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DEPARTMENT OF THE NAVY  
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16 APR 1996

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

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

Ref: (a) Baker Environmental, Inc transmittal ltr of 15 Feb 96

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

1. Per reference (a), we have completed a medical review of the "Remedial Investigation/Feasibility Study Health and Safety Plan, Operable Unit No. 16 (Sites 89 and 93), 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) 363-5556 or Mr. Donald Coons at (804) 363-5547. DSN prefix is 864.

  
J. 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 "Remedial Investigation/Feasibility Study Health and Safety Plan, Operable Unit No. 16 (Sites 89 and 93), MCB Camp Lejeune, North Carolina, Contract N62470-89-D-4814, Contract Task Order No. 0344," was prepared for LANTNAVFACENGCOM, by Baker Environmental Inc. and forwarded to the Navy Environmental Health Center in February 1996. The document is dated 16 February 1996.
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 Mr. Donald J. Coons, Physical Science Technician, or Ms. Mary Ann Simmons, Industrial Hygienist, who may be contacted at (804) 363-5547 or 363-5556. The DSN prefix is 864.

### Specific Comments:

1. Page 2-1, Section 2.0, "Site Organization and Coordination":

Comment: The first bullet in the second paragraph states the subcontractors are responsible for "Complying with the conditions outlined under "Field team Members," and familiarity and compliance with the contents of this HASP."

Recommendation: We recommend that each subcontractor, as a minimum, provide their own site specific, task hazard analysis.

2. Page 3-4, Section 3.3.4, "Noise":

Comment: This paragraph states, "Past experience during this type of heavy equipment operation has not indicated a noise level concern in conjunction with 29 CFR 1910.95 requirements . . ." However, on page 3-8, Section 3.6.4, "Monitoring Well Installation," the second bullet of the second paragraph cites "Elevated noise levels from heavy equipment operation," as a potential "Physical/Environmental" hazard. It is unclear if elevated sound pressure levels are or are not a potential hazard at this site.

Enclosure (1)

**Recommendation:** Review site heavy equipment operations to determine if noise levels are or are not expected at hazardous levels. If there is any question, state that sound pressure levels will be quantified and that exposed personnel will be included in the company's hearing conservation program.

3. Page 3, Section 3.5.2, "Hazardous Fauna":

**Comment:** The first sentence of the fourth paragraph states, "If a tick is found buried under the skin, remove it by pulling steadily and firmly." Ticks embed their mouth parts in the skin, they do not become buried. The last sentence states, "Observe the bite area periodically thereafter for signs of infection, such as Lyme disease."

**Recommendation:** We recommend rephrasing the first and last sentences as follows, "If a tick is found embedded in the skin, do not squash or burn it," and "Observe the bite area periodically for signs of a rash around the site. Also, keep alert for flu like symptoms; these may be symptoms of Lyme Disease." Additionally, include a requirement for field personnel to use appropriate chemical insect repellants when potentially exposed to ticks.

4. Page 5-1, Section 5.0, "Exposure Monitoring":

**Comment:** Chemicals, other than those measurable by a PID, for example, cadmium and lead, are listed in Table 3-2, "Chemical/Physical Properties of Chemicals Detected at Site 93, MCB Camp Lejeune, Jacksonville, North Carolina." However, the PID is the only instrument listed for breathing zone monitoring.

**Recommendation:** Include methods to evaluate all chemicals to which employees may be exposed at or above permissible exposure levels.

5. Page 5-2, Section 5.4, "Equipment Calibration":

**Comment:** This section states that the PID will be calibrated daily before use in accordance with manufacturer's requirements.

**Recommendation:** We recommend calibrating all monitoring equipment before and after each period of use in accordance with good industrial hygiene practice and manufacturer's recommendations.

6. Page 7-1, Section 7.0, "Decontamination Procedures":

**Comment:** There are no provisions listed for containerizing and properly disposing of spent decontamination liquids.

**Recommendation:** Include this information in the final HASP.

7. Page 8-1, Section 8.0, "Emergency Procedures":

Comments:

a. Provisions to periodically exercise the emergency response plan and to critique the exercise or event are not included in the HASP.

b. Page 8-4, Section 8.8.2, "Chemical Injury," and Page 8-6, Section 8.10, "Personal Protection and First Aid Equipment": The use of a 15 minute emergency eyewash is stipulated in both sections. Information is not provided stating that these units meet the American National Standards Institute's (ANSI) criteria of being able to deliver to the eyes 1.5 liters (0.4 gallons) of potable water per minute.

Recommendations:

a. Include a requirement that the emergency response plan will be exercised and critiqued.

b. Include a statement in the final HASP that the emergency eyewash units meet ANSI Standard Z358.1-1990 or later.

## ACRONYMS

ACGIH:	American Conference of Governmental Industrial Hygienists
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
LEL	Lower Explosive Limit
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