *Comply with applicable standards for management of waste.*

*For corrective measures alternatives that meet these requirements, the additional factors listed below should be considered:*

5. *Long-term reliability and effectiveness*
6. *Reduction in the toxicity, mobility, or volume of waste*
7. *Short-term effectiveness*
8. *Implementability*
9. *Cost.*

*Sections 8.2 and 8.3 should be revised to reflect the structure recommended in the guidance.*

**Navy Response to BAH Specific Comment No. 6:**

The information provided in the CMS Work Plan is structured in accordance with the Stations RCRA/HSWA Permit No. PR2170027203 dated October 20, 1994. As stated previously this Work Plan is going to utilize the format outlined in the Permit.

**BAH Specific Comment No. 7:**

***Section 8.4.2 Corrective Measures Study Final Report, Page 8-5***

7. *This section should be expanded to provide a more detailed description of the Final CMS Report format and content. The Final CMS Report should describe each of the phases of alternative evaluation, and provide detailed rationale for selecting or rejecting each alternative. The Final CMS Report should be prepared in accordance with guidance provided in the RCRA Corrective Action Plan, and an outline should be included in the CMS Work Plan to ensure consistency with the RCRA Corrective Action Plan.*

**Navy Response to BAH Specific Comment No. 7:**

A more detailed description of the Final CMS Report format and content will be added to the work plan

in accordance with the Stations RCRA/HSWA Permit No. PR2170027203 dated October 20, 1994.

**BAH Specific Comment No. 8:**

***Table 3-1 Summary of Sampling and Analytical Program, SWMU 53***

8. *Table 3-1 indicates that the field duplicate and matrix spike samples for pesticides will be collected from sample location 53SS09. However, the CMS Work Plan also indicates that the sample from location 53SS09 will not be analyzed unless sample 53SS07 or 53SS08 is contaminated. As such, the field duplicate sample and matrix spike samples for pesticide analyses should be collected using sample 53SS07 or 53SS08 to ensure that the field duplicate and matrix spike samples are analyzed.*

**Navy Response to BAH Specific Comment No. 8:**

The typographical error has been corrected. The duplicate and matrix spike/matrix spike duplicate samples will be collected from 53SS08. Table 3-1 has been corrected.

**BAH Specific Comment No. 9:**

***Figure 3-2 Additional Surface Soil Samples for Lead, Zinc, and Copper***

9. *The proposed sample locations cannot be evaluated because the results of the previous investigation are not provided. Figure 3-2 should be revised or additional figures provided that depict the previous sample results (as done for the pesticide results on Figure 3-1). This information is necessary to evaluate the adequacy of the proposed sample locations.*

**Navy Response to BAH Specific Comment No. 9:**

Figure 3-2 has been revised to include the results for lead, zinc, and copper from the previous investigations. It should be noted that the historical data from the previous investigations is also being provided in Section 1.0 of the CMS Work Plan.