

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

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August 1, 1991
faxed copy

Mr. Paul Ko
Western Division
Naval Facilities Engineering Command
Code 1813 PK
P.O. Box 727
San Bruno, CA 94066-0720

Dear Mr. Ko:

**REVIEW OF THE SITE INVESTIGATION FIELD WORKPLAN, CROWS LANDING
NAVAL AUXILIARY LANDING FIELD (CLNALF)**

The Department of Toxic Substances Control (Department) has reviewed the workplan for the field investigation of CLNALF. Generally we find the workplan encompasses the sources of contamination suspected at CLNALF.

Our primary concern is the criteria established to implement ground water sampling. The workplan links ground water sampling to the soil investigation results. In other words, if constituents are detected during the soils investigation, ground water sampling will be implemented.

The Department does not support this approach. Considering the mobility of some of the constituents included in the investigation, primarily volatile compounds, there is a potential for constituents to have entered the ground water almost in total, leaving little or no residue in the soil. We therefore recommend that ground water sampling be implemented during this phase of the site investigation. By conducting a multi media site investigation now, later investigations and their associated costs could be avoided or limited.

We recommend that ground water sampling be implemented by a hydro-punch or ground water monitoring wells, which ever is more applicable at each site.

The Department requests further clarification regarding two subjects:

- 1) The sampling methodology and disposal procedures for waste materials (drill cuttings and purge water etc.) is not clearly outlined in the workplan. Please provide an addendum outlining your proposal for handling these materials.

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D/N:1

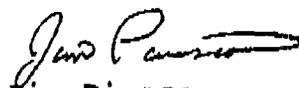
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- 2) The sampling protocol used throughout the workplan indicates that EPA contract laboratory protocols will be followed. However, the specific sampling procedures for each constituent is not included. Please provide a listing of sampling procedures intended for use at CLNALF.

Enclosed as an attachment to this letter is the Department's review of the health and safety plan. The Department's review does not constitute an approval, rather it provides concurrence with the appropriate health and safety regulations.

Should you have any questions regarding this letter, you may contact me at (916) 855-7874.

Sincerely,



Jim Pinasco
Waste Management Engineer

enclosure

cc: Mr. Michael Mosbacher, P.E.
California Regional Water Quality Control Board
3443 Routier Road
Sacramento, CA 95827-3098

Mr. Robert Fourt
Stanislaus County Department of Environmental Resources
1716 Morgan Road
Modesto, CA 95351

M e m o r a n d u m

Date : July 24, 1991

To : Mr. Jim Pinasco *JR*
Waste Management Engineer
Department of Toxic Substances Control
10151 Croydon Way, Suite 3
Sacramento, CA 95827-2106

From : Toxic Substances Control Program
1515 Tollhouse Road
Clovis, CA 93612
8-451-3908

Subject : Site Specific Health and Safety Plan for Crows Landing Naval
Auxiliary Landing Field (NALFCL)

Activity Requested

It was specifically requested that the Site Health and Safety Plan for Crows Landing Naval Auxiliary Landing Field, Sites 11, 12, 13 and 16 be reviewed for conformity with applicable standards and guidelines. Additionally, a memorandum citing deficiencies and recommendation was requested.

Review Activity

The Technical Assistance Unit (TAU) has reviewed the Health and Safety Plan prepared by PRC Environmental Management. The criteria used by the TAU is based upon the requirements found in 29 CFR 1910.120, CCR Title 8, 5192, The California Health and Safety Code and TSCP policies and guidelines.

Discussion/Comments and Recommendations

The Health and Safety Plan is intended to be a functional stand alone document. The Plan is used to educate and familiarize the on-site workers with the site history, proposed work activities, known or potential health hazards, emergency action plans and the health and safety information that is necessary to mitigate the risks from the identified hazards. Therefore, the final Health and Safety Plan should be available at all times for on-site personnel to reference.

In utilizing the Health and Safety Plan, field staff must be able to obtain sufficient information to compile an accurate assessment of the health and safety issues associated with every site job function. The TAU's review finds the Site Health and Safety Plan fails to provide or requires additional information and/or clarification of the items listed below.

