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July 30, 2002

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Dear James:

This letter forwards comments on behalf of the New Mexico Attorney General's Office (AGO) concerning the proposed Corrective Action Order (CAO) issued by the Environment Department on May 2, 2002 concerning environmental restoration at Los Alamos National Laboratory (LANL).

Our office has reviewed the administrative record concerning the Environmental Restoration program and has developed comments on the status of that program at various LANL Technical Areas. The comments are set forth on an attached table, together with references to the schedule called for in the proposed CAO.

In addition to revising the schedule as indicated, it is vitally important that the Environment Department (NMED) carefully design the procedure to be used in carrying out the CAO. We have previously called the attention of NMED to the need to take and respond to public comment during remediation. See our letter dated July 12, 2001. The need for public participation at several stages bears reemphasis. After the CAO is made final, NMED and LANL will implement it through a series of studies, reports, and further



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orders. NMED will direct a remedy and, ultimately, conclude the process. In this context, the public should have an opportunity to consider a proposed remedy, comment upon it, and receive NMED's response to comments with its decision at the following stages:

1. Schedule of compliance: Comment should be received on the schedule for corrective action. EPA has pointed out that public participation should not be significantly reduced when a schedule is issued by corrective action order. See EPA, RCRA Public Participation Manual at 4-8 (1996). This is being done in the current process.
2. RFI scope, conditions, and schedule: When the elements of an RFI or the content of an RFI report are specified in a corrective action order public comment should be taken. EPA, RCRA Public Participation Manual at 4-9 (1996). This is also being done in the current process.
3. CMS work plan scope and schedule: Comment should be taken when CMS requirements are included in a corrective action order. This is also being done now.
4. Remedy selection: The public should have an opportunity to comment on the proposed remedy, including the justification for the remedy set forth in a Statement of Basis issued by NMED. See EPA-OSWER, Guidance for Public Involvement in RCRA Section 3008(h) Actions, May 5, 1987; see 40 CFR § 265.121(b); EPA, Corrective Action for Releases from Solid Waste Management Units at Hazardous Waste Management Facilities; Proposed

Rule, 61 Fed. Reg. 19432, 19454 (May 1, 1996); EPA, RCRA Public Participation Manual, at 4-13 (1996).

5. Corrective Measures Implementation Plan: The specification of particulars, conditions and schedule of corrective measures should be the subject of public comment and response. See EPA, RCRA Public Participation Manual at 4-15 (1996).
6. Remedy Completion: The determination that no further action is called for requires an opportunity for comment. See EPA, RCRA Public Participation Manual at 4-16 (1996); see also 40 CFR § 265.121(b).

In addition, to facilitate public participation, NMED and LANL should take full advantage of the possibilities of electronic communication. In preparing the CAO, NMED has created an index to all of its files concerning hazardous waste regulation at LANL. This index may now be examined as a paper copy at NMED's offices. It would be far more useful to the public if the index were available on the Internet and were searchable to find items by subject matter.

Further, the CAO will call for the submission of numerous RFI work plans, RFI reports, CMS plans, CMS reports, and so forth. NMED should publish such documents on its Internet site or should direct LANL to do so. Previously, the LANL ER web site carried current ER reports; this pattern should be revived. Moreover, it is possible to receive public comment via the Internet as well. The comments and NMED's responses could easily be incorporated into the administrative record.

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The AGO urges NMED to allow for public participation as outlined above in its
issuance and implementation of a corrective action order.

Very truly yours,



LINDSAY A. LOVEJOY, JR.
Assistant Attorney General

LALJr:lajr

New Mexico Attorney General's Office
 Comments on Draft Los Alamos National Laboratory Corrective Action Order
 July 30, 2002

