TA00 LANL LA/Pueblo Canyon Surface Water

City of Santa Fe
New Mexico

ENTERED

BUCKMAN DIRECT DIVERSION BOARD

February 27, 2009

Danny Katzman
Los Alamos National Laboratory

VIA EMAIL

SUBJECT: Definition of LANL Early Warning System Requirements

Dear Mr. Katzman:

We are writing to inform LANL regarding the Board's detailed requirements for the LANL early warning system. We request that LANL design and implement such an early warning system as soon as possible and no later than one year from now. Through our discussions this past fall and winter we have gained a much better understanding of the physical system that must be monitored in real time in order to provide early warning to the BDD. The purpose is to stop BDD diversions from the Rio Grande when Los Alamos Canyon is flowing and transporting suspended sediments with LANL-origin contaminants to the Rio Grande, but resume those diversions as soon as the contaminant flow has diminished and been carried downstream past the diversion location.

We have decided to implement a system that will help the BDD water treatment plant operators monitor the Rio Grande and the Rio Chama. We request that LANL design and implement a complementary flood warning system for the Los Alamos Canyon and Pueblo Canyon watersheds.

The BDD Board wishes to receive stream gage and rain gage data from LANL via the BDD Project Supervisory Control and Data Acquisition System (SCADA). The BDD SCADA system will process the input data and provide all alarm and control outputs. The SCADA system is our platform, and we request that LANL provide all hardware and equipment necessary to measure variables and transmit them via standard telemetry equipment to the BDD SCADA system. Another mode of communication will be required for streaming video of Los Alamos Canyon streambed at the E110 gage. LANL should identify and implement communication of the streaming video to the BDD control room.

30062

The following is our specific request and proposal to share implementation responsibility.

1. LANL will provide continuous stage and flow data for key stream gages, including E110, E050, E060 (site location subject to change: LA/P Interim Measures Work Plan), E070 and E099, and other upstream gages.
2. LANL will provide turbidity data for E110.
3. LANL will contract with the USGS to reinstall, operate, and maintain the E110 gage, including streaming video of the Los Alamos Canyon streambed at the E110 gage location.
4. LANL will provide rainfall rate and amount data from locations in the Los Alamos Canyon, Pueblo Canyon, and Guaje Canyon watersheds that LANL is currently monitoring.
5. LANL will provide all communications equipment necessary to transmit the data per items 1 through 5 to the BDD SCADA system, in real time.
6. LANL will own, operate, maintain, repair and replace the LANL Early Warning System in order to achieve excellent telemetry performance and good performance from data collection instruments.
7. LANL will design and implement a program of data acquisition and interpretation to characterize the quality and the variability of quality of stream flow at the E110 gage at low flows and during storm events.
8. The BDD will receive the real-time data from LANL via the BDD's SCADA system. The SCADA system will treat these as continuous variable inputs (analog inputs).
9. The BDD will program its SCADA system to display the values from LANL stream gages and rain gages as inputs with value and rate of change alarms.
10. BDD also will obtain USGS stream gage data for key Rio Grande and Rio Chama stream gages.
11. The BDD will make weather radar data available in the BDD control room.
12. The BDD will make operating decisions regarding its diversion of water from the Rio Grande using LANL-provided data.

Additionally, as we have discussed, we request that LANL implement a system of signaling the Santa Fe Water Division via telemetry or telephone call or other method, in order that the Water Division can transmit a signal to an automatic sampler located on the Rio Grande just upstream of Canada Ancha. We would like to implement this system immediately.

We look forward to your response.

Sincerely,

Rick Carpenter
Project Manager

c: Jon Goldstein, NMED
Robert Gallegos
Norm Gaume
Kyle Harwood