



Department of Toxic Substances Control



Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
2796 Corporate Avenue
Cypress, California 90630

M60050_003352
MCAS EL TORO
SSIC NO. 5090.3.A

Gray Davis
Governor

September 11, 2000

Mr. Dean Gould
BRAC Environmental Coordinator
Marine Corps Air Station El Toro
Base Realignment and Closure
P.O. Box 51718
Irvine, California 92619-1718

DRAFT PROJECT WORK PLAN, REVISION 1, FOR PRE-DESIGN ACTIVITIES AT
INSTALLATION RESTORATION SITES 3 AND 5, AND DEBRIS DISPOSAL FROM
SITE 1, MARINE CORPS AIR STATION (MCAS) EL TORO

Dear Mr. Gould:

The Department of Toxic Substances Control (DTSC) reviewed the above draft Project Work Plan (Work Plan) that was received by this office on August 7, 2000. The Work Plan describes the objectives and procedures for pre-design activities at Sites 3 and 5 and waste management activities at Sites 1 and 24. The pre-design activities includes trenching to verify the landfill boundaries at Sites 3 and 5 and clearing concrete and asphalt to prepare for the radiological survey at Site 3. The waste management activities include off-site disposal of stockpiled debris (metallic material and soil) from Site 1 and dismantling and disposal of soil vapor extraction system piping from Site 24.

After review of the Work Plan, DTSC has the following comments:

1. Title: Please include Site 24 in the title since this work plan includes dismantling and disposal of piping associated with the Site 24 soil vapor extraction system.
2. Section 3.1.1.3 - Soil Borings: In the second paragraph, 03-DGMW65 and 04-DGMW66 are listed but their locations are not shown on Figure 4, Site Plan and Proposed Trench Locations. Also, 03-DGMW65 is not included in the notes that show "depth" and "waste encountered."

Please show the locations of 03-DGMW65 and 04-DGMW66 on Figure 4 and include notes (depth and waste encountered) for 03-DGMW65.

 Printed on Recycled Paper

Mr. Dean Gould
September 11, 2000
Page 2

3. Section 3.1.1.3 - Soil Borings: In the third paragraph, eighteen soil borings (03SB1 through 03SB15 and 03SB17 through 03SB19) are listed; however only borings 03SB11 through 03SB15 and 03SB17 through 03SB19 shown on Figure 4, Site Plan and Proposed Trench Locations.

Please show the locations of borings 03SB1 through 03SB11 on Figure 4.

4. Section 4.6 - Site 1 (EOD [Explosive Ordnance Disposal] Range) Debris Segregation and Disposal Activities: The sixth paragraph states, "Samples of the non-UXO [unexploded ordnance] or non-radioactive soil remains from screening operations will be collected and analyzed for characterization and hazard classification. One sample will be collected and analyzed for every 20 tons of screened and stockpiled soil material. Following hazard classification, the material will be hauled off-site to a CERCLA-approved facility for disposal. It is estimated that approximately 100 tons of debris including scrap metal and soil may be generated from the segregation activities at this site."

Please refer to Chapter 9 of SW-846 to verify that the number of samples proposed is adequate for waste classification. If preliminary data is not available, please state as such and describe that the number of samples will be verified after the analytical results are reviewed and additional samples will be collected, if necessary.

5. Section 4.7 - Site 24 (Potential VOC [volatile organic compound] Source Area) SVE [Soil Vapor Extraction] Pipe Dismantling and Disposal: Please clarify that the work at this site (dismantling, removal, and disposal of approximately 8,000 linear feet of polyvinyl chloride piping associated with the SVE system) will only occur following regulatory approval.
6. Section 4.7 - Site 24 (Potential VOC Source Area) SVE Pipe Dismantling and Disposal: Please clarify waste classification sampling to be conducted for the waste piping prior to disposal.
7. Section 4.10 - Demolition of Concrete and Pavement: This section states that concrete and asphalt demolition material will be hauled off-site for recycling. The section does not mention classification of the waste prior to disposal/recycling.

