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DEPARTMENT OF THE NAVY

NAVY ENVIRONMENTAL HEALTH CENTER
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Ser 06/

JUN 03 1992

From: Commanding Officer, Navy Environmental Health Center
To: Commander, Atlantic Division, Naval Facilities Engineering
Command, Code 1822, Norfolk, VA 23511-6287


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

Ref: (a) NAVENVIRHLTHCEN ltr 5090 Ser 06/3567 of 18 May 92

Encl: (1) Health and Safety Plan Review

1. Medical review of the Draft Final Health and Safety Plan, Sites 6, 9, 48, and 69, Camp Lejeune, North Carolina, has been completed. Our comments on the health and safety plan portions are provided in enclosure (1). Our comments pertaining to emergency response, radiation safety and medical surveillance were previously forwarded by reference (a).

2. The technical point of contact for comments on the review is noted in the enclosure. 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 coordinate with Ms. Sheila Muschett, P.E., Head, Installation Restoration Program Support Department at 444-7575, extension 430.


W. P. THOMAS
By direction

HEALTH AND SAFETY PLAN REVIEW

GENERAL COMMENTS:

1. The "Draft Health and Safety Plan, Sites 6, 9, 48, and 69, Camp Lejeune, North Carolina" was provided by Atlantic Division, Naval Facilities Engineering Command (LANTNAVFACENGCOM) for review. The document was prepared for LANTNAVFACENGCOM by Baker Environmental Inc., and was dated 10 April 1992.
2. These comments address the health and safety plan (HASP) section of the document. Comments for the emergency response, radiation safety, and medical surveillance sections were provided under separate correspondence.
3. The point of contact for this review is Ms. Mary Ann Simmons, Site Support Department, who may be contacted at 444-7575, extension 477.

SPECIFIC COMMENTS:

1. Pages 1 and 2, Paragraph 1.3, "Medical Surveillance Requirements":

Comments:

(a) The second paragraph states that all individuals engaged in site activities will receive a physical examination and the content of the exam is described. The OSHA standard, 29 CFR 1910.120 (b)(4)(ii)(D), requires that the physician be provided site-specific information in order to determine the content of the examination.

(b) The last sentence on the page states that subcontractors will be required to meet all applicable medical monitoring requirements identified by OSHA. There is no description of how Baker will ensure that this actually occurs. Additionally, subcontractors have to comply with all applicable OSHA regulations, not just those for medical surveillance.

Recommendations:

(a) Revise section to state that the examining physician will be provided site-specific information and that the employees will be given examinations based on the site-specific information.

(b) Revise section to describe how Baker will monitor subcontractor compliance with OSHA requirements.

2. Page 4, Section 1.5, "Pre-Entry Requirements":

Comment: The statement is made that site-specific safety and health hazard information will be obtained from daily site reconnaissance. While this should be done, enough information already exists to develop a site-specific HASP with the expectation that the HASP may have to be revised as more or different information is made available.

Recommendation: The HASP should be as site-specific as possible at all times. Revise HASP to be site-specific based on information available at the time.

3. Page 9, Section 4.0, "Site Organization and Coordination":

Comment: The Contractors are yet to be determined.

Recommendation: Fill in these blanks as soon as this information is known. Additionally, will the contractors be required to provide their own HASP, PPE, and medical surveillance examinations, or will they be required to follow Baker's procedures and be provided services and equipment as necessary?

4. Page 10, Section 5.0, "Site Control":

Comment: This section is too generic. A site map is not included, nor is use of the "buddy system", site communications, safe work practices or a description of the nearest medical assistance been addressed.

Recommendation: Revise this section to be site-specific as required by 29 CFR 1910.120 (b)(4)(ii)(F).

5. Page 12, Section 5.4, "Sanitation/Site Precautions":

Comment: This section states that sanitation and site precautions to be followed are found in Attachment D. Attachment D information is not site-specific.

Recommendation: Revise this section to be site-specific.

6. Page 13, Section 6.2, "Chemical Hazard Analysis":

Comments:

(a) It is stated that "toxicological properties" are identified in Tables 6-1, 6-2, and 6-3. Information in these tables is not toxicological in nature, but more in the line of exposure limits and chemical information.

(b) Some information for site 6 is in Table 6-1 and some in Table 6-2. Why is this information presented in separate tables?