TA	O U	SWMU	Proposed CAO requirement	Comments
1	1 0 7 8		No order.	Some remedial action in this townsite area has been taken on an emergency basis, <i>e.g.</i> , at Hillside 138, but most of the sites have not progressed beyond the receipt of RCRA Facility Investigation (RFI) reports and supplemental information. LANL should be required in 2002 to submit a proposal to delete Potential Release Sites (PRSs) in OU-1078 from the permit or, alternatively, to conduct a Corrective Measures Study (CMS) and promptly complete a CMS report on such PRSs.
3	1 1 1 4	3-010(a)	Ground Water IWP 9/30/02; Investigation Report 4/30/04.	PRS 3-010(a) is a site of releases of lead, mercury, and radionuclides. A Phase II RFI Work Plan was submitted in 1994. In 1995 a RFI report was filed. A response to a Notice of Deficiency (NOD) was filed in 1996. NMED in 1999 requested further characterization of groundwater impacts, and LANL submitted a plan. Such characterization should be completed in 2002 and a report submitted promptly.
10	1 0 7 9	10-003(a-o), 10-007	Investigation Work Plan 3/31/04; Investigation Report 6/30/05.	TA-10 is now largely public. There have been at least four RFI reports concerning various PRSs in TA-10, but none of them has been approved. There was also a Voluntary Corrective Action (VCA) in Bayo Canyon in approximately 1995. NMED does not seem to have stated to LANL whether these sites require further action. The AGO suggests that NMED direct the completion of whatever additional sampling needs to be done in these PRSs in 2002 and, as appropriate, the submission of CMS work plans and the carrying out of such plans in 2003-2004.
15	1 0 8 6		No order.	This area (former OU-1086) contains numerous TA-15 firing sites. NMED files indicate that after initial RFI and interim action reports in 1996, and a NOD response in 1997, Phase II investigations were conducted in 1998, and a revised RFI report and SAP were due in 1999. They do not seem to have been submitted. They should be listed for completion in 2002.
16	1 0 8	16-003(o)	Investigation Work Plan 12/31/03; Investigation Report	This TA-16 area, known as the Fish Ladder, was investigated in 1995 and 1997 but the data were not reported. Since data are available, we suggest that the

	2		5/31/05.	existing information be reported in 2002 and such report be the basis for further planning.
16	1 0 8 2	16-008(a)	Investigation Work Plan 12/31/03; Investigation Report 8/31/04.	This TA-16 area, known as the 90's Line Pond, was investigated in 1998 and 1999 but the data were not reported. Since data are available, we suggest that the existing information be reported in 2002 and such report be the basis for further planning.
16	1 0 8 2	16-018 (MDA P), TA-16-387	Closure Report 10/31/02; Ground Water and Storm Water Monitoring Plan 4/30/04.	MDA P is in the closure process. The AGO concurs in the schedule proposed.
16	1 0 8 2	16-021(c), 16-003(k)	Interim Measures report 7/31/02; Investigation Work Plan for additional wells 12/31/02; CMS Report for surface/alluvial ground water 7/31/03; Phase III RFI Report 7/31/03; CMI Plan for surface/alluvial ground water 7/31/04; Investigation Report for groundwater 4/30/05; CMS Report for Intermediate, Regional Ground Water 3/31/06; CMI Plan for Intermediate, Regional Ground Water 3/31/07.	TA-16 has various high explosive problem areas. The 260 outfall, PRS 16-021(c), is now undergoing a CMS, which, pursuant to addendum dated September 1999, includes the effects upon regional ground water. The problems being investigated are among the most serious at the facility. We strongly suggest that a schedule be set that includes such wells penetrating the regional aquifer as are called for to measure the extent of the contamination and that a deadline of no later than 2003 be established for the completion of investigations and 2004 for preparation of a CMS report.
18	1 0 9 3	18-001 (a, b, c)	No order.	TA-18 is a criticality test area. RFI reports have been filed, and in 1995 an Expedited Cleanup Plan for SWMU 18-003(e) was filed. In 1996 an Expedited Cleanup Completion Report on SWMU 18-001(b) and a Voluntary Corrective Action Completion Report for PRS 18-001(a) were filed. In 1997 a Sampling and Analysis Plan (SAP) was under consideration, but in 1999 LANL requested to defer all corrective measures to FY 03. There are unresolved questions of ground water contamination here. Both the SAP and fieldwork pursuant to the SAP should be scheduled for 2002, with a