The concrete pad and asphalt pavement overlies a landfill (Site 3) where VOCs, semivolatile organic compounds (SVOCs), pesticides, petroleum hydrocarbons, radionuclides, dioxins, furans and metals were detected in shallow soils from 0 to 10 feet below ground surface (bgs) (refer to Section 3.1.2.1 - Site 3 Chemical Analyses Results). As a result, following demolition, the concrete waste must be

Mr. Dean Gould
September 11, 2000
Page 3

sampled and classified according to Federal and State hazardous waste criteria. Please include the type and number of samples to be collected and the analyses to be performed. Following waste classification, the demolition waste can be transported to an appropriate facility. Due to the chemical composition of asphalt, the associated compounds may interfere with detection of contaminants. As a result, please include a strategy for classification of the waste asphalt.

8. Section 6.2.3 - Waste Disposal: The third paragraph states, "The Chemical Waste Management facility in Kettleman City, California, and the Safety-Kleen facility in Westmoreland, California, are two Class I hazardous waste facilities that will be considered for hazardous waste disposal."

Please specify each waste stream and the anticipated disposal facility. Additionally, please be advised that Safety-Kleen Corporation has notified DTSC that they are experiencing financial difficulties. It may be appropriate to have an alternative disposal site available.

9. Section 7.1 - Project Schedule, Stage 5 - Closeout Report: It is possible that the completion of proposed activities for Sites 1, 3, 5 and 24 will not coincide. Please clarify if only one Closeout Report will be prepared or if information for each site will be reported as activities for each site are completed.
10. Section 4.10 - Demolition of Concrete and Pavement and Table 1 - Waste Management Summary Requirements: In Section 4.10, it is proposed that concrete and asphalt demolition material will be hauled off site for recycling. The characterization requirements for construction debris identified in Table 1 are not referenced in Section 4.10.
11. Section 6.2.2.1 - Soil Stockpiles: In general, the work plan appears to provide justification for storage of waste piles that have not been sampled or classified and have been on site for approximately 10 months.

DTSC is concerned that the stockpiled debris (metallic material and associated soil) was generated in October and November 1999 and after 10 months, the waste has not been sampled or classified. Since the waste has not been classified and the specific regulations applicable to the waste cannot be determined, it may be found after sampling and classification that the waste was not managed properly.

DTSC is also concerned regarding failure of the Department of the Navy to provide timely notification regarding these waste generation activities. The stockpiled debris was generated in October and November 1999 and the

Mr. Dean Gould
September 11, 2000
Page 4

members of the Base Realignment and Closure Cleanup Team (BCT) were first informed about the stockpiles during the July 26, 2000 BCT meeting, approximately nine months after generation of the waste. Subsequently, DTSC received the Project Work Plan on August 7, 2000 that proposed classifying this waste for off-site disposal.

Please notify DTSC at least two weeks prior to the collection of waste classification samples from the stockpiled waste at Site 1 so that DTSC personnel can be present to observe sampling activities.

12. Section 6.2.2.1 - Soil Stockpiles: The second paragraph in this section states, "If excavated soil from Site 1 activities are determined to be RCRA [Resource Conservation and Recovery Act] hazardous waste, then the new (effective June 1, 1999) RCRA Staging Pile regulations of 40 CFR [Code of Federal Regulations], Section 264.554, may apply."

The State of California (State) is authorized to implement RCRA. To date, the State has not adopted the Federal Staging Pile regulations and as a result these do not satisfy State requirements.

13. Table 1 - Waste Management Summary Requirements: The "Storage Requirements" for Excavated Soil and/or Reuse state, "If hazardous, the stockpiles will be managed in accordance with the Staging Pile requirements of 40 CFR Section 264.554."

As stated in comment number 12 above, the State is authorized to implement RCRA. To date, the State has not adopted the Federal Staging Pile regulations and as a result these do not satisfy State requirements.

14. Table 1 - Waste Management Summary Requirements: The "Storage Requirements" for Soil from Exploratory Trenching state, "The soil from exploratory trenching has been predetermined to be non-hazardous . . ."

Please provide an explanation for this determination.

