LOS ALAMOS COUNTY

PUBLIC WORKS DEPARTMENT

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July 10, 1998

James H. Davis, Ph.D., Chief
Surface Water Quality Bureau
New Mexico Environment Department
1190 St. Francis Drive
Santa Fe, New Mexico 87502

RE: Response to Breached Landfill and Stockpiled Site Issues Outlined in May 22, 1998, NMED Letter: Follow-up on Meeting held May 11, 1998, with County of Los Alamos Representatives Concerning the NMED-SWQB Notice of Violation (NOV) Dated December 4, 1997.

Dear Dr. Davis,

As promised, this is to provide you Los Alamos County's response to the Breached Landfill and Stockpiled Site issues raised in paragraph B of the subject letter. Each of the two issues, shown in bold print, will be addressed in the order presented in the subject letter. As mentioned in our June 25, 1998, correspondence on the Rubble Pile concerns, a third issue has been added to describe our long-term corrective actions. It is important to note that plans described in this correspondence outline our proposed approach for corrective action. Complete engineered drawings and construction details can be developed only after confirmation that our proposed approach is acceptable to all of the various stakeholder agencies.

1) Plans for the breached site after re-evaluation by both the County and the DOE/LANL in light of the comments by the stakeholder agencies at the May 11, 1998 meeting. Documentation will be provided to show specific DOE/LANL involvement as well as a timeline for the submittal of the revised corrective action plan associated with this site. In no case will any plan which has a detrimental effect on the wetland be considered acceptable.

Since the May 11, 1998, meeting with NMED stakeholder agencies, Los Alamos County and DOE/LANL have been attempting to work closely together to develop a plan for long-term corrective action on the rubble pile/road crossing, the breached site, and the stockpiled soil. Interim corrective measures in the form of silt fencing and straw bales have already been placed around the sloped perimeter of the rubble pile/road crossing and below the breached site (Attachment 1). Silt fencing has also been placed along the southern perimeter of the stockpiled soil area, and we hope to complete placement of straw bales in this area by July 31, 1998. Our interim corrective measures have held up well during recent long, heavy rains.

A description of our plans for final corrective action at the breached site is provided as Attachment 2. We expect to complete final design for the work in the area of the breached site by August 22, 1998. We anticipate construction to commence by September 1, 1998, with estimated completion by October 31, 1998.

2) Plans for removal by the County of the stockpiled soil referred to in the NOV. Also, a justified timeline associated with this removal will be included. The removal process shall be done in such a manner that it will not impact the wetlands and/or watercourse associated with Sandia Canyon. Verification of removal will be performed by appropriate NMED bureau representatives.

As described in Attachment 3, design of a final closure grading plan and an operations plan for the removal of stockpiled soil will be completed by August 22, 1998. As discussed in the May 11, 1998, meeting at NMED, our intention is to systematically remove the stockpiled soil for a number of constructive purposes throughout Los Alamos County. We anticipate doing this over the remaining landfill operating life of approximately ten years. Planned and potential constructive uses include, but are not limited to:

- Cover material for slope stabilization at the existing rubble pile/road crossing as described in paragraph three (3) below and in Attachment 4.
- Cover material for continued construction of the Sandia Canyon Road Crossing as described in paragraph three (3) below.
- Cover material for an abandoned rubble pile located at the Los Alamos Airport.
- Cover material for eventual closing of the Los Alamos County Landfill.
- Fill material for a number of planned/proposed County construction projects such as:
    1. Trinity Re-development Facility Project
    2. Finch Street Road Crossing Project
    3. Oppenheimer Extension Road Project
    4. Future capital projects yet to be determined
- A significant portion of the stockpiled material will be made available as clean fill to residents and contractors for use in a variety of private and public projects throughout the County.

Notwithstanding the above planned and potential constructive uses of stockpiled material, the completed final closure grading plan and operations plan will clearly outline the timeline for attainment of final contours that will allow for verification of stockpiled soil removal by NMED bureau representatives.

3) In our June 25, 1998, correspondence, we committed to provide NMED with additional documentation on our long-term corrective action plan for the rubble pile/road crossing.

A modified Erosion Control and Slope Stability Plan for the Rubble Pile Area is provided as Attachment 4. The plan has been modified to include a description of the installation of a final cap for the stabilized slopes of the rubble pile. Requirements to gain stakeholder agency concurrence of our approach, and to coordinate design of slope stabilization contours for the rubble pile/road crossing with those being designed for the breached site, will delay completion of slope stabilization work on the rubble pile/road crossing until October 31, 1998.

