



Department of Energy  
National Nuclear Security Administration  
Washington, DC 20585



June 28, 2006

The Honorable A.J. Eggenberger  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W.  
Suite 700  
Washington, D.C. 20004-2901

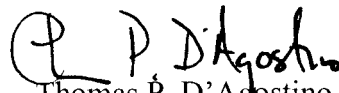
Dear Mr. Chairman:

Your March 7, 2003, letter requested that the National Nuclear Security Administration (NNSA) undertake flood mitigation measures at Technical Area (TA)-18 related to possible flooding after the Cerro Grande fire, including hydrologic modeling as well as implementing maintenance and inspection procedures for the Pajarito Flood Retention Structure. On May 21, 2003, NNSA responded to the Board's letter with a commitment to take specific actions and provide a follow-up memorandum regarding their status.

The enclosed correspondence package submitted by the NNSA Los Alamos Site Office (LASO) and Los Alamos National Laboratory (LANL) provides documentation of the status of the flood mitigation measures and the Flood Retention Structure at TA-18. I believe that the LASO and LANL actions discussed in the enclosed correspondence adequately address your concern with the Flood Retention Structure.

If you have any questions please contact me or have your staff contact Michael Thompson of my office at 301-903-5648 or Gerald Schlapper, LASO Senior Safety Advisor at 505-665-7111.

Sincerely,

  
Thomas P. D'Agostino  
Deputy Administrator  
for Defense Programs

Enclosures

cc: E. Wilmot, LASO  
M. Whitaker, DR-1



## memorandum

National Nuclear Security Administration  
Los Alamos Site Office  
Los Alamos, New Mexico 87544

DATE: JUN 03 2006  
REPLY TO: S&H: GS-003  
ATTN OF:  
SUBJECT: Current Status of SIMS ID#L03-518 and March 7, 2003 letter from DNFSB to NNSA,  
Flood Mitigation Measures at TA-18 after Cerro Grande Fire

TO: Dr. Thomas D'Agostino, Deputy Administrator for Defense Programs, NA-10,  
HQ/FORS

Attached is the Los Alamos National Laboratory (LANL) correspondence package documenting the status of the flood mitigation measures at TA-18 to date. The Los Alamos Site Office (LASO) has reviewed the LANL submittal and finds that it addresses the concerns of the Defense Nuclear Facility Safety Board (DNFSB). Specifically, LASO verified the implementation of maintenance and inspection procedures developed for the Pajarito Flood Retention Structure (FRS) as part of a LASO Safety System Oversight Assessment of TA-18 Passive System conducted April 17-21, 2006

LANL is continuing to monitor each year's precipitation events and storm water flow conditions and generates annual reports. The assumptions used for the hydrologic and hydraulic modeling completed August 2003 addressed the worst-case conditions (post-fire, watershed impact, etc.) and for the most part remain unchanged.

LASO has determined that the concerns of the DNFSB have been addressed with flooding risk no greater than currently analyzed utilizing the modeling as completed in August 2003. The continued use of the FRS will be re-evaluated upon completion of the removal of the TA-18 radioactive material inventory. The DNFSB concerns with FRS are considered closed.

If you have any questions concerning this subject, please contact Gerald Schlapper, Senior Safety Advisor for LASO at (505) 665-7111.



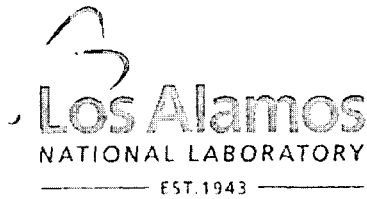
Edwin L. Wilmot  
Manager

Attachment

See Page 2

cc w/Attachment

X. Ascanio, NA-124, HQ/GTN  
S. Pierpoint, NA-125.2, HQ/GTN  
M. Schoenbauer, NA-12, HQ/GTN  
M. Whitaker, DR-1, HQ/FORS  
A. Jordan, DNFSB  
C. Keilers, DNFSB, LASO  
G. Schlapper, S&H, LASO  
F. Bell, OOM, LASO  
J. Fredlund, S&H, LASO  
D. Winchell, PS-2, LANI., MS-C347



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The World's Greatest Science  
Protecting America  
*Office of the Director*