15. Figure 4 - Site Plan and Proposed Trench Locations: The location of an abandoned monitoring well is shown approximate 100 feet west of Unit 1 of the Original Landfill.

Please include the original designation for this monitoring well.

Mr. Dean Gould
September 11, 2000
Page 5

16. Attachment 1 - Site-Specific Health and Safety Plan, Section 1.3 - Summary of Major Risks: "There is potential exposure to contaminants associated with gasoline, jet fuel, and volatile organic compounds (VOCs)."

Although this section only provides a summary, all of the major chemical categories should be listed and should be consistent with the information provided in the previous investigation studies and as presented in the Work Plan for Site 3 (Section 3.1.2.1), Site 5 (Section 3.1.2.2), Site 1 (Section 2.1.1), and Site 24 (Section 2.1.4). For example, according to Section 3.1.2.1, VOCs, SVOCs, pesticides, petroleum hydrocarbons, radionuclides, dioxins, furans and metals were detected in shallow soils from 0 to 10 feet bgs.

17. Attachment 1 - Site-Specific Health and Safety Plan, Section 4.1 -Chemical Hazards: The information in this section should list the specific chemical hazards associated with each of the chemical categories identified in Section 1.3 of the Site-Specific Health and Safety Plan by. Please refer to Comment Number 12. Additionally, it would be helpful to identify the chemical hazards for each site.
18. Attachment 1 - Site-Specific Health and Safety Plan, Table 1 - Chemical Hazard Assessment: The information in this table should be consistent with Section 4.1 of the Site-Specific Health and Safety Plan.

Additional comments from the DTSC Industrial Hygiene and Field Safety Section are enclosed. Please contact me at (714) 484-5395 if you have any questions.

Sincerely,



Triss M. Chesney, P.E.
Remedial Project Manager
Southern California Branch
Office of Military Facilities

Enclosure: Comments from the DTSC Industrial Hygiene and Field Safety Section, dated September 5, 2000.

cc: See next page



Department of Toxic Substances Control



Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Edwin F. Lowry, Director
1011 N. Grandview Avenue
Glendale, California 91201

Gray Davis
Governor

MEMORANDUM

TO: Triss Chesney
Hazardous Substances Scientist
Office of Military Facilities

FROM: Julie Kim, M.S. *Julie Kim*
Assistant Industrial Hygienist
Industrial Hygiene and Field Safety Section (IHFSS)
Human and Ecological Risk Division (HERD)

DATE: September 5, 2000

SUBJECT: Marine Corps Air Station (MCAS), El Toro
Pre-Design Activities
Health and Safety Plan
PCA: 14742 Site Code: 400055-47

BACKGROUND

On August 11, 2000, the Office of Military Facilities in Cypress requested the IHFSS to review and comment on a health and safety plan (HASP) addressing pre-design activities at the Military Corps Air Station (MCAS) facility in Irvine, California.

MCAS El Toro (referred to as the Station) is located in a semi-urban, agricultural area of southern California, approximately 8 miles south of Santa Ana and 12 miles northeast of Laguna Beach. MCAS El Toro covers approximately 4,740 acres. The land northwest of the Station is used for agricultural purposes and the land around the MCAS includes commercial, light industrial, and residential areas.

MCAS El Toro was commissioned in 1943 as a Marine Corps pilot fleet operation training facility. The Station's mission involved operation and maintenance of military aircraft and ground-support equipment. Historical activities on the Station included aircraft maintenance and repair. These activities generated waste oils,

Triss Chesney
September 5, 2000
Page 2

solvents, paint residues, hydraulic fluid, used batteries, and other wastes. MCAS EI Toro closed on July 2, 1999 as part of the Base Realignment and Closure (BRAC) Act. A brief description and operational history of Sites 1, 3, 5, and 24 is presented below.

