

05.01-3/25/02-2966



DEPARTMENT OF THE NAVY
NAVY ENVIRONMENTAL HEALTH CENTER
620 JOHN PAUL JONES CIRCLE SUITE 1100
PORTSMOUTH VA 23708-2103

5090.5
Ser EP4369/ 00203
25 MAR 2002

From: Commanding Officer, Navy Environmental Health Center
To: Commanding Officer, Atlantic Division, Naval Facilities Engineering Command
(Kirk Stevens), 1510 Gilbert Street, Norfolk, VA 23511-2699

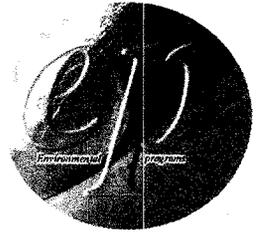
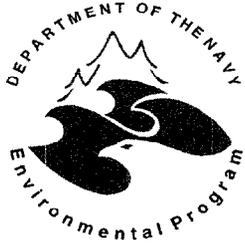
Subj: MEDICAL REVIEW OF DRAFT FEASIBILITY STUDY REVIEW COMMENTS,
OPERABLE AREA NO. 19 SITE NO. 84, BUILDING 45 AREA, MARINE CORPS
BASE CAMP LEJEUNE, CAMP LEJEUNE, NC

Ref: (a) Baker Environmental, Inc. Letter of Transmittal S.O. No. 26007-219-0000-284FS
of 30 Jan 02

1. Per reference (a), we have completed a review of the subject document and forward our comments to you as enclosure (1).
2. Please complete and return enclosure (2) as your comments are needed to continually improve our services to you.
3. If you require additional assistance, please call Mrs. Vera Wang at (757) 953-0940 or Mr. David McConaughy at (757) 953-0942. The DSN prefix is 377. The e-mail addresses are: wangv@nehc.med.navy.mil and mcconaughyd@nehc.med.navy.mil.

P.B. Gillooly
P. B. GILLOOLY
By direction

Copy to: (w/o Encl (2))
CNO (N-453)
NAVFAC (ENC-KPB)
BUMED (MED-24)
CMC (LFL)
MCB Camp Lejeune (ACS EMD/IRP, Tom Morris)



NAVY ENVIRONMENTAL HEALTH CENTER ENVIRONMENTAL PROGRAMS DIRECTORATE Draft Feasibility Study Review Comments

Location: North Carolina

Command: MCB Camp Lejeune

Site: Operable Area No. 19 Site No. 84 – Building 45 Area

Work Description: Draft Feasibility Study

Document Date: January 2002

Contract No/Contract Task Order No: N62470-95-D-6007/0219

EP Document No: 4369

Prepared for: LANTNAVFACENGCOM

Prepared by: CH2MHill Federal Group LTD, and, Baker Environmental, INC

Date Received: 4 February 2002

Reviewed by:

Ms. V. Wang, (757) 953-0940, wangv@nehc.med.navy.mil, DSN 377

**DRAFT FEASIBILITY STUDY
OU NO.19, SITE 84
MCB CAMP LEJEUNE
REVIEW COMMENTS**

General Comments:

1. Our review of this Draft Feasibility Study focused on ensuring that National Contingency Plan (NCP) guidelines for the development of remedial action alternatives were followed, especially on the detailed analysis of the alternatives regarding the criterion for the overall protection of human health and the environment.

2. The document is very thorough and followed all the steps recommended in the NCP guidelines and other EPA guidance. In this feasibility study (FS), the nine criteria used for the detailed analysis of the remedial action alternatives (RAA) were carefully considered. The Navy Environmental Health Center (NEHC) agrees with the detailed analysis of the criterion for the protection of human health and the environment on all alternatives except for RAAs 5 and 7 designated as appropriate for Low-Occupancy Land Use. In RAA 5 (Hot Spot Removal and Institutional Controls) and 7 (Hot Spot Removal and Capping) soil ingestion and dermal contact exposure pathways for PCB concentrations between 1 and 25 ppm allowed under low-occupancy land use are not adequately eliminated for recreational trespassers and other receptors who could spend more than 6.7 hours per week on average, or 335 hours per year at this site. This is because there is no adequate fencing to prevent unauthorized personnel from entering the site. Even though fencing the site perimeter is not required for leaving up to 25 ppm PCB in place for low-occupancy land use, there is no guarantee that trespassers will not spend more than 6.7 hours per week at this site. This is adequately prevented in RAA 6 (Hot Spot Removal and Fencing).