March 14, 2005

Mr. Edwin Wilmot, Manager  
US Department of Energy/NNSA  
Los Alamos Site Office, A316  
Los Alamos, NM 87544

**Subject:** Follow-up Memo to DNFSB to address SIMS ID #L03-518 and DNFSB Letter 3/7/03

**REFERENCES:**

1. March 7, 2003 Letter from DNFSB to NNSA, Flood Mitigation Measures at TA-18 after Cerro Grande Fire
2. May 21, 2003 Letter from NNSA to DNFSB, Response to DNFSB Letter 3/7/03 on Flood Mitigation Measures at TA-18 after Cerro Grande Fire
3. Safety Issues Management System (SIMS) Commitment ID #LC3-518, Follow-up on LANL Flood Mitigation
4. Pajarito Canyon Watershed Precipitation and Storm Flow Annual Report, 2003
5. March 18, 2004 Letter (RRES-WQH: 04-040), S. Rae (LANL) to Everett Trollinger (NNSA-LASO), Transmittal of Pajarito Canyon Watershed Precipitation and Storm Flow Annual Report, 2003
6. Final Report and Documentation of Hydrologic and Hydraulic Modeling for Defining 2-, 25-, and 100-Year Floodplains at Los Alamos National Laboratory (LANL)" (LA-UR 8322) August, 2003

Dear Mr. Wilmot:

On March 7, 2003 the Defense Nuclear Facilities Safety Board (DNFSB) issued a letter (Reference 1) to NNSA on Flood Mitigation Measures to be taken at TA-18 after the Cerro Grande Fire. On May 21, 2003 NNSA responded to the Board's letter (Reference 2) and opened a commitment in Safety Issues Management System (Reference 3) to providing the DNFSB with a follow-up memo to address the status of actions identified in their May 2003 response (Reference 2).

The purpose of this letter is to provide Laboratory input into the NNSA-LASO response to DNFSB concerning actions which have been taken in response to the NNSA Letter dated 5/03 (Reference 2) on Flood Mitigation Measures at TA-18 after the Cerro Grande Fire. Actions identified in the NNSA's response to the DNFSB Letter included:

1. Continue monitoring of precipitation and flow conditions in the area of Technical Area 18 operations,
2. Continuance of the hydrologic modeling beyond fiscal year 2003 for as long as needed to protect defense nuclear facilities,
3. Ensuring that maintenance and inspection procedures are implemented,
4. updating of the Technical Area 18 Emergency Preparedness Plan based on changing conditions, and
5. Preparation and submittal of an Annual report summarizing yearly monitoring of precipitation and hydrologic conditions.

#### Status

- (1) The LANL ENV-WQH Group has been continuing to monitor precipitation events and storm water flow conditions in Pajarito Canyon in the vicinity of TA-18. They publish an annual Surface Water Data Report (Reference 4) and the last report (Reference 5) was transmitted to LASO on March 18, 2004. The report for Water Year 2004 is now being prepared for distribution.
- (2) Extensive hydrologic modeling was completed by Wright Water Engineers of Denver, Colorado, after the fire which considered worst-case conditions. A report entitled "Final Report and Documentation of Hydrologic and Hydraulic Modeling for Defining 2-, 25-, and 100-Year Floodplains at Los Alamos National Laboratory (LANL)" (LA-UR 8322) (Reference 6) was completed in August, 2003, by Wright Water Engineers and transmitted to LASO. The DNFSB Staff was also provided an update on these efforts during an onsite review in October 2003. Soil and vegetation conditions are now approaching pre-fire conditions with greatly reduced flood potential. Based on this turnaround in soil and vegetation conditions, and recent decisions related to the future of TA-18, the Laboratory recommends that LASO discontinue requiring us to perform further hydrologic modeling.
- (3) Maintenance and inspection procedures have been developed for the Pajarito Flood Retention Structure (FRS). TA-18 procedure, TA-18-AB-PRO-0084, was developed to satisfy the annual In-service Inspection (ISI) requirement listed in the TA-18 TSR (TA-18-AB-SAD-0094). This procedure requires that an FRS inspection be performed by the Army Corp. of Engineers (COE) and includes a three page checklist to inspect the spillway, parapet walls, footings, slopes, piping and overflows for deterioration, signs of erosion damage, etc. Inspectors would also look for washouts, rocks, fallen trees and other traffic obstructions. Findings of the inspection are documented in the work order, and any necessary corrective actions for any repairs would be scheduled as a separate work order. The FRS was fully inspected on 9/12/03. A partial inspection, of all but one point due to limitations imposed by snow cover, was performed by the COE on 1/6/05. This latter inspection, although conducted in accordance with facility procedures, was performed outside the annual TSR ISI frequency. A subsequent facility investigation identified the direct cause for missing the annual frequency was due to a misunderstanding by facility and institutional personnel in applying the 25 percent grace period for TSR Surveillance Requirements to ISI requirements. In addition, a contributing factor was the failure to get a contract in place in time to perform the ISI. Although facility personnel exhibited due diligence in requesting the contract approximately 3 to 4 months prior to its scheduled performance date, the Laboratory suspended many activities during its July stand down, including procurement, which resulted in the contract being let after the scheduled due date. This violation was self reported by facility personnel as an Occurrence Report (ORPS: ALO-LA-LANL-TA-18-2005-0002).