Installation Restoration Program (IRP) Site 1 (Explosive Ordnance Disposal Range)

IRP Site 1 is the former explosive ordnance disposal (EOD) range and is located in the northeast corner of MCAS EI Toro in the foothills of the Santa Ana Mountains. IRP Site 1 is situated within a tributary canyon of Borrego Canyon Wash at elevations ranging from approximately 610 to 760 feet above mean sea level. Training in the disposal and detonation of munitions began at IRP Site 1 in 1952 (Jacobs Engineering Group, Inc., 1993). Military ordnance used in training at the site has included hand grenades, land mines, cluster bombs, smoke bombs, and rocket warheads. Civilian and commercial explosives, such as trinitrotoluene, dynamite, and plastic and gelatinous explosives were also disposed at the EOD range. Munitions were detonated in trenches and pits that were continually filled with soil and re-excavated.

In 1982, approximately 2,000 gallons of sulfur trioxide chlorosulfonic acid (FS smoke) were reportedly disposed in trenches located in the northern portion of the site and munitions (i.e., flares and small ordnance). An estimated 300,000 gallons of petroleum fuels were used during training activities from 1952 through 1993 (Jacobs Engineering Group, Inc., 1993). In addition, there are unsubstantiated reports that low-level radioactive material may have been used in training exercises at the site. Perchlorate was identified as a potential contaminant of concern at IRP Site 1 due to its use in explosives and propellants.

IRP Site 3 (Original Landfill)

Near the corner of Desert Storm Road and Irvine Boulevard, the former north gate for MCAS EI Toro is located an asphalt and concrete covered area which is used as a treatment bio-pile pad by other contractors at the Station. This unit is located within the fenced boundaries of MCAS EI Toro and sits on top of another former landfill. Suspected wastes and contaminants include metals, incinerator ash, solvents, paint residues, hydraulic fluids, engine coolants, construction debris, oily wastes, municipal solid wastes, and various inert solid wastes.

IRP Site 5 (Perimeter Road Landfill)

IRP Site 5, Perimeter Road Landfill, is located adjacent to Perimeter Road, in the southeast quadrant of MCAS EI Toro, adjacent to the eastern property boundary and approximately 800 feet north-northwest of Borrego Canyon Wash. Land

Triss Chesney
September 5, 2000
Page 3

uses adjacent to the site include agriculture, recreational, and flight line operations (prior to closure of the Station). Agricultural areas consisting of strawberry fields and orange groves are located immediately to the north and east of the site. The Station golf course is south of the site. Suspected wastes and contaminants disposed at IRP Site 5 include burnable trash; municipal solid waste; cleaning fluids; scrap metals; paint residues; and unspecified fuels, oils, and solvents. Almost any type of waste generated at MCAS El Toro may have been disposed in this landfill.

IRP Site 24 (Potential VOC Source Area)

IRP Site 24, Potential VOC Source Area, was established for an expanded groundwater source investigation in the proximity of IRP Sites 7, 8, 9, 10, and 22. The Phase I remedial investigation indicated that on or more sources might exist for the VOCs in groundwater in the vicinity of these sites.

This project is estimated to require up to two months of field activity and will encompass the following activities and tasks:

- Excavate trenches to confirm boundaries of landfills at IRP Sites 3 and 5
- Remove and demolish asphalt and concrete at IRP Site 3
- Dispose of objects and surficial metallic debris stockpiled at IRP Site 1
- Collect soil, liquid, and sludge samples for waste characterization
- Dismantling and disposal of soil vapor extraction system piping at IRP Site 24

DOCUMENT REVIEWED

The IHFSS reviewed the "Health and Safety Plan" for the Pre-Design Activities at the MCAS Facility located at Trabuco Canyon Road in Irvine, California dated August 4, 2000. Foster Wheeler Environmental Corporation in San Diego, California prepared the Plan for Southwest Division Naval Facilities Engineering Command Contracts Department in San Diego, California.

GENERAL COMMENTS

IHFSS reviewed the health and safety plan for compliance with Title 8, California Code of Regulations (T8 CCR), DTSC's policies and guidelines, and the NIOSH/OSHA/USCG/EPA Guidance Manual as well as other appropriate State and Federal Health and Safety Regulations. The review of the health and safety plan is not a guarantee that it will be properly and safely implemented; implementation is the employer's responsibility.

