General

Los Alamos
NATIONAL LABORATORY

Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Date: June 8, 2000
In Reply Refer To: ESH-18/WQ&H:00-0192
Mail Stop: K497
Telephone: (505) 665-8135

Ms. Sandy Spon
Surface Water Quality Bureau
N.M. Environment Department
P.O. Box 26110
Santa Fe, NM 87502

Mr. Andrew Rosenau
Regulatory Branch
Albuquerque District Corps of Engineers
4191 Jefferson Plaza NE
Albuquerque, NM 87109

SUBJECT: 404/401 JOINT APPLICATION FOR EMERGENCY CONTROL MEASURES TO REDUCE POTENTIAL FLOODING AND SOIL EROSION ON LANL PROPERTY DUE TO THE CERRO GRANDE WILDFIRE

Dear Ms. Spon and Mr. Rosenau:

Enclosed is a copy of the joint 404/401 Application and supplemental information for the Los Alamos National Laboratory's "Emergency Control Measures To Reduce The Potential For Flooding And Soil Erosion On LANL Property Due To The Cerro Grande Wildfire Project". The impact of the Cerro Grande Fire on LANL property continues to be investigated. Of immediate concern is the amount of runoff (and run-on) due to denuded slopes within and above LANL property. LANL's Laboratory Emergency Rehabilitation Team, in cooperation with the United States Forest Service's Burned Area Emergency Rehabilitation (BAER) Team, is making recommendations to reduce the potential for flooding and erosion expected with the start of the summer monsoon season. This project is necessary to control sediment transport from storm events, to help reduce flooding, and to reduce further fire threats. This joint permit application is submitted based on our conversations with the New Mexico Environment Department's Surface Water Quality Bureau and the Army Corps of Engineer representatives the week of May 23, 2000.

If you have any questions regarding this matter, please contact me at (505) 665-8135, or Mike Saladen at (505) 665-6085.

Sincerely,

Marc Bailey

Marc Bailey
Water Quality and Hydrology Group

MB/rm

JUN 1 5 2000

Surface Water Quality
Bureau

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Enclosures: a/s

Cy: Joe Vozella, w/o enc., DOE-LAAO, MS A316
Mat Johansen, w/enc., DOE-LAAO, MS A316
Tom Gunderson w/enc., DLDOPS, MS A100
Richard Burick, w/o enc., DLDOPS, MS A100
Mike Alexander, w/enc., ESH-18, MS K497
Steven Rae, w/o enc., ESH-18, MS K497
Mike Saladen, w/o enc., ESH-18, MS K497
Ken Mullen, w/o enc., ESH-18, MS K497
Deb Woitte, w/enc., LC-GL, MS A187
WQ&H File, w/enc., MS K497
CIC-10, w/o enc., MS A150

JOINT APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT AND NM WATER QUALITY CERTIFICATION
(33 CFR 325) (33 CFR 325.2.6)

OMB APPROVAL NO. 0710-003
Expires October 1996

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (-710-0003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404, Principle Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into Waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routing Uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME Los Alamos National Laboratory	8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) N/A
6. APPLICANT'S ADDRESS MS K497, P.O. Box 1663, Los Alamos, NM 87545	9. AGENT'S ADDRESS N/A
7. APPLICANT'S PHONE NOS. W/AREA CODE a. Residence N/A b. Business (505) 665-8135	10. AGENT'S PHONE NOS. W/AREA CODE a. Residence N/A b. Business N/A

RECEIVED
JUN 12 2000
Surface Water Quality Bureau

11. **STATEMENT OF AUTHORIZATION**

I hereby authorize, N/A To act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)
Emergency Erosion Control Measures, Fire Road and Fire Break Construction, and Flood Control Measures Due To Cerro Grande Fire

13. NAME OF WATERBODY, IF KNOWN (if applicable) See Attached	14. PROJECT STREET ADDRESS (if applicable) N/A
15. LOCATION OF PROJECT Los Alamos (COUNTY) NM (STATE)	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)
See attached

17. DIRECTIONS TO THE SITE
See attached

18. Nature of Activity (Description of project, include all features)
Construct fire roads and fire breaks to prevent further fire damage. Construct detention ponds and install CMPs at TA-18. Re-channelize stream channels to better handle expected increased flow. Install gabions to divert flow. Replace undersized culverts. Place rock and log check dams in drainages to slow flow/drop sediment. Add fill to build up road at washed-out crossings in Los Alamos Canyon to use as emergency evacuation route. Construct detention pond at borrow pit where upper Canon de Valle crosses Highway 501.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)
Fire roads and breaks were constructed to help put out and control the Cerro Grande wildfire. Emergency work is needed to reduce the potential for flooding, erosion, and sediment transport expected with the monsoon season.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Project Schedule
Start Date * May 09, 2000 End Date May 2002
*Fire roads and fire breaks were constructed during the CerroGrande fire.

21. Reason(s) for Discharge

Fire road access to put out fires. Fire breaks to help stop the fire. Escape road in Los Alamos Canyon. Detention ponds, gabions, check dams to slow the velocity of runoff/runon or to redirect flow.

22. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards

Varies by location. No large amounts of fill are anticipated. Existing material in stream channels will be used wherever possible to reshape channels. River rock/washed rock or gabions will be used to build up road eroded by stream in Los Alamos Canyon.

23. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

No filling of wetlands is anticipated at this time

24. Is Any Portion of the Work Already Complete? Yes X No _____ IF YES, DESCRIBE THE COMPLETED WORK

Fire roads/breaks constructed during Cerro Grande fire. Detention ponds started at TA-18 in Pajarito Canyon.

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (if more than can be entered here, please attach a supplemental list).

Bandelier National Monument boundary is due south.
Santa Fe National Forest boundary is due west
Los Alamos County boundary is approximately due north.
San Ildefonso Indian Reservation boundary is east.

26. Describe any adverse water quality impacts that may result from the proposed activity such as increased turbidity or erosion. How long will such impacts occur?

Majority of work is in dry watercourses. Water is currently flowing in Los Alamos Canyon (Los Alamos Reservoir is being drained-BAER Team activity) so any erosion control work may likely add to the already increased turbidity.

27. Describe methods to be used to prevent water quality impacts which could interfere with attainment of State designated fishery, recreation, irrigation, water supply or other uses.

All the fire related work is being conducted to prevent flooding and to control erosion. Extensive use of BMPs is taking place.

28. List of Other Certifications or Approvals/Denials Received from other Federal, State or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
N/A					

*Would include but is not restricted to zoning, building and flood plain permits.

29. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to udertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE
[signature]	June 9, 2000		

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

SUPPLEMENTAL INFORMATION FOR THE 404/401 JOINT APPLICATION FOR EMERGENCY CONTROL MEASURES TO REDUCE FLOODING AND SOIL EROSION ON LANL PROPERTY DUE TO THE CERRO GRANDE WILDFIRE

Background

The impact of the Cerro Grande Fire on LANL property continues to be investigated. Of immediate concern is the amount of runoff (and run-on) due to denuded slopes within and above LANL property. LANL's Laboratory Emergency Rehabilitation Team, in cooperation with the United States Forest Service Burned Area Emergency Rehabilitation (BAER) Team, is making recommendations to reduce the potential for flooding and erosion expected with the start of the summer monsoon season. The BAER Team has identified 3 high priority watersheds above LANL property that need immediate treatment in the form of contour tree felling/terracing, seeding of grass species, rehabilitation of bulldozer and hand fire lines, installation of silt fences and straw bales, installation of temporary fences, protection of cultural/heritage resource sites, enlargement of culverts, and contour raking in areas with highly hydrophobic soil. These three high priority watersheds are: Pajarito Canyon, Los Alamos Canyon, and Pueblo Canyon. Pajarito Canyon and Los Alamos Canyon (including tributaries) run through LANL property, and erosion/flood control measures have already been initiated there by LANL or LANL contracted personnel. Listed below are work activities in areas of high priority delineated by watershed.

Pajarito Canyon:

TA-18 at Pajarito Canyon- work already underway
See # 1A and 1B on map and enclosed photos

Construct stormwater detention basin and improve channel hydraulics.

1) Construct two ~300 ft. wide (width of watercourse) detention basins, 10 ft. high with a 6 ft. high gabion spillway above the flowline in Pajarito Canyon (see # 1B on map). The spillway is approximately 36 ft. wide with the center 12 ft, section being level. The spillway will be made up of three 12 ft. wide gabions each 12 inches (in.) thick placed end to end. It should fully protect the upstream face and the downstream face of the berm. The area upstream shall be cleared of dead/burned trees for a distance of 200-300 ft. and graded level with the elevation of the flowline. A 36 in. corrugated metal pipe shall be placed along the existing flowline prior to building the berm as close as possible to the existing alignment of the watercourse.
2) Construct a rechannelization of the watercourse adjacent to Kiva 2 in Threemile Canyon just above confluence with Pajarito Canyon (see # 1A on map). Re-grade channel to a cross section of approximately 4 ft. deep and 8 ft. wide and align to follow existing watercourse (presently silted in). Install 4 @3 ft. X 3 ft. gabions end to end near NW corner of fence surrounding Kiva 2.
3) Clean miscellaneous debris from areas at "bridge" and cable tray water crossings.
4) Remove fallen trees from centerline area of drainage.
5) Cut down severely burned and dead trees in Pajarito Canyon from Kiva 1 to approximately one mile above. Leave stumps 3 ft. to 4 ft. high to allow them to function as natural trash rake. All cut trees will be removed from site.

Pajarito Canyon-planned work

1) *See #6 on map-* Construct check dam across upper Pajarito Canyon to act as retention pond. Dredging silt after each storm event may be required.

2) *See # 7 on map-* Pajarito wetlands upgrade. Reinforce existing berms; open drainage paths for maximum beneficial use of wetlands in lower Pajarito Canyon.