1. Key Personnel and Responsibilities

Identify key personnel by name and specific assignment for the project. Summarize the operational and health and safety responsibilities of each key person identified. Include the reporting relationships of all personnel, the extent of the Site Safety Officer's (SSO) authority to correct health and safety problems and the overall project responsibilities of the SSO (what the SSO will be doing besides site safety activities). Also include the site and office telephone numbers of key personnel and contractor/responsible party and agency personnel.

2. Job Hazard Analysis/Site Characterization and Analysis

Provide information on potential hazards to workers at the site. Describe potential chemical hazards based on contaminants present or expected, and a concise description (narrative) of the primary health risks associated with each; this should include chemical, physical and toxicological characteristics of the contaminants, such as vapor pressure, odor threshold, expected potential routes of entry, physical state expected (gas, vapor, aerosol, etc.), target organs, acute and chronic effects, etc. This narrative may be augmented by a quick-referenced chart of chemical hazards. Include PELs/TLVs/RELS for each contaminant (if applicable). Provide the known or suspected contaminant levels likely to be encountered on site.

Completely describe the physical hazards associated with each site activity (i.e., trenching, drilling, excavating, sampling) and the steps to be taken to minimize these hazards.

Provide additional information on anticipated weather conditions, including historic mean temperatures and relative humidities. If heat stress potential is indicated (ambient temp > 70F), discuss its symptoms and the attendant hazards.

As drilling will be conducted, ensure that Underground Service Alert (USA) is contacted for guidance regarding underground utilities. Article 6 of the Construction Safety Orders (in Title 8, California Code of Regulations) contains specific regulatory requirements for trenching operations, as does 29 CFR 1926.

Job Hazard Summary

Provide a summary of the potential risks arising from the work being performed at the site. This will include impact on the workers, the nearby/surrounding community, and the environment. This should not be confused with the environmental risk assessment that may be required for site mitigation projects (as part of the RI/FS); the assessment for the SSP will address hazards incurred by the activities at the site (i.e., vapors from exposed faces, particulates generated by drilling and excavation, safety issues, etc.).

3. Exposure Monitoring Plan

Provide a plan for all aspects of the area, including worker and community exposure programs. Describe rationales and methodologies for each program, and locations for area and community monitoring. Equipment calibration protocols should be included as an appendix to the SSP.

Exposure hazards to consider include airborne vapors, gases and particulates, radiation, heat stress, and noise.

Direct Reading Instruments

Vapors and gases are typically initially monitored with direct-reading instruments (DRI's) such as portable flame ionization detectors (i.e., Foxboro Organic Vapor Analyzer or OVA), portable photoionization detectors (i.e., HNu, Photovac TIP, etc.) and various combustible gas indicators. Such measurements may be used for the preliminary determination of appropriate levels of personal protective equipment, but readings must be quantified by personal monitoring using NIOSH methods.

Personal Monitoring

CFR 29 1910.120 and CCR 8 5192 require personal monitoring of those employees likely to have the highest exposures. TSCD interprets this as requiring personal sample collection devices such as pumps and sampling media, or passive dosimeters, with the media quantitatively analyzed for the contaminants of concern by an AIHA-certified laboratory. The personal sampling should be performed in accordance with NIOSH methods, if possible. Summaries of the methods used should be included in the monitoring plan. Note that this sampling is performed in addition to DRI monitoring. If no personnel monitoring is anticipated, provide the discussion logic.

Dust Monitoring

Concentrations of dust that exceed the nuisance dust TLV (10 mg/m³) may be present but it may not be obvious to the observer that such concentrations are present. If it cannot be demonstrated that "visible dust" is an acceptable criteria or action level, then airborne particulate concentrations should be measured with a portable aerosol monitor to ensure compliance with the nuisance dust TLV.