Federal Occupational Safety and Health Administration is the overall governing body for occupational safety and health, when a state approved program does

Triss Chesney
September 5, 2000
Page 4

not exist. In the State of California, there is a state approved OSHA plan. Therefore, Cal-OSHA should be referenced and followed.

Please note that all sub-contractors must submit their own health and safety plans to the DTSC for review. The document was reviewed for scientific content. Minor grammatical or typographical errors that do not affect interpretation have not been noted; however, these should be corrected in future versions of the document.

SPECIFIC COMMENTS

1. General. The state of California administers its own OSHA program; please note that California Code of Regulations (CCR) should be cited and applied over the Code of Federal Regulations (CFR) where applicable.
2. Section 4.1, Chemical Hazards. What were the maximum concentrations of contaminants found in the previous investigations and in what media were the contaminants contained (i.e., soil, water, etc.)?
3. Section 4.3, Physical Hazards. Please include Lockout/Tagout procedures as a part of this plan or as an attachment to the plan.
4. Section 5.0, Activity Hazard Analysis. Are confined space entry activities anticipated? If so, will personnel potentially working under these conditions be trained in confined space entry?
5. Section 6.0, Personal Protective Equipment. What is the initial level of protection as work commences? How will this PPE level be determined?

How will upgrade or downgrade of PPE level be determined throughout the project? Will action levels be utilized as determinants? If so, what action levels will be set with what instrumentation? How will these action levels be established; based upon what rationale?

Since there is a potential for respirator use (level C); what type of cartridges will be utilized? What is the cartridge change-out schedule?

Are all employees with the potential to utilize respirators trained in respiratory protection and fit tested?

6. Section 7.0, Air and Radiation Monitoring. What is the frequency of monitoring for each instrumentation? Please provide rationales for the action levels set for each instrumentation.

Triss Chesney
September 5, 2000
Page 5

7. Section 7.1.1, Photoionization Detector (PID) or Flame Ionization Detector. Which lamp strength will specifically be used for the PID?

The PEL for benzene is 1 ppm; is the action level set at 10 ppm health protective?

8. Section 7.2, Monitoring Strategy. Please note that relying on olfactory senses to detect exposure is not a health protective practice. Please rely on instrumentation readings for objective determination of exposure.

It states in paragraph one, "The PID/FID will also be used wherever odors are detected and will continue to be used until odors can no longer be detected and organic vapor levels are below 5 ppm." What is the rationale for 5 ppm?

It states in paragraph one, "If organic vapors are detected in the work zone, the SHSS will also monitor the perimeter of the work area to ascertain that the levels of organic vapors will not impact personnel outside of the work area. If these levels exceed 1 ppm, the SHSS will consult with the PESH and the NTR for proper course of action." What is the rationale for the action limit of 1 ppm? Is the action limit the result of monitoring in both upwind and downwind locations?

What type of radiation (i.e., alpha, beta, gamma) is suspected to be potentially present at the site and what type will the instrumentation detect? How do the measurement values from the instrumentation compare to the exposure limits?

9. Table 1, Chemical Hazards Assessment. According to T8 CCR 5155, many of the exposure limits in the table are incorrectly stated. The corrected information is as follows:

- Gasoline: PEL = 300 ppm
- Perchloroethylene: PEL = 25 ppm
- Trichloroethene: PEL = 25 ppm
- 1,1-dichloroethene PEL = 1 ppm
- Beryllium: Ceiling = 0.025 mg/m³
- Hydrogen Sulfide PEL = 10 ppm; Ceiling = 50 ppm

Please indicate the arsenic form (i.e., inorganic).

Please correct the information in the table accordingly.

Triss Chesney
September 5, 2000
Page 6

CONCLUSION

The site HASP 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 site safety information that is necessary to mitigate the risks from the identified hazards. In utilizing the site HASP, field staff must be able to obtain sufficient information to compile an accurate assessment of the site safety issues associated with every job function.

The submitted document is well written and contains useful information related to the planned site-activities. The IHFSS recommends revisions as noted previously. If questions should arise, please contact Julie Kim at (818) 551-2855.

Peer Reviewed by:


Nannette Oseas, CIH, M.S.
Senior Industrial Hygienist

cc: HERD chron file