(c) The last sentence of this section states that "Chemical Safety Data Sheets are available for these contaminants" in Attachment C. Sheets are available for some of the chemicals in Attachment C, some are not. At least one of the chemicals for which there is a sheet in Attachment C is not found in any of the tables.

Recommendations:

(a) Revise section to either include toxicological information or omit the term "toxicological". The same comment applies to the titles of the tables.

(b) For the sake of clarity, either combine this information in one table or provide explanation of why this is not possible.

(c) Provide all the Chemical Data Sheets in Attachment C, as stated, or state exactly which of these sheets will be included.

7. Page 13, Section 6.3.2, "Heat Stress":

Comment: The section on heat stress is very generic. Nothing is included concerning monitoring or by what guidelines heat stress will be measured. Since, due to the location, heat stress may well be a serious problem, it is important that appropriate information is provided.

Recommendation: Revise section to be site-specific. ACGIH and NIOSH both have guidelines which can be used for heat stress evaluation and control. Include limitations in the use of PPE due to heat stress in accordance with 29 CFR 1910.120

(b) (4) (ii) (C).

8. Page 18, Table 6-3, "Supplemental List of Chemicals (not otherwise mentioned)"

Comment: This is confusing information. In part A, why are these materials not otherwise mentioned? The footnote in part B states that contact with these chemicals are not anticipated. Why is this information included in the plan?

Recommendation: Clarify this table.

9. Page 20, Section 6.3.3, "Explosion and Fire":

Comment: A list of explosion and fire hazards is presented, but there is no discussion of preventive measures other than they be "closely monitored." Naturally it is important to closely monitor the work, but other precautions are also effective and should be considered. These may include: preventive maintenance,

prior coordination with Navy/Marine Corps officials to determine if under-ground utility lines may exist in the areas being surveyed and their locations, use of non-sparking tools and so on.

Recommendation: Revise this section to include more thorough preventive measures than that simply of "close monitoring."

10. Page 21, Section 6.3.4, "Site-Specific Safety Hazards":

Comment: A risk analysis and methods to deal with the site-specific hazards as required by 29 CFR 1910.120 (b)(4)(ii)(A) is not included for most of these items.

Recommendation: Include methods to deal with the potential hazards and include a risk analysis for each site task and operation.

11. Pages 24 and 25, Section 7.1, "Levels of Protection":

Comment: An HNu and Calorimetric Tubes will be used to evaluate levels of protection. Neither of these monitoring devices will evaluate skin absorption nor many of the chemicals of concern. They are not able to determine if the PPE is being protective.

Recommendation: Revise to include a more detailed, appropriate method, to determine the adequacy of the levels of protection.

12. Page 25, Section 7.2, "Respiratory Protection":

Comments:

(a) OSHA requirements dictate that people using respiratory protective equipment be trained, fitted and medically evaluated. The Respiratory SOP (Attachment D) gives details on the respiratory protection program, yet nothing is stated in the plan about the field personnel working this job having received the training, fitting and medical tests.

(b) Under the Level C paragraph, it is stated that cartridge changeover or protection upgrade will occur under a variety of circumstances, one of which is when the PID/FID concentrations are greater than or equal to 1000 ppm for vapor/gas cartridges. The NIOSH assigned protection factor for these types of cartridges in a full face piece respirator is 50. Since a couple of the contaminants of concern have PELs of 1 ppm, this is potentially allowing for employees to be overexposed to certain chemicals.

Recommendations:

- (a) Address this requirement, 29 CFR 1910.120
(b) (4) (ii) (C), in the site-specific plan.

(b) Revise the upgrade criteria so that the employees will be sufficiently protected.

13. Page 27, Section 8.0, "Site Work Plans/Project Personnel":

Comment: It is stated that the tasks to be performed at each site will be immediately attached to the HASP. These were not found to be attached to the HASP. What is the difference between the information in this table and Section 4.0? It appears that there will be several work parties performing tasks simultaneously. If this is so, who will be the SHSO for each party? Will each team have adequate first aid and monitoring equipment available?

Recommendation: Include the work plans as stated. Consider combining this information with Section 4. Include specific descriptions of the work parties.

14. Page 29, Section 10.1, "Decontamination":

Comment: This section is generic.

