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FACSIMILE TRANSMITTAL



U.S.EPA - REGION 6
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COMMENTS:		

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NOTICE OF DEFICIENCIES
RFI DRAFT REPORT
Appendix II and Appendix III SWMUs Phase II
CANNON AIR FORCE BASE N.M.
EPA I.D. NO. NM7572124451

GENERAL COMMENTS

1. At several SWMU's, a chemical- specific cancer risk between $1E-04$ and $1E-06$ was calculated and a conclusion was drawn that the risk represented was within EPA's target risk range, and therefore, no unacceptable risk was expected. When risk falls within this range, it is a risk management decision as to whether or not it is acceptable.
2. The levels of total recoverable petroleum hydrocarbons (TRPH) in soil at several SWMU's is above the New Mexico limit of 100 mg/kg. This issue should be resolved with the state.
3. Procedures for calculating risk were not presented in the documents presented for review. It is unclear what default assumptions were made and how these compared to Region III's Risk-Based Concentration (RBC) assumptions. Also, fate and transport models were not referenced.

SPECIFIC COMMENTS APPENDIX II SWMU'S

1. SWMU No. 3 Oil/Water Separator Site 108
The TRPH issue (See General Comment No. 2) should be addressed prior to recommending no further action.
2. SWMU No. 5 Oil/Water Separator No. 121:
The Final Work Plan Addendum (W-C 1994) required borings to 25 feet BGS. The borings were completed at 20 feet BGS. The TRPH concentrations were increasing with depth and the borings confirmed contamination at 20 feet BGS. Since the vertical extent of contamination has not been completely defined, additional sampling should be completed and sampled to background.
The TRPH issue (see General Comment 2) should be addressed prior to recommending no further action.
3. SWMU No. 16 Oil/Water Separator No. 680:
Sampling was not conducted at this site during the phase II investigation. Reference the document (Date and Title), that notified EPA that the planned sampling was not feasible. A review of results from the Phase I investigation will need to be conducted to determine if significant contamination exists to warrant additional sampling since the original recommendation of the Phase I investigation was to conduct a screening level risk evaluation and to characterize

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the vertical extent of contamination.

4. SWMU No. 48A Underground Storage Tank:
State standards that specifically address petroleum contamination from USTs are set forth in New Mexico UST regulations Section 1209.D Part 3 (a). These regulations specify cleanup levels for contaminated soils associated with UST's. TRPH clean up levels are set at 100 mg/kg for highly petroleum contaminated soils. TRPH was detected at a concentration of 17,300 mg/kg and reporting limits for several potentially toxic constituents were above Risk Based Concentrations (RBC's). Therefore, further action is warranted at this SWMU.
5. SWMU No. 48B Above Ground Storage Tank:
The TRPH issue (See General Comment No. 2) should be addressed prior to recommending no further action.
6. SWMU No. 83 Oil/Water Separator Site 120:
The TRPH issue (See General Comment No. 2) should be addressed prior to recommending no further action.
7. SWMU No. 108 EOD Training Area:
A hazard index greater than 1 for one non-cancer constituent (barium) was calculated at this SWMU. Additive risk, grouped by target organ affects, for non-cancer Contaminants Of Concern (COC's) should be calculated. Risk due to background should be calculated using one-half the reporting limit, or analyses should be conducted at a lower reporting limit.

SPECIFIC COMMENTS APPENDIX III SWMUs:

1. SWMU No. 31 AGE Maintenance Shop Pad:
The Previous Investigations Section states that near boring 03103 located off the slab west of the wash rack that small piles of stained soils were observed at this location suggesting that oily soils have been deposited here. Have any plans been proposed to remove these piles of oily soils?

Additive risk was not addressed. Several Polycyclic Aromatic Hydrocarbons (PAH's) exceeded Region III RBC levels. Risk from all carcinogens at a site are additive, and it is not appropriate to address them on a separate basis. Risk is also additive across all pathways.

The Region III RBC's were not derived to address dermal exposure, and therefore, may be less conservative than what is likely to occur at the SWMU.

The reporting limit (RL) for analytical results is greater than the RBC for several chemicals (e.g. RL in soil for Benzo(a) pyrene ranges from 0.38 to 3.7 mg/kg whereas the residential soil RBC is 0.088 mg/kg). In these cases risk should be

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calculated using one-half the reporting limit or analyses should be conducted at a lower reporting limit.

Risk due to background concentrations should be calculated. This does not imply that COC's below background will need to be cleaned up. However, this information will be used in the risk management decision for setting clean up levels for other COC's (i.e. where in the range of 1E-04 to 1E-06 clean up levels should be set).

2. SWMU No.93 Oil/Water Separator No. 5121:
The TRPH issue (See General Comment 2) should be addressed prior to recommending no further action.
3. SWMU No. 127 Oil/water Separator No. 4095:
General Comments 1 through 3 apply. Specific comments for SWMU No. 31 apply.
4. SWMU No. 55 Lead/Acid Battery Area:
General Comments 1 through 3 apply. Specific comments for SWMU No.31 apply.
5. SWMU No. 77 CE Container Storage Area:
Sample 7707-0000 was analyzed with too high of a detection limit for pesticides/ PCBs. Sample results were omitted from risk calculations using the justification that PCBs were not characteristic of other samples collected at the SWMU. However, only one organic chemical (Arochlor-1260) was detected at this site above RBCs and it is a PCB. Also, if an industrial exposure scenario is used to imply the conclusion of no significant risk, then a deed restriction for industrial use only should be imposed.

A hazard index greater than 1 for one non-cancer constituent (manganese) was calculated at this SWMU. Additive non-cancer risk should be calculated for this SWMU across all COC's (i.e. including individual COC's which have a calculated hazard index less than 1). Non-cancer risk should be added based on effects to the same target organ (e.g. liver,kidney). Risk due to background should be calculated using one-half the reporting limit or analyses should be conducted at a lower reporting limit. General Comment 2 also applies to this SWMU.
6. SWMU No. 103 Wastewater Playa Lake:
In the evaluation of the Ground Water Pathways Section, borings 60 feet below the bottom of the lake were originally planned, but were not drilled due to technical difficulties. What were those technical difficulties? Since the deepest sediment samples were only 5 feet below the lake, and metals, pesticides, and VOC's were detected, what criteria determined that the vertical extent of contamination was defined?

Ecological risk at this SWMU should be addressed. Fish samples may need to be taken at this site to reduce uncertainties

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associated with bioaccumulation assumptions. General Comments 1 and 2 apply. Additive risk was not addressed. Risk from all carcinogens at a site are additive, and it is not appropriate to address them on a separate basis. Risk is additive across all pathways. Region III RBC's were not derived to address dermal exposure, and therefore, may be less conservative than what is likely to occur at the SWMU.

7. SWMU No. 97 Landfill 25 Monitoring Well:
Additive non-cancer risk should be calculated for this SWMU. The calculated Hazard Index of 1.7 for carbon disulfide requires additional sampling and analysis to further assess ground water contamination.

The Risk Evaluation Section states that Monitor Wells N and O are located approximately 3500 feet downgradient of Monitor Well K , and they are also downgradient of landfills No.3 and No.4. Submit a map showing Monitor Wells K, N, and O, and landfills No.3 and No.4. The lateral distance (3500 feet) may result in unreliable data.