Specific Comments:

1. Executive Summary, Remedial Action Objectives, page ES-3:

The first two bullets refer to removal or mitigation of potential exposure to contaminants in excess of the selected cleanup levels for high- and low-occupancy land use. For clarification to the non-technical reader who may read only the Executive Summary, we suggest including in these bullets examples of high and low occupancy land use.

2. Page 1-4, first paragraph, and Figure 1-2, Section 1.2.1 Site Location and History:

- a. The text states, "Access to the site is limited along Highway 24 by a chain link fence." In Figure 1-2 fencing is only indicated around the building 45 foundation and the CP&L substation. The fence along Highway 24 is missing in Figure 1-2, and its location needs to be indicated for information purpose.

b. Two green symbols with a flowery appearance are shown on all of the maps. There is no legend explaining their meaning. One of the green symbols is located at the intersection of Gravel Road and Dirt Road. We recommend including their meaning on the map.

c. Two thick solid green lines are shown running along and parallel to Highway 24. The map legend refers to the green solid line as the “approximate wetland boundary line.” It is not clear whether or not the green lines along Highway 24 are also considered wetland boundary lines. We recommend clarifying the legend.

3. Pages 1-13 to 1-15, Section 1.6.1, “Surface Soil”:

The text mentions chemicals that were detected at concentrations exceeding their Region IX preliminary remediation goal (PRG). The text does not provide the PRG for each of the chemicals exceeding their respective PRG, particularly for the semi-volatile organic compounds (SVOCs) and Pesticides. Although PRGs are listed in section 2 tables, we suggest including the specific PRGs in a consistent manner whenever mentioning that its concentration exceeded the PRG. This will allow the reader to evaluate the magnitude of the exceedences in this section.

4. Page 2-1, first paragraph, Section 2.0, Remediation Goals and Remedial Action Objectives”:

The first paragraph aims to explain that, as stated in the NCP, in developing and screening the remedial action alternatives, the lead agency shall establish remediation goals. The remediation goals are based on acceptable exposure levels that are protective of human health and the environment by considering Applicable or Relevant and Appropriate Requirements (ARARs), if available, and other factors such as acceptable exposure levels for systemic and carcinogenic toxicants. We suggest this be more clearly stated in this section by editing the second sentence in the first paragraph as follows: “The remediation goal options and remedial action objectives are based on regulatory requirements, standards, and guidance, *also referred to as Applicable or Relevant and Appropriate Requirements (ARARs) and those To Be Considered (TBCs), if available*, as well as *assessments of current and potential human health risks and future land use considerations for Site 84.*” By clearly emphasizing ARARS and health risk assessments, the reader can better understand the purpose of presenting risk assessment results in addition to the selection of ARARS in the report.

5. Page 2-7, Section 2.0, “Remediation Goals and Remedial Action Objectives, USEPA Region IX PRGs”:

a. Since USEPA Region IX PRGs are not considered ARARS, but are more closely associated with risk assessments we suggest creating a separate section (for example 2.4.3) to address the PRGs. The last paragraph on this page states that PRGs are tools for evaluating and cleaning up contaminated sites. To improve accuracy from the health risk perspective we suggest editing this paragraph as follows: “*PRGs are not ARARS. They are health risk-based concentrations developed to predict single contaminant risk estimates for a specific environmental media. Human health risk estimates are used in conjunction with ARARS and other factors when ARARS are not available for developing cleanup goals. PRGs are derived from standardized equations, combining exposure information, assumptions, and EPA toxicity*

data. PRGs are concentrations that correspond to either one in a million (10^{-6}) cancer risk or a safe "Reference Dose" (RfD) whichever is lower. Therefore, PRGs are concentrations of hazardous constituents in environmental media that are protective of human health and the environment. However, environmental levels that exceed PRGs will not necessarily produce adverse health effects."

b. We recommend editing the last sentence of the second paragraph, on page 2-8, as follows: "However, they are helpful in providing *a point of departure* toward remediation targets to use during the analysis of different remedial alternatives."

