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THROUGH: *boz* Bruce Swanton, Program Manager, DOE/EM Oversight
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FROM: Steve Yanicak, NMED AIP/LANL

DATE: January 31, 1994

SUBJECT: Review Of LANL's Operable Unit 1078 RFI Work Plan Addendum, NFA Proposals submitted October 1993.

The Hazardous and Radioactive Materials Bureau (HRMB) Agreement in Principle (AIP) staff have completed the review of the operable unit (OU) 1078 RCRA facility investigation (RFI) work plan Addendum, NFA Proposals. This memo details the comments stemming from the review. For clarity, the memo contains numbered items listing comments that are keyed to a specific section number or figure in the RFI, as well as to the paragraph, e.g., Item 2. (4.4.4.4 p2). The AIP program is submitting these comments and technical recommendations to the HRMB's Enforcement/Technical Programs because of eventual New Mexico HSWA authorization. Any non-RCRA comments listed are those that are included in this memo for the sake of completeness of the work plan review.

SPECIFIC COMMENTS

Item

1. (SWMU 1-006(m) [TA-1-56]) The westernmost storm drains (if still in place) could possibly have natural uranium contamination from the 1952 or 1953 fire when firemen undoubtedly flooded the entire eastern portion of the Sigma building. AIP staff's major concern regarding this AOC is whether the natural drainages and outlets of the westernmost storm drains were addressed in the decontamination and decommissioning of the Sigma building in 1965. Because the Sigma fire event probably represents a one time spill, it is highly unlikely that there would be a significant amount of uranium contamination in the suspected storm drains if they are still in place. AIP staff suggests the following, subject to further technical discussions between AIP and LANL staff:
(1) A thorough radiological survey based on archival TA-1 engineering drawings, should be conducted of any apparent westernmost storm drain outlets and related surface drainages,



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(2) An attempt could be made to locate the westernmost storm drains with geophysical methods such as a metal detector or GPR unless a structure currently exists over the suspected location, (3) If the storm drains are located, the current and future land owners should be notified of the existence and location of the buried storm drains and be briefed on the possibility that they might contain some residual uranium contamination.

2. (SWMU 1-007(h) [TA-1, TU and TU-1 Buildings]) Two thin (10- to 20-cm-thick) horizontal veins of uranium contamination left in place (presently at 4 to 10 feet below the ground surface) during the 1970's decontamination and soil excavation of TU/TU-1 buildings might pose a threat to human health and the environment (H H & E). It was mentioned in the Ahlquist publication (pg. 110) that one sample from one of the veins had 1200 pCi/g of gross-alpha activity. In the event of any future land excavation projects, it is recommended that:
- (1) Current and future land owners should be notified of the existence and exact location of this hot spot, whether or not a structure presently exists on the site, (2) An informal risk assessment (based on existing data, using a residential scenario) be conducted to determine whether there is any H H & E risk due to radiation exposure at the site.