

Document Title:

- (1) Draft Final Health and Safety Plan, Phase II Remedial Investigation, Installation Restoration Program (IRP) Site 1 Explosive Ordnance Disposal (EOD) Range, Marine Corps Air Station (MCAS), El Toro, California

Reviewer: Alan E. Jessen, Associate Industrial Hygienist, Human and Ecological Risk Division (HERD), Industrial Hygiene and Field Safety Section (IHFSS), Department of Toxic Substances Control, Letter dated March 1, 2001.

Comment No.	Section No.	Comment	Response	M60050.002580 MCAS EL TORO SSIC # 5090.3
1.	6.8.1, page 6-5	<p>It was noted in Section 5.2.5 that, while not expected, there is a chance of depleted uranium containing products being present. However, no instruments have been selected to detect alpha particles. Nor has any sampling been tested for uranium (Table 3-1, Shallow Metal Concentrations). An alpha detecting instrument should be used on site. The use of this instrument and its detection action levels should be included in tables 6-1 to 6-4 as appropriate.</p> <p>Clarification</p> <p>It has since been discovered that depleted uranium is not suspected at this site. The radiological material of concern is from the possible disposal of low level radioisotopes once used at this station, not associated with weapons used by EOD. The following is from the Historical Radiological Assessment (HRA) from May 2000 I received from you.</p> <p>For Site 1 --</p> <p>"since the report did not indicate the year that the disposal occurred, radioactive isotopes used on the Station should be included in the survey effort. This would include Ra-226, Sr-90, Co-60, and Th-232. The survey objective is to search for and detect these radioisotopes which may be present within 18 inches of the ground surface. The radionuclides of interest at this site, Ra-226 and Co-60 can be detected using a high density survey up to a depth of approximately 18 inches, with gamma detection equipment. Radionuclides Sr-90 and Th-232 are detected through the Bremsstrahlung effects of beta radiation and will be detected to a lesser depth than Ra-226 and Co-60 (pg. 30)."</p> <p>The instrumentation identified in the Survey Plan includes the following portable meters:</p> <ul style="list-style-type: none"> • Sodium iodide crystal scintillation detectors for 	<p>Reference to Depleted Uranium has been removed and discussion of the recommended radioisotopes has been added.</p> <p>HASP Section 6.9 specifies the radiological monitoring procedures that will be employed during activities at the EOD Disposal Range.</p> <p>Instruments specified for use are:</p> <ol style="list-style-type: none"> 1. NaI Scintillator - for evaluation of whole-body gamma exposures. 2. Halogen-quenched "pancake" G-M detector- for surface evaluation of alpha/beta levels. <p>Table 6-5 details monitoring procedures to be employed and specifies response actions based on readings obtained.</p> <p>These procedures address the range of radioactive materials that may be encountered at the site.</p>	

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		<p>gamma detection.</p> <ul style="list-style-type: none"> • Pancake-type thin window Geiger-Mueller gas filled chambers (or equivalent) for beta-gamma detection. • Radiation exposure rate meters (Micro-R) for determining area exposure rate. • Alpha-beta ZnS(Ag) scintillators for stationary one-minute alpha and one-minute beta readings. <p>Based on this information, the Health and Safety Plan should not reference depleted uranium but reflect the new information on the radioisotopes mentioned above. Instrumentation taken to the site should also be edited in light of this information.</p>	
2.	6.8.2 to 6.8.4, page 6-6	<p>These sections only describe when VOCs will be measured. Table 6-1 notes other non-VOC measuring instruments to be brought into the field. Please indicate the frequency or anticipated use of all instruments taken into the field</p> <p>Clarification</p> <p>This comment was in error as the information was found in the original Health and Safety Plan. No changes are necessary in response to this comment.</p>	Clarification noted.
3.	7, page 7-1	<p>When gloves are necessary an inner and outer glove of nitrile rubber is to be used. Nitrile rubber is not effective against benzene, fair for toluene and good for xylene. If the inner or outer glove would be changed to laminated film or supported polyvinyl alcohol gloves then protection would be excellent for these and other substances.</p> <p>Clarification</p> <p>The chemicals noted in Section 3.1.2 do not indicate that benzene is found at the site. However, fuels and toluene were found in the soil. Section 5.2.1 notes that benzene and toluene are</p>	<p>The Reviewer's comment is noted. However, Earth Tech does not intend to make any changes in glove specifications.</p> <p>The glove material performance characteristics noted in the comment are based on tested performance against pure materials (benzene, etc.) only. Earth Tech has considerable experience in fuel-contaminated environments (characterized by low concentrations of contaminants in a soil or water matrix) using the specific gloves indicated in the HSP. We have found their performance to be excellent under these conditions, both from a chemical protection standpoint and in</p>

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		<p>components of fuels. It is inferred that the toluene came from the fuels. Air monitoring of VOC is geared towards benzene due to its low threshold limit.</p> <p>If the soil noted in Section 3.1.2 was tested for benzene then it is assumed that there is no benzene in the soil and monitoring for benzene in the air is precautionary. This being the case the use of two nitrile gloves would be appropriate. However, if benzene is found in the soil in significant amounts (high enough to volatilize and be measured in the air at the site) then the use of nitrile double gloves would not be appropriate due to nitrile's high permeability to benzene.</p> <p>The health and safety plan should reflect this. It should state in Section 3.1.2 that benzene was not found in the soil and Section 7.0 should consider the possibility that different gloves should be used if previously undetected chemicals (benzene) are detected.</p>	<p>meeting the physical challenges of our work. It is our intention to continue use of this field-proven protective clothing for our personnel.</p>