

MSWA LANL SHOEZ/16-021(C) 16-021(C)

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Does LANL  
Data needed  
for eco  
risk

Aug 4-97  
CONFIDENTIAL 4/19/99

### 16-021(C) RFI PHASE II NMED DISCUSSION POINTS

- COPC Inconsistencies
  - Text and Summary Tables for Sections 2 through 4 should be consistent
    - Table 2.4-1: dichlorobenzene[1,2-] represented twice
    - page 3-113: nitrobenzene not included; nitrotoluene(3-) included
    - Tables 4.4-19 and 4.4-20: various major and minor constituents missing
  - Table 6.1-1 should be summary of the "Results" Tables from Sections 2 through 4
    - Table 6.1-1: nitrotoluene(2-) missing; trichloroethane[1,1,1-] not found in preceeding "Results" tables
  - Tables D-2.3-1 through D-2.3-28: include various COPCs that are not identified in preceeding tables (or text) throughout the report
- ✓ • Elimination of COPCs prior to Screening Level Assessment
  - page 3-39: various radionuclides eliminated
  - page 3-113: various radionuclides eliminated
  - page 6-18: mercury eliminated; not in "methylated form"
  - pages 6-18 and 19: uranium and cesium eliminated without adequate justification
  - page 6-20: unfiltered data eliminated
  - page 6-23: uranium missing
  - page 6-24: nitrates considered naturally occurring
  - page 6-24: aluminum considered naturally occurring
- ✓ • Compilation of Complete COPC List and Its Use in the Screening Level Assessment
  - page 2-62: elimination of barium as COPC from soil when identified as COPC in tuff
- ✓ • Media Inconsistencies
  - Each Media Inadequately Defined: include description, depths, characteristics, etc.
  - Media Identification: specify soil and water types (surface, subsurface, spring, alluvial, perched, etc.) as defined
  - Define and Justify the Media Used for Each "Component" in the Screening Level Assessment
- ✓ • Consistency in Handling and Presentation of Water Quality Parameters
  - Table 3.4-42: TDS not included although retained as "COPC"
  - page 3-113: TDS not included although retained as "COPC"
  - Tables 4.4-19 and 4.4-20: various major and minor constituents missing
- ✓ • Screening Level Evaluation of Groundwater Pathway
- ✓ • Relevance of the Water Canyon Fault Zone
- ✓ • Importance/Influence of Vertical Flow Component
- ✓ • Source of EPA Information regarding Points of Compliance ← CALL TARDIFF
- ✓ • Define ESL
  - page 6-19: ESL mis-used and mis-defined
- ✓ • Use of Developmental Effects versus Morbidity
  - page 6-19
- ✓ • Schedules for Geologic Mapping, Fracture Logging, Site-specific Risk Assessment