				CMS plan promptly thereafter.
21	1 1 0 6	21-011(k)	Voluntary Corrective Measures Plan 4/30/02; Voluntary Corrective Measures report 3/31/04.	The AGO suggests that any approved interim action in connection with outfalls 21-024(i) and 21-011(k) should be carried out in 2002.
21	1 1 0 6	21-014 (MDA A)	Investigation Work Plan 2/28/06; Investigation Report 5/31/07.	TA-21 includes MDAs T, U, B, A, and V and several major outfalls. NMED has several times advised LANL that the material disposal areas in TA-21 have high priority. However, even though the RFI work plan for these areas was approved in 1992, a Phase Report 1A was filed in 1993, Phases 1B and 1C were filed in 1993 and 1994, and certain other reports have been filed, NMED was still reviewing sampling plans and overseeing sampling in 1997-98, and the completion of sampling and submission of a final report based thereon has not been accomplished. The AGO suggests that LANL be required to complete all planned sampling in 2002-2003 and finish investigatory reports based thereon in 2003-2004.
21	1 1 0 6	21-015 (MDA B)	Investigation Work Plan 9/30/04; Investigation Report 9/30/05.	A SAP was filed for MDA B in September 1998, and there has been little activity since. The AGO suggests that LANL be required to complete all planned sampling in 2002-2003 and finish investigatory reports based thereon in 2003-2004.
21	1 1 0 6	21-016(a-c) (MDA T)	Investigation Work Plan 2/28/03; Investigation Report 5/31/04.	A SAP was filed for MDA T in March 1996, and there has been little activity since. The AGO suggests that LANL be required to complete all planned sampling in 2002-2003 and finish investigatory reports based thereon in 2003-2004.
21	1 1 0 6	21-017(a-c), 21-022(f) (MDA U)	Investigation Work Plan 8/31/04; Investigation Report 11/30/05.	A SAP was filed for MDA U in September 1998, and there has been little activity since. The AGO suggests that LANL be required to complete all planned sampling in 2002-2003 and finish investigatory reports based thereon in 2003-2004.
21	1 1 0 6	21-013(b, g), 21-018(a, b) (MDA V)	Investigation Work Plan 12/31/05; Investigation Report 12/31/06.	A RFI report on MDA V was filed in 1996, a response to a NOD in 1997, and an Interim Measures Plan in 2000. There is no indication that the interim measures were implemented. The AGO suggests that LANL be required to complete the interim measures and complete any further needed investigations in 2002.
21	1 1 0 6	21-024(i)	Voluntary Corrective Measures Plan 8/31/02; Voluntary Corrective Measures	The AGO suggests that any approved interim action in connection with outfalls 21-024(i) and 21-011(k) should be carried out in 2002.

			Report 8/31/03.	
32	1 0 7 9		No order.	An RFI report has been submitted concerning the PRSs in TA-32, and a Phase II investigation was apparently planned. Voluntary Corrective Action (VCA) plans were also submitted for several PRSs. However, none of these documents has been approved by NMED. This office suggests that NMED direct that any needed additional sampling to be completed and that RFI report supplementation be completed in 2002-2003.
33	1 1 2 2		No order.	TA-33 is the location of firing sites and mesa-top disposal areas. Based on initial sampling, EPA in February 1998 pointed out the presence of significant radiological contamination and the risks of migration to nearby springs. Additional sampling is called for to determine the extent of contamination, and a report should be furnished. This should be done in 2002-2003.
35	1 1 2 9		No order.	TA-35 housed a wastewater treatment facility. Several RFI reports were submitted in 1996 and one in 1998. A response to a Request for Supplemental Information (RSI) was filed in 1999. The June 1996 RFI Report stated that further inquiry was required at several sites. In 1997 and in early 2002 SAPs were filed for most of the PRSs needing further investigation. The investigation should continue to complete Phase II sampling in 2002, and a report should be filed soon thereafter.
36	1 1 3 0		No order.	TA-36 contains firing sites and surface disposal areas. In 1996 LANL filed a response to a NOD for PRSs in TA-36. In 1997 NMED determined that the RFI report on several of these PRSs was "grossly deficient." LANL thereafter proposed to remedy the deficiencies in a new SAP, scheduled to be delivered by September 1998, a date later extended to December 1998. This SAP apparently has not been filed, and the AGO suggests that filing of the SAP, and the execution of the SAP, should be completed in 2002.
39	1 1 3 2		No order.	TA-39 contains firing sites and disposal areas within Ancho Canyon. In 1997 NMED called in the RFI report for PRSs in this area, having identified it as "high priority for review." The RFI report was submitted in March 1997, and in November 1997 NMED issued a RSI, specifying additional work to be completed both in the field and in analysis. In December 1997 LANL responded, agreeing that the RFI report is deficient and requesting until September 1998 to complete the report. Later LANL requested a further extension to September