In a letter to the County, dated July 2, 1998 (Attachment 5), the Department of Energy, Los Alamos Area Office (DOE/LAAO) verified its continued need for, and support of, the Sandia Canyon Road Crossing. For its part, DOE has fulfilled its commitment to provide County Engineers a definition of the road centerline. DOE has further committed to work with the County to establish an agreement to allow continued development of the road crossing. We anticipate completion of such

an agreement by December 31, 1998. During the interim, DOE/LANL and County engineers will work closely to coordinate the completion of final design and permit applications for the road crossing. Other than slope stabilization work described in Attachment 4 and in our June 25, 1998, correspondence, no resumption of work on the rubble pile/road crossing will be initiated until our final plans for the road crossing have been coordinated with your office and the Corps of Engineers, Albuquerque Office. If we are successful in completing the road crossing design and reaching agreement with the DOE on continuing road crossing construction activities by December 31, 1998; and if DOE obtains appropriate permits, we estimate continuation of road crossing work to begin by March 31, 1999. Work is expected to continue on the road crossing for approximately ten years.

General Comments

As requested, a timeline summarizing our intended plan of action, as outlined in this correspondence and our June 25, 1998, letter, is provided as Attachment 6. This timeline, including schedules for design and construction activities, is contingent upon our receiving timely concurrence of our approach from stakeholder agencies, and will have to be adjusted if stakeholder agency agreement cannot be obtained by July 31, 1998.

Additionally, our efforts to develop a final corrective action plan in concert with DOE/LANL have been somewhat complicated by continuing enforcement actions of the NMED and the Corps of Engineers, especially with respect to the rubble pile/road crossing and related issues. These enforcement actions include activity deadlines for DOE that may directly impact our proposed corrective action plan.

For the above reasons, we hereby request a meeting with you and representatives of the various stakeholder agencies, at the Los Alamos County Landfill, to discuss expectations of the various parties. We would also propose to use this meeting to clarify any issues or concerns related to our proposed corrective action plan. I would appreciate it if the NMED lead staff member would contact Dave Riker, Public Works Director, at 662-8150, to arrange an appropriate meeting date and time.

We greatly appreciate your continued assistance and advice, and look forward to the prospect of meeting to discuss our plan for resolution of the concerns described in the Notice of Violation and in subsequent correspondence. Please call Mr. Riker if you have questions or concerns relating to this correspondence.

Sincerely,

Joseph C. King
County Administrator

Attachments:

1. Interim Corrective Measures: All Sites
2. Plans for Breached Site Corrective Action
3. Plan for Stockpiled Area Corrective Action

4. Erosion Control and Slope Stability Plan for Rubble Pile Area
5. Letter: DOE/LAAO to Los Alamos County, dated July 2, 1998
6. Proposed Timeline for Final Notice of Violation (NOV) Corrective Actions

cc: David J. Riker, Public Works Director, LA County
Felicia Orth, Assistant County Attorney, LA County
E. Kelley, Director, NMED-WWMD
J. Sloan, NMED-OLC
C. Brown, NMED-SWQB
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File

