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**DEPARTMENT OF THE NAVY**

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24 APR 1995

From: Commanding Officer, Navy Environmental Health Center  
To: Commander, Atlantic Division, Naval Facilities Engineering  
Command, Attn: John Eason, 1510 Gilbert Street, Norfolk,  
VA 23511-2699

Subj: MEDICAL REVIEW OF INSTALLATION RESTORATION PROGRAM  
DOCUMENTS FOR MARINE CORPS BASE, CAMP LEJEUNE, NC

Ref: (a) LANTNAVFACENGCOM memo of 28 Mar 95

Encl: (1) Health and Safety Plan Review  
(2) Medical/Health Comments Survey

1. As you requested in reference (a), we completed a medical review of the "Site Specific Health and Safety Plan for Soil Remediation, Operable Unit 1, Marine Corps Base, Camp Lejeune, North Carolina." Our comments are provided in enclosure (1).

2. Please complete and return enclosure (2). Your comments are needed to continually improve our services to you.

3. We are available to discuss the enclosed information by telephone with you and, if necessary, with you and your contractor. If you require additional assistance, please call Ms. Mary Ann Simmons at (804) 444-7575 or DSN 564-7575, extension 402.

*Y. P. Walker*  
Y. P. WALKER  
By direction

## HEALTH AND SAFETY PLAN REVIEW

Ref: (a) 29 CFR 1910.120 (Hazardous Waste Operations and Emergency Response)  
(b) Navy/Marine Corps Installation Restoration Manual (February 1992)

### General Comments:

1. The "Site Specific Health and Safety Plan for Soil Remediation, Operable Unit No. 1, Marine Corps Base, Camp Lejeune, North Carolina, Contract N62470-93-D-3032, Delivery Order No. 0062" was prepared for LANTNAVFACENGCOM, by OHM Remediation Services Corporation and forwarded to the Navy Environmental Health Center on 29 March 1995. The document is dated March 1995.
2. The method for the review is to compare the health and safety plan (HASP) to federal requirements under OSHA regulations (29 CFR 1910.120) and to Department of the Navy requirements under the "Navy/Marine Corps Installation Restoration Manual" (see references (a) and (b) above). We noted deviations and/or differences in the plan from these two primary references. A list of acronyms used in our comments is included as Attachment (1).
3. The points of contact for review of the HASP are Ms. Mary Ann Simmons, Industrial Hygienist, or Mr. Donald Coons, Physical Science Technician, who may be contacted at (804) 444-7575, or DSN 564-7575, extensions 402 or 334, respectively.

### Specific Comments:

1. Page 3-1, Subsection 3.1, "Chemical Hazards":
  - a. All of the cited chemicals of concern (COCs) are suspect carcinogens and should be noted as such.
  - b. The current OSHA PEL and ACGIH TLV for dichlorodiphenyl trichloroethane (DDT) is  $1 \text{ mg/m}^3$  vice  $0.05 \text{ mg/m}^3$ .
  - c. As an administrative comment, in the second paragraph, last line, insert "zone" between "breathing" and "using."
2. Page 3-3, Subsection 3.3, "Environmental Hazards": Include specific information for ticks since they are a potential hazard year around.
3. Page 3-4, Subsection 3.3.1, "Heat Stress": The third paragraph, fourth bullet addresses heat stroke, a true medical emergency. Include information describing the proper field treatment of

Enclosure (1)

heat stroke casualties while waiting for competent medical care to arrive. The skin of a heat stroke victim may be hot and moist (from perspiration) or hot and dry. Temperatures can be 104°F or higher.

4. Page 3-7, Subsection 3.4, "Task-Specific Risk Assessment/Hazard Analysis":

a. As an administrative comment, we recommend numbering the tasks to facilitate their location and identification.

b. The "Buddy System" should be utilized if potential exposure to hazardous materials exists.

c. Page 3-8, Task, "Access Clearance, Utility Verification and Site Survey Operations, Potential Hazards Column": As a control measure for the hazard "inhalation and contact with hazardous substances," "review of hazardous properties of water treatment chemicals" is cited. This is the first mention of this potential hazard existing on the site. We recommend deleting this reference if it does not exist on-site or explaining it more clearly.

