



State of New Mexico  
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**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

January 24, 1995

Mr. Ken Zamora  
Scientech  
Los Alamos Area Office  
Los Alamos, NM 87544

Dear Mr. Zamora:

Please find enclosed the Hazardous and Radioactive Materials Bureau (HRMB) January 17, 1995 meeting notes. This meeting, among staff from Los Alamos National Laboratory (LANL) (ESH-18 staff: Bruce Gallaher, Steve McLin, and Dave Rogers), Department of Energy representatives (Ken Zamora and Bonnie Koch), and HRMB staff (Teri Davis, and Susan Hoines, RCRA Technical Program), was held to discuss LANL's response to the New Mexico Environment Department's (NMED) letter dated November 7, 1994. This letter requested technical information needed by HRMB in order to complete its hydrogeologic evaluation at LANL as part of an EPA-New Mexico RCRA work grant commitment for FY95. LANL has seven (7) days from receipt of this transmittal to provide any comments prior to the inclusion of the meeting notes into HRMB's permanent file on LANL.

Thank you for participating in the meeting. If you should have any questions or comments please contact either Ms. Teri Davis or Ms. Susan Hoines of my staff at 827-4308.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ronald Kern".

Ronald Kern, Program Manager  
RCRA Technical Compliance Program

Enclosure: Meeting Notes

cc: Benito Garcia, HRMB  
Teri Davis, HRMB  
File, LANL Red '95  
Barbara Hoditschek, HRMB  
David Neleigh, EPA Region 6  
Susan Hoines, HRMB



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Meeting Notes January 17, 1994

ITEM

1. HRMB: HRMB is concerned that no mention of perched water in well H-19 was made either in the outline of *Geologic and Hydrologic Records of Observation Wells, Test Holes, Test Wells, Supply Wells, Springs, and Surface Water Stations in the Los Alamos Area*, by W. D. Purtyman, submitted to the HRMB on 12/22/94 or in the complete report submitted on 1/13/95. HRMB noted that the well log for well H-19 was published in a USGS paper in 1964 (*Geology and Ground-Water Resources of the Las Alamos Area, New Mexico*, Geological Survey Water-Supply paper 1753, by Roy L. Griggs, 1964). This well log showed that there was a saturated zone at 24 to 27 feet below ground surface (bgs) and another saturated zone in the Guaje Formation at 450 to 472 feet bgs.  
  
LANL: *Geologic and Hydrologic Records of Observation Wells, Test Holes, Test Wells, Supply Wells, Springs, and Surface Water Stations in the Los Alamos Area* is currently being printed as a final report. LANL would still be interested in any comments NMED might have on this report. Would NMED submit any formal comments on this report to EPA?  
  
HRMB: These comments and requests for information are for HRMB's own use for now. HRMB is not planning currently to submit formal comments on the report by Purtyman to the EPA.
2. HRMB: HRMB would like copies of the original geologic logs and well construction records for PCO-4 (Pajarito Canyon Observation Well) and ST-1. PCO-4 is shown in Devaurs and Purtyman (1985), but it is not listed in the latest "Purtyman Report", *Geologic and Hydrologic Records of Observation Wells, Test Holes, Test Wells, Supply Wells, Springs, and Surface Water Stations in the Los Alamos Area*. Well ST-1 is not listed in the "Purtyman Report" either.
3. HRMB: *The Report on Water Supply Investigation in Pajarito Canyon, Los Alamos, New Mexico*, by Black & Veatch Consulting Engineers, Kansas City, Missouri, 1950,

Meeting Notes January 17, 1995

makes reference to a windmill well in lower Pajarito Canyon. This well is also not mentioned in the "Purtyman Report". HRMB is interested curious to find out if Black & Veatch mention zones of saturation in original well logs. HRMB would like copies of these logs if they are available.

LANL: There are bound to be errors in the numbers in the Purtyman document. The sheer numbers of documents to locate and review make it difficult to compile a comprehensive report.

4. HRMB: Wells located by the SHEBA building at the Los Alamos Critical Facility, TA-18, were not included in the Purtyman report. These wells were installed to monitor releases from the SHEBA building. These wells encountered shallow ground water in Pajarito Canyon.

5. HRMB: It appears that well LA-1A is missing from the Purtyman Report.

LANL: The four inch diameter well LA1 is still remaining. It should be looked at. There is still a packer assembly in 1A and in 1B. Actually well LA-1A is in the Purtyman report. It was given a different name. Its well log is in the Test Well section of the report. It is called GT1 on page 246.

6. HRMB: Are the Homestead, Stahlmer, Ice Rink, and Three-Mile spring in the Purtyman Report?

LANL: Most of the springs mentioned were stumbled upon by the ER program of LANL. This particular group wouldn't necessarily have all of the information.

HRMB: Would it be possible for the state to gain access to the infrared survey of the springs?

LANL: Ed Van Eckart was coordinating the infrared survey for the ER program. It would be a good idea to contact him.

7. HRMB: Have any slug tests been conducted within the LAO and MCO series for the Los Alamos alluvial system in Mortendad Canyon, and the PCO series in Pajarito Canyon?

