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DEPARTMENT OF THE NAVY

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From: Commanding Officer, Navy Environmental Health Center
To: Commander, Atlantic Division, Naval Facilities Engineering
Command, Code 1822, 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 transmittal ltr of 29 Jul 94,
Contract #N62470-89-D-4814, CTO 0249

Encl: (1) Health and Safety Plan Review

1. As you requested in reference (a), we completed a medical review of the "Draft Health and Safety Plan for Remedial Investigation/feasibility Study of Operable Unit No. 9, Sites 65 and 73, Marine Corps Base, Camp Lejeune, North Carolina." Our comments are provided in enclosure (1).

2. 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 477.


W. P. THOMAS
By direction

HEALTH AND SAFETY PLAN REVIEW

Ref : (a) 29 CFR 1910.120
(b) Navy/Marine Corps Installation Restoration Manual (February 1992)

General Comments:

1. The "Draft Health and Safety Plan, for Remedial Investigation/Feasibility Study of Operable Unit No. 9, Sites 65 and 73, Marine Corps Base Camp LeJeune, North Carolina" was prepared for LANTNAVFACENGCOM by Baker Environmental, Inc., and forwarded to the Navy Environmental Health Center on 1 August 1994. The document was dated 29 July 1994.
2. This review addresses both health and safety and emergency response sections of the plan.
3. The method used for this review is to compare the health and safety plan to the 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. Deviations and/or differences in the plan from these two primary references are noted. A list of acronyms used in our comments is included as Attachment (1). Specific comments are noted below.
4. The overall quality of this plan is greatly improved over others we have reviewed by Baker Environmental, Inc.
5. The point of contact for review of the health and safety plan is Ms. Mary Ann Simmons, Industrial Hygienist, who may be contacted at (804) 444-7575, or DSN 564-7575, extension 477.

Specific Comments:

1. Section 3.0, "Site Characterization":

a. Section 3.2.1, "Chemical Hazards": This section states that the chemicals of potential concern at Site 65 are "a few organics (e.g., SVOCs, pesticides and PCBs) and a variety of inorganics (i.e., chromium, lead, etc.)." This listing, especially the PCBs and pesticides, does not appear to be consistent with the site background description found in Section 3.1.1, "Site 65 - Engineer Area Dump" which indicates this site was formerly used as a battery acid disposal area and a liquids (petroleum, oil and lubricant products) disposal area.

Enclosure (1)

b. Section 3.2.2.3, "Noise": This section indicates that elevated noise levels may be present due to drilling and other heavy equipment operations. A hearing conservation SOP should be included if this is found to actually be the case for this site.

c. Section 3.2.3, "Radiation Hazards": The first paragraph states that the potential for radiological disposal at Site 65 is minimal. There either is or is not a radiological hazard at this site. We recommend determining the naturally occurring radiation levels before starting work, and if levels are found in excess of those levels, the site is evacuated until the situation is thoroughly investigated by a radiation expert.

d. Section 3.2.5.8, "Test Pit/Trenching (Site 65)": The physical hazard of "explosion from contact with explosive/ignitable materials" is listed. This is the first indication that explosive hazards are anticipated. If this hazard actually is anticipated for this site, include additional information in the HASP.

e. Include a site-specific hazard analysis for decontamination procedures.

2. Section 5.0, "Environmental Monitoring":

a. Section 5.1, "Personal Monitoring":

(1) Consider basing the action level for the Miniram results on cadmium since its PEL is lower (0.005 mg/M³) than that of coal tar pitch volatiles (0.2 mg/M³).

(2) Since coal tar pitch volatiles do not have an ionization potential, according to the NIOSH *Pocket Guide to Chemical Hazards*, and thus cannot be measured by the PID, it would seem to be more appropriate to base the action level for PID readings on a volatile organic compound with an ionization potential, measurable by the PID.

b. Section 5.2, "Point Source Monitoring": Action levels are provided for radiation monitoring results. We recommend, before starting work, determining the naturally occurring background radiation levels, and that the site is evacuated if these levels are exceeded during the course of work.

c. Section 5.5, "Equipment Calibration and Maintenance" states that equipment is to be calibrated daily. Standard industrial hygiene practice is to calibrate instruments before and after each period of use.

3. Section 6.2, "Site-Specific Levels of Protection":

a. Level B PPE is specified for the "Test Pit/Trenching" task for Site 65. Earlier in the plan, Section 3.2.2.6, "Heavy Equipment," personnel are specifically prohibited from entering into trenches and are instructed to avoid walking within 2 feet of an open excavation. Based on this direction, the reason for using Level B PPE for this task is not

clear. While it is important to protect the employee from chemical hazards, it is also important not to expose them to additional physical hazards such as heat stress.

b. Include PPE requirements for personnel performing equipment decontamination.

4. Section 10.0, "Medical Surveillance Requirements":

a. Section 10.1, "General": Clarify the relationship between the occupational health physician and the examining physician.

b. Table 10-1, "Medical Surveillance Testing Parameters": The first footnote at the bottom of the page says that "the attending physician has the right to reduce or expand the medical monitoring on an annual basis as he/she deems necessary." If the occupational medicine physician and the examining physician are not the same person, it is unadvisable to independently change the examination contents established by the occupational medicine physician. If the examining physician feels the medical monitoring should be altered, he/she should consult with the occupational medicine physician before acting.

5. Attachment A, "Baker Environmental Inc, Safety Standard Operating Procedures":

a. If hazardous noise levels are expected during the site work, include a hearing conservation SOP.

b. SOP 6.0, "Cold Stress": This SOP does not include information regarding work-rest cycles, fluid replacement protocols, types of beverages to avoid, or a description of "latent (delayed)" symptoms of hypothermia.

ACRONYMS

ACGIH:	American Conference of Governmental Industrial Hygienists
AG:	Acid Gas
ATSDR:	Agency for Toxic Substances and Disease Registry
BBP:	Bloodborne Pathogen Program
CPR:	Cardiopulmonary Resuscitation
CRZ:	Contamination Reduction Zone
EIC:	Engineer-in-Charge
EPA:	Environmental Protection Agency
EZ:	Exclusion Zone
HASP:	Health and Safety Plan
HBV:	Hepatitis B Virus
HIV:	Human Immunodeficiency Virus
IPA:	Isopropyl Alcohol
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
PPE:	Personal Protective Equipment
PPM:	Parts per million
SOP:	Standard Operating Procedure
STEL:	Short Term Exposure Limit
TLV:	Threshold Limit Value