5. Page 5-1, Subsection 5.1, "Anticipated Protections Levels": The second task, "Multi-media Sampling" and the third task, "Access Clearance, Utility Verification, Site Survey," specifies "modified Level D/C with tyvek." Provide information about when one level of protection would be chosen over the other.

6. Section 7.0, "Air Monitoring":

a. Page 7-1, Subsection 7.2, "Photoionization Detector (PID)":

(1) According to Section 3.1, "Chemical Hazards," all the chemical hazards are pesticides or PCBs, none of which have ionization potentials. Explain the usefulness of the PID for this site. Explain how non-specific direct reading instruments will be used to evaluate employee exposures to specific chemicals.

(2) "GMC-H cartridges," an MSA product, is specified in this section. Since it is unlikely that all employees can be successfully fitted to a single type of respirator, we recommend revising this section to allow for individual fitting variation, or deleting reference to a specific product.

b. Page 7-2, Subsection 7.3, "Real-Time Aerosol Monitor (Miniram)": Based on the lowest PEL/TLV of 0.5 mg/m<sup>3</sup> for chlordane and PCBs, as shown in Table 3-1, "Chemical Hazards," explain setting the action level (AL) at 2.5 mg/m<sup>3</sup> as a trigger to upgrade PPE. This level does not appear to be protective.

c. Page 7-2, Subsection 7.4, "Air Monitoring Log": Include the name/signature of the person conducting the sampling.

7. Section 8.0, "Emergency Response and Contingency Plan":

a. Include a map showing the route to the medical facilities in the final version of the HASP.

b. Include provisions for critiquing plan rehearsals and/or incidents for "lessons-learned."

c. Page 8-4, Table 8.1, "Emergency Telephone Numbers": Include phone numbers for the NOSC/NOSCDR, and the LEPC. The telephone number for the Regional Poison Control Center is invalid. We recommend verifying all telephone numbers prior to starting site operations.

d. Page 8-15, Subsection 8.7.1.1, "Response": In the first paragraph following the "NOTE" it is implied that decontamination of casualties may be eliminated. Decontamination of contaminated casualties may be delayed but it can not be eliminated.

8. Section 9.0, "Training": Prior to starting work, a safety meeting should be held to brief employees on the HASP and any other pertinent site-specific information.

9. Appendix C, "Site Material Safety Data Sheets": Several MSDSs are not readable. Provide legible copies with the final HASP.

## ACRONYMS

ACGIH:	American Conference of Governmental Industrial Hygienists
AG:	Acid Gas
ANSI:	American National Standards Institute
ATSDR:	Agency for Toxic Substances and Disease Registry
BBP:	Bloodborne Pathogen Program
CPR:	Cardiopulmonary Resuscitation
CRZ:	Contamination Reduction Zone
EIC:	Engineer-in-Charge
EMS:	Emergency Medical Service
EPA:	Environmental Protection Agency
EZ:	Exclusion Zone
HASP:	Health and Safety Plan
HBV:	Hepatitis B Virus
HIV:	Human Immunodeficiency Virus
IDLH:	Immediately Dangerous to Life and Health
LEPC:	Local Emergency Planning Committee
MSDS:	Material Safety Data Sheet
NIOSH:	National Institute for Occupational Safety and Health
NOSC:	Navy On-Scene Coordinator
NOSCDR:	Navy On-Scene Commander
OSHA:	Occupational Safety and Health Administration
OV:	Organic Vapor
PCB:	Polychlorinated Biphenyl
PEL:	Permissible Exposure Limit
PID:	Photoionization Device
PPE:	Personal Protective Equipment
PPM:	Parts Per Million
SCBA:	Self Contained Breathing Apparatus
SOP:	Standard Operating Procedure
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Value

FROM: \_\_\_\_\_  
 (YOUR NAME/COMMAND)  
 TO: NAVENVIRHLTHCEN, ENVIRONMENTAL PROGRAMS  
 FAX: COM: (804) 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 about the comments we provided for to 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 (804) 444-7575, DSN 564, extension 402, 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!*