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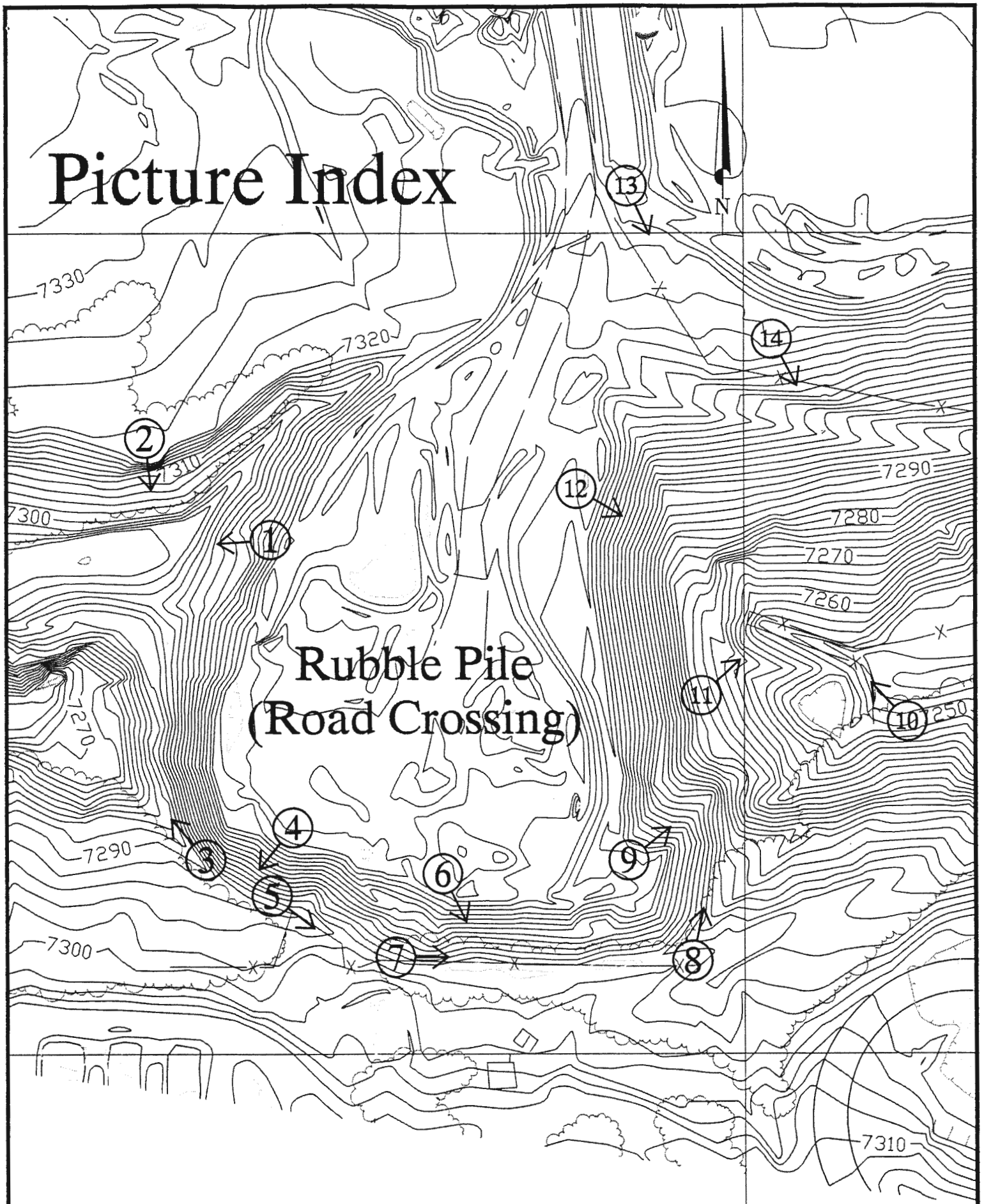

Picture Number 1

Picture Number 2

Interim Corrective Measures: All Sites

Picture Number 3

Picture Number 4

Interim Corrective Measures: All Sites

Picture Number 5

Picture Number 6

Interim Corrective Measures: All Sites

Picture Number 7

Picture Number 8

Picture Number 9

Picture Number 10

Interim Corrective Measures: All Sites

Picture Number 11

Picture Number 12

Interim Corrective Measures: All Sites

Picture Number 13

Picture Number 14

Interim Corrective Measures: All Sites

Los Alamos County Landfill
Plans for Breached Site Corrective Action

The breached site portion of the Los Alamos County Landfill is located at the northeast corner of the intersection of the north line of the rubble pile and the south line of the landfill. This section of the landfill is approximately 1.7 acres. The site consists of a steep side slope which is adjacent to the canyon. This side slope has a gradient of 41%. This gradient appears to allow sediment to runoff into the canyon. To address this problem, the area will be recontoured to create a side slope of no greater than 25%. This area will be properly capped and revegetated per the New Mexico Environment Department Solid Waste Regulations. This work will be accomplished by removing material from the area, placing that portion of the material which is solid waste into the operating cell of the landfill, and then recontouring the site with fill material from the soil stockpile area. All of this work will be accomplished from the upper portion of the site and will not require working within or disturbing the wetlands or the canyon. Capping and revegetating the area will result in a stable side slope that will not require further disturbance at any future time. A final design for the work in this area will be prepared and completed by August 22, 1998. The work to recontour this area will commence shortly after this date.