Recommendation: Revise section to be site-specific as required by 29 CFR 1910.120(k). Consider site conditions and contaminants during the revision. Include the method for monitoring the effectiveness of the decontamination. Include methods for decontamination for each level of protection that is anticipated to be worn while performing the sampling.

15. Page 30, Section 10.3, "Equipment Decontamination":

Comment: This is a generic statement. While not all types of equipment to be used may be known at this time, it is probably not much different than that used on similar jobs.

Recommendation: Revise to be site-specific as required by 29 CFR 1910.120(k). Include all pertinent decontamination procedures in the HASP.

16. Page 34, Section 11.4, "Environmental Monitoring":

Comment: Nothing is mentioned as to who will be conducting the monitoring and what training is required prior to operating the instruments.

Recommendation: State this information in this section.

17. Page 34, Section 11.4.1, "Point Source":

Comments:

(a) Point source monitoring is defined as monitoring performed at the source of the activity within the breathing zone of the worker. These are two separate types of samples. When levels of protection are assigned, the worker's exposure must be evaluated. The selection of the types of monitoring equipment is interesting since many of the chemicals of concern would not show a response on an Hnu. Many non-volatile liquids, toxic solids, particulates and other toxic gases and vapors cannot be detected. The instrument is non-specific. Another problem to consider when using the HNu is the effect of high humidity which can effect the response by about 50%. High temperatures and humidity can also affect detector tube readings.

(b) The particular type of direct reading instrument, HNu or OVA, is not specified. Which will be used? What is an OVA 128?

Recommendations:

(a) Separate area sampling requirements from personal sampling requirements. Include in this section a discussion on the limitations of the specified sampling equipment and what will be done to compensate. Include a discussion on how other chemicals of concern will be monitored.

(b) Specify the type of instrument to be used.

18. Page 44, Section 11.5, "Personal Monitoring":

Comment: The statement is made that personal sampling done in accordance with Section 11.4.1 should be sufficient. This is not sufficient for several reasons. First, the vast majority of OSHA standards are based on an 8-hour time weighted average. To evaluate exposures, 8-hour samples, or something close to 8-hours, must be taken. Secondly, as mentioned previously, the types of equipment to be used do not measure many of the chemicals of concern on these sites. Finally, nothing is mentioned about monitoring for skin absorption hazards.

Recommendation: Revise section to be consistent with the OSHA standards. Broaden the types of sampling instruments so additional chemicals can be detected, or state why this will not be done.

19. Page 44, Section 11.6, "Equipment Maintenance and Calibration":

Comment: This section states that equipment will be

calibrated daily and by methods found in Baker's Standard Operating Procedures for Administrative, Field and Technical Activities Manual.

Recommendation: Equipment must be calibrated before and after each day's use and in accordance with the manufacturer's recommendations.

20. Page 48, Section 14.0, "Spill Containment Procedures":

Comments:

(a) This is not site-specific information.

(b) The last sentence states that "appropriate Navy Activity Personnel will be..." Specific names and phone numbers need to be included here.

Recommendations:

(a) Revise section to be site-specific. Items to address are found in 29 CFR 1910.120(j). State where the containment materials can be found and how this will be communicated to the site employees.

(b) Revise to include site-specific information.

21. Attachment A, "Medical Surveillance Testing Parameters":

Comment: This is not site-specific as required by 29 CFR 1910.120 (b)(4)(ii)(D). The examining physician is supposed to be provided the site-specific information and then decide on the content of the examinations. While these examinations appear to be comprehensive, there is no indication that they are based upon anticipated site conditions.

Recommendation: Revise section to be site-specific.

22. Attachment B, "OSHA Training History of Project Personnel":

Comment: The 8-Hour refresher course for Mr. Wattras is outdated. Mr. Tepsic must have the training before he works on the site.

Recommendation: Ensure the employees on site have the required training as detailed in 29 CFR 1910.120(b)(4)(ii)(B).

23. Attachment D, Section 3.0, "Care and Cleaning of Personal Protective Equipment":

Comment: Although stated in the first paragraph that this section applies to Levels C and D, nothing was found for Level D,

nor was anything included for Level B.

Recommendation: Revise to include information for Levels B and D equipment.