A determination should also be made to estimate the worse-case concentration of contaminants (such as heavy metals and semi-volatile organics) present in 10 mg/m³ of airborne particulates. These estimated concentrations are then compared with established standards for individual compounds to determine if the standards would be exceeded. If yes, then the action level for dust/particulates should be set at a level such that standard for the individual contaminant would not be exceeded. In this case, portable aerosol monitors should be supplemented with personal sampling for the specific contaminant(s) using NIOSH methods.

4. Personal Protective Equipment (PPE) and Engineering Controls

29 CFR 1910.120 requires SSP's to have a written PPE program, and lists the requirements for such a program. This reference should be consulted when preparing this section of the SSP. Applicable portions of the firm's formal PPE Program may be included as an appendix.

Protective Clothing

Discuss protective clothing selections and the rationale for the selections. This must be more specific than "chemical resistant" coveralls, gloves, etc., and must include rationale for selection. Each entire protective ensemble must be completely described, including the type of material; simply indicating an EPA "Level of Protection" (Level A, B, C or D) is not acceptable, but first identifying and then, later referring to a described ensemble as EPA Level A, B, C or D would be acceptable.

Site Control (Work Zones and Security Measures)

In this section, provide a site and area map with exclusion, contamination reduction and support zones outlined, and show the location of the decontamination area. Define the site control/security measures; these include items such as fencing, locked gates, security guards, flagging, etc. Describe on-and-off-site

communications methods and systems.

5. Decontamination Measures

This section will describe the decontamination (decon) procedures to be used for personnel, personal protective equipment, sampling equipment and construction equipment. Detail the decon procedures, including how the decon line and rest area will be set up, the steps in the decon process (for each level of protection), provisions for collection and disposal of contaminated materials and liquids, and a listing of decon equipment and solutions that will be used (i.e., soap and water, steam cleaner, etc.). Include provisions for personal hygiene (hand/face wash, showers) (see "Sanitation", below).

General Safe Work Practices

This section describes safe work practices that will be employed at the site, and addresses specific issues such as personal hygiene, drill rig safety, trenching safety, site entry protocol, smoking/eating restrictions, etc. If necessary, this section should address proper illumination of the jobsite, especially if work is to be done at night; describes illumination criteria.

6. Sanitation

Describe the provisions that will be made to ensure proper sanitation facilities are available for site personnel. This includes adequately stocked washing facilities and showers, toilets, potable water, etc.

7. Standard Operating Procedures

Establishes Standard Operating Procedures (SOP's) for activities that can be standardized due to their repetitive nature; examples are decontamination protocol, respirator fit test procedures, equipment calibration, drill rig checkout, and confined space procedures. A checklist is advisable because it is useful in the field for daily checks of working conditions.

If such safety SOP's are provided through the firm's health and safety program/manual, that section of the manual should be provided as an appendix to the SSP.

8. Emergency Response Plan

The plan should describe medical and emergency services to be used, including a list of emergency contact telephone numbers, and a map and narrative describing the route to the nearest emergency room. Personnel with current

CPR/First Aid training need to be identified.

9. Provide in the Health and Safety Plan the maps referred to in the plan.
10. Attachment is a blank form and therefore provides no information on the evaluation of hazardous chemicals.
11. Provide the rationale used to establish the action levels for upgrade in the level of personal protection.
12. Provide the results of previous analyses and monitoring.
13. Provide an estimate of the personnel requirements including subs for the project.

There may be additional requirements found in Cal-OSHA's general Industrial Safety Orders and Federal OSHA's Hazardous Waste Operations and Emergency Response (HAZWOPER), including recordkeeping, worker exposure monitoring, medical surveillance, training and respiratory protection. Therefore, it should be noted that acceptance of this Plan by the Department does not necessarily constitute compliance with all occupational health and safety regulatory requirements.

Thank you for the opportunity to comment on the site specific Health and Safety Plan for NALFCL. If you have any questions regarding these comments, please contact me at 8-451-3908.



Marc T. Boswell, M.S.
Associate Industrial Hygienist

cc: Doug Hohman
Senior Hazardous Materials Specialist