Los Alamos County Landfill
Plan for Stockpile Area Corrective Action

The stockpiled soil is located along the southern boundary of the Los Alamos County Landfill property and adjacent to the canyon. The stockpile area has side slopes with gradients exceeding 50%. The stockpile soil was placed in this location to allow for maximum space to safely operate the landfill. This stockpile soil is planned for use in daily operation and final capping of the landfill. To address the issue of the steep side slopes while allowing for the most efficient utilization of the material, a final closure grading plan and operation plan for the landfill will be prepared and completed. These plans will be utilized by the landfill operation staff to efficiently utilize the soil and to reduce the gradient of the stockpile side slope. The plans will call for systematically removing the soil from the stockpile and recontouring the landfill site adjacent to the canyon to a final grade of 25%. Included with the operation plan will be procedures to minimize any impact to the bottom of the canyon or the wetlands by removing soils from the upper portions of the stockpile first. The final closure grading plan and the operation plan will be completed by August 22, 1998.

Erosion Control and Slope Stability Plan
for
Rubble Pile Area

Background

A rubble pile, presently inactive, is located in the southwest corner of the area designated as the Los Alamos County Landfill. This rubble pile contains construction and demolition debris from various locations in Los Alamos County. The purpose of this rubble pile is for disposal of construction and demolition debris as well as the fill material for a proposed road crossing of the canyon. The rubble pile has been utilized, until recently. During a recent inspection by the New Mexico Environment Department (NMED), it was discovered that this rubble pile was potentially contaminating the canyon water course. NMED has requested Los Alamos County to stop utilizing the rubble pile until such time as the contamination issues are addressed.

There were four areas that were identified as potentially contaminating the water course. These are the west side, east side, northeast corner and south side of the rubble pile. The contaminant of greatest concern from these four areas is sediment runoff. The following brief paragraphs present the proposed approach to addressing the sediment runoff problem for three of the four areas. The south side of the rubble pile has been previously addressed by others.

Proposed Corrective Action

West Side of Rubble Pile

At present, the west side of the rubble pile consists of a very steep side slope. This side slope does not allow for stabilization of the slope to control sedimentation runoff. To address this issue Los Alamos County Landfill staff will cut back the upper portion of the rubble pile to allow for initial stabilization. Once the rubble pile is trimmed back, a minimum of 24 inches of soil will be placed over the west side of the rubble area. The west side will be sloped at a 25% grade. The soil cover will then be disced, fertilized, and seeded to further enhance slope stabilization. At present, it is not intended to extend the existing 84-inch drain pipe.

East Side Rubble Pile

The east side of the rubble pile has a similar steep slope as the west side. To address this problem, it is proposed to remove the section of the existing 84-inch drain pipe that has had its top half removed. This section of pipe will be replaced with a new 84-inch pipe. In addition, the 84-inch pipe will be extended approximately 40 feet downstream from its present location. Once this new pipe is in place, soil will be placed on the side slope to create a slope with a 25% grade. This soil will cover the existing rubble material. The depth of soil will vary from 3 feet to over 6 feet. Once in place, the soil surface will be disced, fertilized and seeded. The extension of the 84-inch pipe will not encroach upon the existing wetlands area. To further control potential velocity scouring from storm water discharging from the 84-inch pipe, baffles will be considered for installation in the pipe. A riprap apron will also be placed at the discharge end of the pipe to eliminate discharge scouring at this location.

Northeast Corner of Rubble Pile

A transition occurs from rubble to municipal solid waste at the northeast corner of the rubble pile. This area has a relatively steep slope. To better control this area, it is proposed to cut away the solid waste to create a flatter slope. This excavated area would be from the toe of the present slope, within the canyon, to the top of the slope. The resulting slope would have a grade of 25% or less. The solid waste removed would be placed in the present landfill cell. The remaining solid waste would be covered with a minimum of 24 inches of soil. Once in place, the soil would be disced, fertilized and seeded. It is anticipated that a minimal amount of work would be conducted within the canyon water course.

Installation of Final Cap

The entire rubble pile -- the west, south and east sides -- will be capped as required in the New Mexico Solid Waste Management Regulations dated October 27, 1995. Section 503, Construction and Demolition Landfill Closure and Post-Closure Requirements, of Subpart V, Closure and Post-Closure Requirements of the regulations requires a compacted layer of 2 feet of approved material be placed over the rubble pile. Suitable material is that material having no greater a permeability than 1×10^{-5} cm/sec. This layer will also include 6 inches of topsoil for revegatation. The top of the rubble pile will be sloped at no greater than 5% or less than 2% with a maximum side slope of 25%. The required cap is designed to prevent ponding of water and erosion of the cover material.