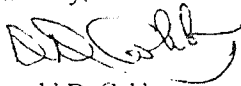
March 14, 2005

- (4) Based on data collected during the last two inspections on changing conditions, updates to the TA-18 Emergency Preparedness Plan were not necessary.
- (5) The 2003 annual report summarizing precipitation and hydrologic conditions was prepared and transmitted to LASO (reference 4 and 5) in March 2004. As was previously stated in item 1, the 2004 report is being prepared by the ENV-WQH Group and should be completed in the near future.

In summary, the Laboratory will continue to monitor precipitation and flow conditions in the TA-18 operations area and provide LASO with annual reports summarizing the data. Maintenance and inspection procedures have been developed and will be used to monitor and maintain the FRS. Hydrological modeling, although conducted and reported in August, 2003, is not recommended to be continued in the future.

Please do not hesitate to call Sara Scott or myself if you have any questions or comments.

Sincerely,



Donald D. Cobb  
Deputy Director (Acting)

Cy:

G. Schlapper, NNSA-LASO  
F. Bell, NNSA-LASO  
C. Keilers, DNFSB  
T. Burns, DNFSB  
S. Scott, N-DO  
R. Franke, N-5  
D. Hayes, N-5  
S. Rae, ENV-WQH  
D. Satterwhite, PS-4  
P. Volza, PS-2  
DIR-05-106 File

## memorandum

National Nuclear Security Administration  
Los Alamos Site Office  
Los Alamos, New Mexico 87544

DATE: AUG 02 2005  
REPLY TO:  
ATTN OF: OOM: 6GS-003  
SUBJECT: Current Status for SIMS ID #L03-518 and March 7, 2003 letter from DNFSB to  
NNSA, Flood Mitigation Measures at TA-18 after Cerro Grand Fire

TO: Dr. Thomas D'Agostino, Acting Administrator for Defense Programs, NA-10, HQ/FORS

Attached is the Los Alamos National Laboratory (LANL) correspondence package documenting the status of the flood mitigation measures at TA-18 to date. LANL addressed the requirement for hydrologic modeling as well as the maintenance and inspection procedures that have been developed for the Pajarito Flood Retention Structure (FRS).

The Los Alamos Site Office (LASO) has reviewed the LANL submittal and finds that it addresses the concerns of the DNFSB. Due to the fact that the TA-18 site is being de-inventoried coupled with the fact as noted in the LANL transmittal that substantial re-growth of vegetation approaching pre-fire conditions has occurred, this DNFSB concern is considered closed.

If you have any further questions, please feel free to have your staff contact Gerald Schlapper, Senior Safety Advisor for LASO at (505) 665-7111.



Edwin L. Wilmot  
Manager

Attachment

cc w/attachment:  
X. Ascanio, NA-124, HQ/GTN  
S. Pierpoint, NA-125.2, HQ/GTN  
M. Schoenbauer, NA-12, HQ/FORS  
M. Whitaker, DR-1, HQ/FORS  
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D. Winchell, PS-2, LANL, MS-C347