6. Page 3-4, Section 3.0, "Identification and Preliminary Screening of Remedial Action Technologies, Site Access Restrictions":

The last paragraph states that the site access restrictions process option includes the installation and or maintenance of security fencing and signs around the contaminated media at Site 84. Please clarify that this will be new fencing, which includes the border with Highway 24.

7. Page 4-11, Section 4.0, "Development and Screening of Remedial Action Alternatives, RAA 5: Hot Spot Removal and Institutional Controls, page 4-9 and RAA 7: Hot Spot Removal and Capping":

As stated on page 4-8, adding fencing in the northwest corner of the site in RAA 4 to restrict access to this site would then designate this as low-occupancy area. Therefore, it seems that in order to use this site as a low-occupancy area, fencing along the perimeter of the site should be required in RAA 5 and RAA 7 to prevent potential recreational trespassers or other receptors, who may spend more than 6.7 hours per week, from entering the site. Although fencing is not required for low occupancy areas with PCB concentrations less than 25 ppm, one cannot ensure that areas with these concentrations will remain low-occupancy without a fence to limit access to unauthorized personnel. To ensure that the site remains as a low-occupancy area we recommend fencing the whole site perimeter.

8. Pages 5-14 to 5-19, Section 5.0, "Detailed Analysis of Remedial Action Alternative, RAA 5: Hot Spot Removal and Institutional Controls", and "RAA 7: Hot Spot Removal and Capping":

a. On page 5-14, the paragraph addressing the Overall Protection of Human Health and the Environment for RAA 5, states that institutional controls will include land use restrictions that would limit future land use to low-occupancy uses such as non-office warehouse, equipment storage area, or an electrical substation. Since in this alternative the site is not entirely fenced, recreational trespassers may come in contact with soils and sediment in the wet lands contaminated with PCB concentrations between 1 and 25 ppm PCB for more than the 6.7 hours per week allowed for low occupancy areas.

b. We suggest adding the following to the third paragraph on page 5-15 addressing short-term effectiveness for RAA 5, "*However, since the site is not totally fenced recreational*

trespassers spending more than 6.7 hours per week at the site may be exposed to PCB concentrations between 1 and 25 ppm.”

c. The second paragraph on page 5-18 addressing the Overall Protection of Human Health and the Environment for RAA 7 states that the capping alternative will prevent low-occupancy human and ecological receptors from coming into contact with soil contaminants. However, since in this alternative the site is not entirely fenced, recreational trespassers may come in contact with soils and sediment in the wetlands contaminated with less than 25 ppm PCB more than 6.7 hours per week allowed for low-occupancy areas.

d. On page 5-19, the paragraph addressing short-term effectiveness for RAA 7, we suggest adding the following after the second sentence: *“However, since the site is not totally fenced recreational trespassers spending more than 6.7 hours per week at the site may be exposed to PCB concentrations between 1 and 25 ppm.”*

Editorial Comment:

1. Page 1-12, Section 1.6.1 “Surface Soil”:

According to the report formatting, a line space is needed after the first paragraph above the PCB abbreviation, which should be bolded and italicized to distinguish the subsection on PCB.

FROM: _____ (YOUR NAME/COMMAND)
TO: NAVENVIRHLTHCEN, ENVIRONMENTAL PROGRAMS
FAX: COM: (757) 444-7261/DSN: 564-7261

MEDICAL/HEALTH COMMENTS - YOUR VIEW

Please help us improve our review process by indicating the extent to which you agree or disagree with the comments we provided your activity.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. "Value added" to IR/BRAC process?	1	2	3	4	5
2. Received in a timely manner?	1	2	3	4	5
3. High level of technical expertise?	1	2	3	4	5
4. Very useful to the RPM?	1	2	3	4	5
5. Contractor incorporated comments?	1	2	3	4	5
6. Easily readable/useful format?	1	2	3	4	5
7. Overall review was of high quality?	1	2	3	4	5
8. NAVENVIRHLTHCEN was easily accessible?	1	2	3	4	5
9. NAVENVIRHLTHCEN input during scoping or workplan development would be "value added"?	1	2	3	4	5
10. Added involvement in IR/BRAC document needed?	1	2	3	4	5

Please return by fax using the box provided at the top of this page. If you have any other comments, please list them below or telephone Ms. Mary Ann Simmons, Industrial Hygienist at (757) 462-5556, DSN 253, at any time to discuss your viewpoint. As our customer, your comments and suggestions of how we can improve our services to you are important!