



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street
San Francisco, Ca. 94105

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MCAS EL TORO
SSIC # 5090.3Memorandum

Subject: Review of Installation Assessment Study of Marine Corps
Air Station, El Toro, California

From: Lewis Mitani *Lewis Mitani*
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To: Marine Corps Air Station El Toro File

General Comments

Section 6.2.4. page 6-2, POL Storage, Underground did not adequately address underground storage tanks (UST), both active and inactive as well as product and waste storage holding tanks. UST represents a significant source of soil and groundwater contamination and an inventory of the UST on MCAS El Toro should be more complete than the one presented in Appendix C of the report. The size of the tank, construction material, the age of the UST, and type of product or waste the tank held as well as its location should be included in the inventory. Any UST program on base should be noted, including integrity testing, spill control, leak detection systems, base response to leaks and any cleanups.

Not fully addressed in the report is how MCAS El Toro stored, handled or shipped electrical insulating fluids, specifically polychlorinated biphenyls (PCB). MCAS El Toro has been operational since 1943, potentially, older electrical equipment may be still present on base. What kind of electrical insulation is in the electrical equipment (transformers, switches, and oil fuse cutoffs) that is located on MCAS El Toro? Has the older PCB filled electrical equipment been replaced over time? Of the electrical equipment that is or have been present on MCAS El Toro, what type of maintenance (repair, preventative) was conducted on them? Were there any instances of spillage or malfunctions of electrical equipment that lead to spillage or leakage of electrical fluid? Were electrical insulation fluids utilized for dust control on unpaved roads? Where were insulating fluids stored or disposed?

Disagree with the compositing of samples for the sites recommended for confirmation study. A confirmation study should identify unknown compounds present, to what extent they are present and how they are integrated into the environment. Compositing of samples can mask problems by diluting isolated concentrations of hazardous compounds to below detection limits. A sampling program should generate data suitable for subsequent analysis so that informed environmental decisions can be made.

EPA concurs that the following sites should go to confirmation study at MCAS El Toro:

- Site 1 Explosive Ordnance Disposal Range
- Site 2 Magazine Road Landfill
- Site 3 Original Landfill
- Site 5 Perimeter Road Landfill
- Site 9 Crash Crew Pit No. 1
- Site 11 Transformer Storage Area
- Site 14 Battery Acid Disposal Area
- Site 16 Crash Crew Pit No. 2
- Site 17 Communication Station Landfill

The following are sites of concern and are recommended for confirmation study or further investigation and evaluation:

- Site 4 Ferrocene Spill Area
- Site 6 Drop Tank Drainage Area No. 2
- Site 7 Drop Tank Drainage Area No. 7
- Site 8 DPDO Storage Yard
- Site 10 Petroleum Disposal Area
- Site 12 Sludge Drying Beds
- Site 13 Oil Change Area
- Site 15 Suspended Fuel Tanks
- Unnumbered Site, Hobby Shop (Building 626)
- Unnumbered Site, Material Management Group (Building 320)
- Unnumbered Site, Tactical Air Fuel Dispensing System (TAFDS) Operations Area
- Unnumbered Site, Supply Center Storage (Building 320)

Comments for Sites of Concern

Site 4 Ferrocene Spill Area. Although the quantity of material spilled (5 gallons) appears to be small, the visibly stressed vegetation is indicative that some environmental impact has taken place. Not addressed in the report is how long the tank was utilized for the storage of ferrocene. Could spillage of the ferrocene from past operations cause the stressed vegetation? Ferrocene is 29-30 percent lead, the accumulation of lead in the soil or vegetation would not be readily apparent and what stressed vegetation that is apparent, could be due to the hydrocarbon carrier. Also, the hydrocarbon carrier itself could be a persistent and hazardous substance.

Site 6 Drop Tank Drainage Area No. 2. The combination of JP-5 fuel washed out and lubrication oils that was reportedly disposed of from 1960 to 1983 could pose a threat to groundwater as well as the accumulation of hazardous components in the soils.

The JP-5 fuel could make the trace and heavy metal components of the lubrication oils more mobile than anticipated. Also the hazardous components of JP-5 fuel could accumulate in soil or migrate to groundwater.

Site 7 Drop Tank Drainage Area No.2. See comments for Drop Tank Drainage Area No. 1.