24. Attachment E, "Environmental Hazards Specialists International, Inc. (EHS) - Standard Operating Procedures":

Comment: This is good and interesting information concerning the subcontractor EHS, however it is not sufficient for a HASP.

Recommendation: Ensure that all subcontractors have an acceptable HASP prior to working on the sites.

SUMMARY COMMENTS:

1. This HASP is generic and does not provide adequate site-specific information. While it is realized that not all the information is known about the site, enough is known to be able to develop a much more site-specific document than is presented here. It is felt that, as written, the requirements of 29 CFR 1910.120 are not fulfilled.
2. In general, inadequate information was provided to determine that site employees would be protected by hazards anticipated to be found on the sites. Very little mention was made of monitoring the effectiveness of the plan. Site tasks were not described, nor was a risk analysis accomplished for each task.
3. It is recommended that when the plan is finalized all sections containing similar subject matter be combined in that particular section. This would make the plan much easier to read and comprehend. While not mandatory, it is recommended that the OSHA standard, 29 CFR 1910.120(b)(4)(ii) be used as a guideline for topics and order of presentation.



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 (412) 269-6000

LETTER OF TRANSMITTAL

To: EPA Region IV
Waste Management Division
345 Courtland Street
Atlanta, GA 30365

Attn: Ms. Michelle Glenn

S.O. No. 19024-SRN
 Project: Navy CLEAN-CTO-0024
 Date: June 3, 1992

We are forwarding the following: Attached Under Separate Cover

DWG. NO.	NO. COPIES	TITLE OR DESCRIPTION	COMMENTS
	2	Final RI/FS Work Plan for Sites 6, 9, 48 and 69 Camp Lejeune, NC	Replacement pages: 5-27, 5-37, 5-51 5-11 thru 5-19
	2	Final RI/FS Sampling and Analysis Plan for Sites 6, 9, 48 and 69, Camp Lejeune, NC	Replacement pages: 3-3 thru 3-12, 5-12, 5-13, 6-2 thru 6-10
	2	Final RI/FS Quality Assurance Project Plan for Sites 6, 9, 48 and 69, Camp Lejeune, NC	Replacement pages: 2-1, 5-2, 7-2, 7-3, 8-1, 9-2 thru 9-13, 10-1

THESE ARE TRANSMITTED as checked below:

- As requested
- For review and comment
- For your information
- No exception taken
- Rejected - See remarks
- Proceed subject to corrections noted
- Revise and resubmit
- Submit specified items

GENERAL COMMENTS:

BAKER ENVIRONMENTAL, INC.
 By: Raymond P. Wattas
 Title: Project Manager
 Page 1 of 1

Baker

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LETTER OF TRANSMITTAL

To: US EPA, Region IV
345 Courtland Street
Atlanta, Georgia 30365

S.O. No. 19017-20-SRN / 19024-20-SRN
 Project: CTO-0017 / CTO-0024
 Date: 6/3/92

Attn. Ms. Michelle Glenn

We are forwarding the following: Attached Under Separate Cover

DWG. NO.	NO. COPIES	TITLE OR DESCRIPTION	COMMENTS
	2	Final Interim Remedial Action RI for the Shallow Aquifer at the HPIA	
	2	Final Interim Remedial Action FS for the Shallow Aquifer at the HPIA	
	2	Final Interim Remedial Action PRAP for the Shallow Aquifer at the HPIA	
	2	Final RI/FS Work Plan for Sites 6, 9, 48, & 69, MCB Camp Lejeune	
	2	Final RI/FS Sampling and Analysis Plan for Sites 6, 9, 48, & 69, MCB Camp Lejeune	

THESE ARE TRANSMITTED as checked below:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> As requested | <input type="checkbox"/> No exception taken | <input type="checkbox"/> Revise and resubmit |
| <input type="checkbox"/> For review and comment | <input type="checkbox"/> Rejected - See remarks | <input type="checkbox"/> Submit specified items |
| <input type="checkbox"/> For your information | <input type="checkbox"/> Proceed subject to corrections noted | <input type="checkbox"/> _____ |

GENERAL COMMENTS:

cc: Mr. Byron Brant (LANTDIV)

BAKER ENVIRONMENTAL, INC.

By: Raymond P. WattasTitle: Project ManagerPage 1 of 1