Los Alamos Canyon:

Los Alamos Canyon – work underway
See # 2 and # 3 on map

1) *See # 2 on map-* Add fill to fire road below TA-2. Clean fill from the borrow pit south of TA-8 will be added to washed out area of fire road in the same location as described in Army Corps of Engineers Action No. 2000 00201. Dirt and rock will be used instead of gabions and drive over mats.
2) *See # 3 on map* - Use diversion structures ("Jersey bouncers" for example) to protect sanitary lift station below TA-41, production well sites, and TA-2/TA41 structures.

Los Alamos Canyon – planned work

1) *See # 10 on map-* Construct diversion structures and install BMPs to prevent erosion of material around the cross-country radioactive liquid waste line in the bottom of the Los Alamos Canyon. This line runs from TA-21 to TA-50.

2) *See # 11 on map-* Remove silt from 8 ft. X 15 ft. concrete box culvert in front of TA-41.

Additional work will involve these watercourses:

Canon de Valle- work underway

1) *See # 4 on map-* Construct berm in bottom of the canyon north of TA-16-260 to catch runoff/sediment from water used to put out fire in Material Disposal Area- R (MDA-R). This area is still smoldering and successive dirt layers are being exposed and fire suppressed.

Planned work

1) *See #5 on map-* Grade borrow pit area just east of State Road 501 to act as detention pond.

Mortandad Canyon- planned work

1) *See # 8 on map-* Construct three new sediment traps and clean out existing ones in lower Mortandad Canyon. Total volume of sediment disturbed will be approximately 15 acre feet.

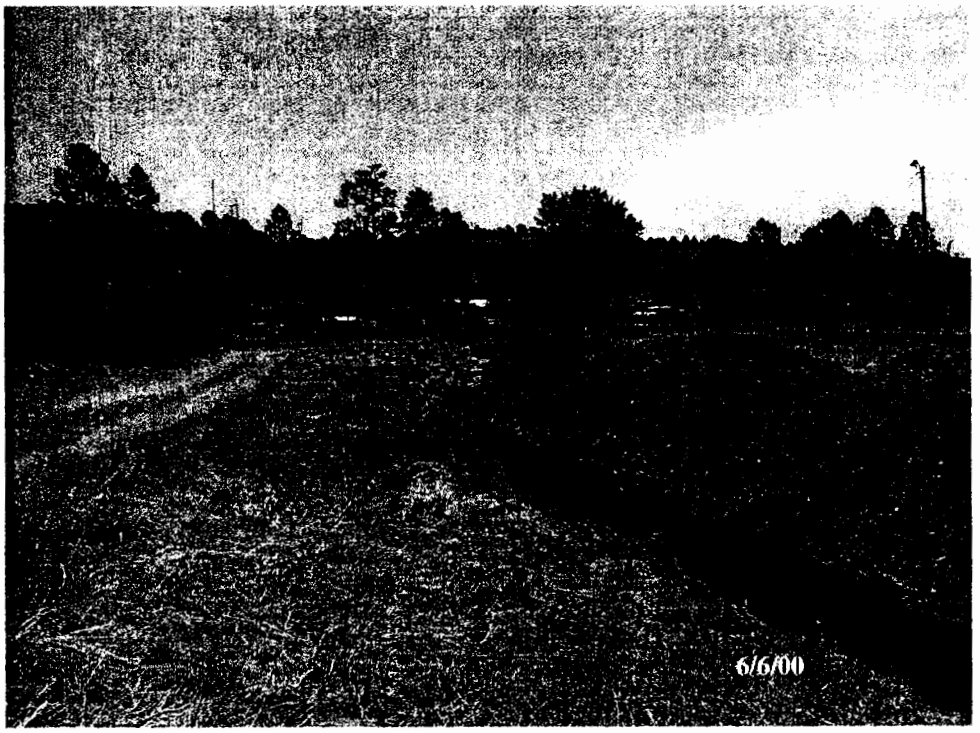
Sandia Canyon-planned work

1) ***See # 9 on map***- Construct diversion structures to prevent erosion of material around the cross-country radioactive liquid waste line in the bottom of Sandia Canyon. This line runs from TA-21 to TA-50.

Miscellaneous planned work

- Replace culverts in the fire area along State Road 501 (see left side of map).
- Construct additional detention ponds, retention ponds, and earthen dams as identified.
- Contour raking and mulching to begin 6/8/00. Aerial seeding on LANL to begin 6/8 or 6/9.
- Evaluate BMPs at existing Soild Waste Management Units and Potential Release Sites located in watercourses. Upgrade, repair, or install as needed.
- Install and maintain fire roads and fire breaks in various canyons as needed
- Perform soil sampling and characterization to monitor sediment transport.

The Laboratory's Water Quality and Hydrology Group (ESH-18) will track Dredge and Fill work activities and will update the Army Corps of Engineers and the New Mexico Environment Department Surface Water Quality Bureau on the status of work in progress and of new work as needed.



Diversion trench at TA-18 above Kiva 2 in Threemile Canyon (see 1A on map)

First detention basin in Pajarito Canyon above Kiva 1 in TA-18.
Second basin will be upstream (see 1B on map)