Meeting Notes January 17, 1995

- LANL: Yes. Sixteen to eighteen slug tests have been conducted between the Los Alamos and Mortendad Canyons. Two years ago they put the results in a draft report. The raw data can be provided to HRMB. No one thought any slug tests were performed in Pajarito Canyon.
- LANL: LANL agrees to supply data to HRMB for DT-U.S.G.S. aquifer tests.
8. HRMB: HRMB requests geologic logs / well logs with elevation data for the following wells:  
LADP-3  
LADP-4  
LAO-1.1
- LANL: LANL agrees to supply information to HRMB on wells LADP-3, LADP-4, and LAO-1.1.
9. HRMB: The USGS reported transmissivity (T) from specific capacity in the 1960's. HRMB would like to see the original calculations.
- LANL: A map is available with all the Ts for different wells marked on it. There is no valid way to get the storage coefficient for the plateau other than Theis' test on LA1.
10. HRMB: If the original well logs are available for the LA series and the PM series and Otowi 4, the HRMB would like access to them
- LANL: What exactly does the HRMB want when it says "original Log"?
- HRMB: A document published in 1993 by LANL entitled *Geology, Drilling, and Some Hydrologic Aspects of Seismic Hazards Program Core Holes, Los Alamos National Laboratory, New Mexico*, written by Jamie N. Gardner, Tom Kolbe, and Susan Chang referenced a written communication from Steve Reneau in 1992. This document indicates that after Steve Reneau examined the lithologic log of PM-2 he indicated that PM-2 penetrates first Tshirege Member, not Otowi, beneath the near surface alluvium. This would indicate to HRMB that there are original

Meeting Notes January 17, 1995

geologic logs or drill cores for Mr. Reneau to study. HRMB would like to study these original logs.

LANL: LANL believes that Reneau reinterpreted that log, in which case he didn't have actual rock samples to study. He reinterpreted the same lithologic log included in the Purtyman report. If there are any original records, NMED is welcome to come and look at them. This group will have to sit down with Bill Purtyman and consolidate documents. We might get lucky to have all the USGS logs together. Other geophysical logs are probably scattered throughout the facility. It is possible to look up the lithologic log of PM2 in a USGS report.

11. HRMB: Are the geologic logs and well completion records available for the new wells?

LANL: Elevation data may be available.

12. HRMB: Video Logs of TA-49 wells--has anyone seen them? Are they valuable?

LANL: LANL has a library of tapes. This group is not sure where they are. Video cameras were used to help fish out junk in the holes. If they were to have any tapes, the camera was available in 1980. The wells were drilled in the 60's. Once the jack pumps are in, it is not physically possible to run a log in the hole. Contact the ER project leader to see if this information is available.

13. HRMB: HRMB understands that the AIP program is currently making arrangements to obtain water level data from LANL.

LANL: LANL has not received a request for that data from AIP yet. LANL will try to get the water level data on GIS soon but won't be able to get it on line within 90 days.

Otowi 4-- there is no transducer in Otowi 4. Initially when this well was drilled, the water level was higher than in TW3. Now it's lower.

HRMB: In the future, HRMB envisions monitoring systems

Meeting Notes January 17, 1995

with short screen intervals in the main aquifer and in the perched zones.

LANL: LANL is still trying to decide how to present the water level data.

HRMB: HRMB would like a snapshot in time.

14. HRMB: Is there an index/library for aerial photos of LANL property?

LANL: Barry Drenin has an aerial photo index. The ER Reading Room Library has a complete file. Anything water supply related is considered 'sensitive'. The state may have a problem gaining access. On the other hand, the photos should be made available on FIMAD.

15. HRMB: HRMB requests site visits to the following places: Core Museum, SHB-3 location, TA-3 Hg site (perched water), Ancho Spring, LAO.1.1 site, Mortendad Canyon (new A1 wells), WCO series, FCO-1 & PCTH-1 CDBO series, Ancho Canyon at State route 4, Doe Spring, Spring 5AA Water Canyon, Horizontal borehole locations Area G, and Area P Landfill (Canon De valle).  
HRMB requests Laboratory ID Badges ("Red Badges") for the following NMED personnel: Ms. Teri Davis, Ms. Susan Hoines, and Ms. Lee Winn.

LANL: To visit the core museum, simply coordinate with ES4; call Greg Bayherst directly. As far as LANL knows, TA-3 has a surface drainage there. LANL doesn't have a problem with the state making visits to the sites HRMB mentioned.

16. LANL: LANL heard a rumor through AIP that HRMB had concerns about the water level map submitted by LANL to the EPA.

HRMB: The main concern here is that the map was mixing water levels obtained from shallow screened intervals and deep screened intervals.

LANL: LANL recognizes some labeling errors in that document and is planning to resubmit it to the EPA with corrections. The other things HRMB is

Meeting Notes January 17, 1995

concerned with are considered a matter of interpretation.

In Summary:

LANL will be able to grant NMED personnel access to sites on LANL property. The sites are listed in these meeting notes. LANL will attempt to consolidate all of its well log records but advises NMED to do its own literature search. Whatever original well logs LANL has, NMED is welcome to study them. Results from the infrared survey will most likely be obtained from the LANL ER program. Aerial photos are available for study at the library. LANL is currently trying to get all of its water level information entered into FIMAD but doubts it will be finished within 90 days. All the raw data from any slug tests performed by LANL are available to NMED.