### 16-021(C) INTERIM ACTION NMED DISCUSSION POINTS

- Inclusion of Sump Collection Trench
- Discharge

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# 16-021(C) CMS PLAN

## NMED DISCUSSION POINTS

- General
  - ✓ ○ Institutional Controls Not Evaluated
  - ✓ ○ COPC Discrepancies (in Comparison with RFI Phase II Report)
    - COPCs in CMS should be the same as those presented in the RFI Phase II Report
  - ✓ ○ Tables 6.3-1 through -4 are Unclear
    - For example, it is difficult to discern what samples will be analyzed in the field or laboratory and for what analyses in Table 6.3-1.
  - ✓ ○ Include Cross-section showing lithologies, springs, wells, faults, proposed sampling stations, etc.
  - ✓ ○ Include plots to demonstrate relationships between flow, time and concentration of specific constituents
- RFI Phase III Activities
  - Complete an Evaluation of Potential Source Terms (including, but not limited to, radionuclide and HE) in the Study Area
  - ✓ ■ Evaluate Other Available Data for the Study Area
    - ✓\* Water Data from BH 16-2712 (now available?)
    - ✓\* MDA P Borehole Data, K-site, SHB-3
    - ✓\* Other Alternate Potential Sources
  - ✓ ■ Revise Site Conceptual Model (per R-25)
  - ✓ ■ Effect of expediting R-27
  - ✓ ■ Include Nitroglycerin, TCE degradation products and Radionuclides
  - ✓ ■ Evaluate Data to be Collected prior to Interim Action (Source Removal)
  - ✓ ■ Coordinate with Canyons Focus Area
    - \* Representative Present? - M. TAEDIFF LAISSON
  - MD ✓ ■ Address the following components:
    - \* recharge and contaminant pathways (groundwater to spring/seep discharge)
    - \* perennial surface water
    - \* groundwater discharge to surface water (and vice versa)
    - \* loss/gain of alluvial water to subsurface
    - \* stormwater events
    - \* contaminant transport within biological communities
    - \* hydrochemical interactions between the different saturated and unsaturated zones
  - **Groundwater Dynamics**
    - ✓ ■ Include unfiltered water samples of groundwater samples
    - ✓ ■ Use consistent purging and sampling methodology (i.e., bladder pumps)
    - Connectivity
      - ✓ ■ Value of Tracer Mass Balance
      - ✓ ■ Evaluate Other Connectivity Tools
      - IN IM ■ Analyses for HE at 260 Pond Borehole
    - **Recharge and Residence Times**
      - ✓ ■ "Fingerprint" Steam Plant drainage alluvial water, 90s-line Pond water, Cañon de Valle water west of the Pajarito Fault, etc. using isotopic and chemical analyses
    - Spring and Seep Dynamics
      - ✓ ■ Include Martin Spring and Fishladder Seep in Study
      - ✓ ■ Ensure Consistent Treatment (evaluation and analyses) of Study Area Springs, Seeps and Surface Waters
    - Alluvial **Groundwater Dynamics**
      - Media Terminology Inconsistencies: it is unclear whether this subheading (and the one below) refers to surface water or alluvial groundwater, or both (see recommendation below)
      - SO MEWHAT ✓ ■ Characterize alluvial aquifer (hydraulic conductivity, etc.)
      - ✓ ■ Use downhole camera and neutron logging to ascertain saturation in boreholes
      - Alluvial Sediment Dynamics

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SHOULD BE IN SVOC/NOCS

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DOING FLOW PROFILES, EXTENT OF SAT, GEOPHYS

DID 200' BHs  
DATA AFTER RFI RPT

MD RECOMMENDS  
PRE-PAK  
SCREEN ON  
AUGER HOLES

- **Surface Water System Dynamics**

- ✓ ■ Conduct Field Observations within Study Area Canyons
- ✓ ■ Include Martin Spring and Fishladder Seep Canyons in Study Area
- ✓ ■ Ensure Consistent Treatment (evaluation and analyses) of Study Area Springs, Seeps and Surface Waters
- ✓ ■ Include unfiltered water samples of surface water samples
- ✓ ■ Ensure Surface Water Bureau concerns regarding sampling methods are addressed
- ✓ ■ Identify Saturation in Study Area Canyons

- **Water**

- ✓ ■ Conduct Flow Measurements and Water Balance for Study Area Canyons
- ✓ ■ "Fingerprint" of Cañon de Valle (east and west of Pajarito Fault), Water Canyon, Martin Spring Canyon and Fishladder Seep Canyon (if available) Surface Waters using isotopic and chemical analyses
- ✓ ■ Use Barium Hoch Kit and also Analyze for Tracer
- ✓ ■ Sample Stormwater Events "BEYOND SCOPE"; VALUE NOT TO CRIS

- **Sediments**

- ✓ ■ Geomorphology of Entire Study Area

BUREAU TO GO ON RECORD  
SAY STORM EVENTS WON'T HAVE  
SIGNIFICANT IMPACT. WANT TO  
FOCUS ON CONTAM INVENTORY

## MISCELLANEOUS

- **Timing**

- Finalization of Ecological Screening Methodology
- Revision of Screening Assessment (Section 6)
  - Recommend by Media
- Revision of Affected Appendices
- Revision of Summary Tables for Sections 2 through 4
- Revision of Table 6.1-1
  - Complete listing of COPCs by Media
  - Include indication of carcinogenicity
- Combining CMS Report and RFI Phase III/IM