Site 8 DPDO Storage Yard. The dismissal of the DPDO storage yard appears to be based on the spillage of several gallons of PCB which were excavated. The actual cleanup of the PCB spill area was unsubstantiated by laboratory analysis. In section 5.2.14 the DPDO yard has been utilized at this site from early 1940's to present date. The report states "leaks or spill have reportedly occurred in the storage yard complex from stored containers and mechanical electrical components but there is little or no documentation regarding timing and volume. The greatest potential for environmental pollution may be associated with storage of solvents, paints, thinners and other substances and leakage of PCB containing insulating oils for stored electrical transformers". This site clearly has the potential to present an environmental threat from sources other than the single documented PCB release. Not addressed in this report is whether or not this site is paved, runoff patterns from the site and spill control countermeasures.

Site 10 Petroleum Disposal Area. The spraying of 52,000 gallons of mixed antifreeze, waste crankcase oil, hydraulic and transmission fluids and solvents from 1952 to mid-1960's would allow the accumulation and/or migration of trace and heavy metals, and organic components to levels that represent an environmental hazard. The mixing of waste could make components more viscous and mobile than can be predicted. Also, synergistic reactions were not taken into account. The excavation of soil from portions of the site during construction is not a sufficient reason to dismiss the site.

Site 12 Sludge Drying Beds. The use of available data on typical concentrations of heavy metals in municipal sewage sludges to give a "ball park" estimate of metals content that would be expected is to broard an assumption to make a sound environmental judgement.

Site 13 Oil Change Area. Crankcase oil contains trace and heavy metals which could accumulate to levels that represent an environmental hazard. Crankcase oil may contain additives whose components are considered hazardous which may also be present. Also the disposition of the contaminated soil that was scraped up and piled at the north end of the area was not addressed.

Site 15 Suspended Fuel Tanks. Reportedly 500 gallons of diesel fuel spilled to the ground and stained a 750 square foot area. Components of diesel fuel can accumulate to levels that represent an environmental hazard. The assumption of ultraviolet and bio-degradation of diesel fuel is an insufficient reason to dismiss the site. A sound environmental decision should be made based on laboratory data.

Unnumbered Site, Hobby Shop (Building 626). This site is described in Section 5.2.8, page 5-7 of the IAS report. A 600 gallon UST is utilized to store waste oil. The report states "the ground around the tank and leading to the building is saturated with oil. Two square feet of the building, in line to the tank and closest to the ground, are discolored black with the oil that has seeped under the floor". This is a description of an operation that has housekeeping problems. Seepage under the floor may include other substances that are considered hazardous waste. From 1967 to before 1976 the asphalt in the compound was washed down with kerosene. The use of kerosene would make organic compounds, trace and heavy metals mobile, possibly reaching the groundwater. The extent of contamination and the type of waste(s) being generated should be identified so that a proper environmental assessment can be made.

Unnumbered Site, Material Management Group (Building 320). This site was identified in section 5.2.13.1, page 5-10 of the IAS report. The report states "the only wastes of concern produced are the leakage from stored chemical drums, and chemical supplies with expired shelf life. The drums are stored outside of Building 320. In 1964 about 1,000 drums were stored there; now, there are about 100-125 drums. Leaky drums received are returned to the supplier". From 1964 to present date drums containing chemicals appear to have been stored in this one area. Over the 22 years this area was utilized for the storage of drums, a considerable number of drums must have leaked. Not addressed in the report is exactly where outside Building 320 are the drums stored? Is the site paved? Is the site bermed? What is the runoff pattern of the site? Are there unpaved areas where runoff can collect or percolate into the soil? Were solvents ever used to wash down the drums or "clean" the area? What spill control countermeasures has the Material Management Group taken?

Unnumbered Site, Tacticle Air Fuel Dispensing System (TAFDS) Operations Area. This site was identified in section 5.2.13.2 on page 5-11 and in section 5.3.3.1 on page 5-16 of the IAS report. The use of bladder tanks for the storage of fuel has resulted in the spillage or leakage during operations. Not addressed in the report is the area in which the bladder tanks are stored, is the area paved? Is the area bermed? What is the runoff pattern of the area? What spill control countermeasures

has TAFDS taken? During the cleanup of one of the spills that occurred two or three years ago (page 5-11) the dirt under the fuel bladder was hauled away by TAFDS. Is this a standard operating procedure? Were soil samples collected to determine the adequacy of cleanup? Where were the contaminated soils disposed?

Unnumbered Site, Supply Center Storage. This site was identified in section 6.2.6 on page 6-3 of the IAS report. Is this the same site described in section 5.2.13.1 on page 5-10 of the IAS report? See comments for unnumbered Site, Material Management Group Building (Building 320).

Preliminary Assessment Recommendation

MCAS El Toro ERRIS file should remain active and the MCAS El Toro should be notified of EPA's determination that confirmation studies are recommended to ensure consistency with the NCP. National Priorities List scoring should be initiated as soon as sufficient confirmation study data is available.