				1999, which was granted. The report has not been filed. NMED should schedule this RFI report for completion in 2002.
48	1 1 2 9		No order.	A RFI report was filed on PRSs, mainly outfalls, connected to the TA-48 radiochemistry site in 1995, and a response to a NOD in 1996, a SAP was filed in 1997, and a RFI report addendum was filed in late 1997. EPA in 1998 advised NMED that the outfall sampling was inadequate. The AGO suggests that in 2002 additional sampling at these PRSs and a report be scheduled soon thereafter.
49	1 1 4 4	49-001(a-g), 49-003, AOC C-49-008(d) (MDA AB, Areas 1, 3, 4, 11, 12)	Investigation Work Plan 4/30/06; Investigation Report 8/31/07.	TA-49 contains the Frijoles Mesa hydronuclear experiment sites. In 1996 NMED determined that MDA AB, PRSs 49-001 (a-g) had high priority; organics had been detected in the regional aquifer in well DT-9, and NMED requested LANL to accelerate the RFI. A stabilization plan for MDA AB was submitted in late 1998, and a best management practices report in 1999. An RFI Report dated August 1997 has been filed for PRSs in Areas 5, 6, 10, and 11. It is not clear why the completion of investigations and submission of reports on them should be delayed beyond 2003.
49	1 1 4 4	49-005(a), 49-006, AOCs C-49-002, C-49-005(b), C-49-008(a, b) (Areas 5, 6, 10)	Investigation Work Plan 3/31/08; Investigation Report 4/30/09.	See the comments on TA-49, above.
50	1 1 4 7	50-009 (MDA C)	Investigation Work Plan 10/31/02; Investigation Report 2/29/04.	TA-50 contains MDA C, PRS 50-009, a major waste disposal area. Drilling pursuant to the RFI Work Plan was conducted in 1995. RFI Reports were filed in 1995 and 1996 concerning PRSs investigated through soil sampling. However, no RFI report and no recommendation as to further action have been submitted concerning MDA C. It should be noted that drilling results contained in materials produced in response to an NMED document demand show significant contamination emanating from MDA C. An RFI report should be completed in 2002-2003 with a recommendation for further action soon thereafter.
53	1 1 0	53-002(a, b)	Investigation Report 4/30/03.	TA-53 contains three surface impoundments. Records of the HWB show that a combined RFI Work Plan and SAP were submitted in 1998 and, after further submittals,

	0			approved in August 2000. Completion of any sampling and analysis and submission of an RFI report should be scheduled for 2002-2003.
54	1 1 4 8	54-004 (MDA H)	Investigation Report Addendum 5/31/02; CMS Report 12/31/02; CMI Plan 12/31/03.	<p>TA-54 contains MDAs G, H, and L. These are RCRA-regulated units, and NMED has required submission and execution of RCRA closure plans. Under the HSWA process, an RFI Report for channel sediment pathways from MDAs G, H, J, and L was filed in 1996. In 1997 RFI Reports were filed on tritium in surface soils at MDA G. An RFI Report concerning MDAs G, H, and L was filed in March 2000.</p> <p>Concerning MDA H, a CMS Plan for MDA H was filed in March 2001, followed by an RFI Report and a Plan for Supplemental Sampling in May 2001. An RFI Report Addendum was scheduled for submission in April 2002 but has not been filed. A monitoring Compliance Demonstration for MDA H was filed in April 2002.</p> <p>NMED should require that RFI reporting concerning MDAs G, H, and L be completed in 2002 and that a CMS be conducted and reports be submitted before the end of 2003.</p>
54	1 1 4 8	54-006 (MDA L)	Investigation Work Plan 2/28/03; Investigation Report 9/30/03; CMS Plan 7/31/04.	<p>See the discussion of MDA H above. In addition a RCRA closure plan was filed in April 2002.</p> <p>NMED should require that RFI reporting concerning MDAs G, H, and L be completed in 2002 and that a CMS be conducted and reports be submitted before the end of 2003.</p>
54	1 1 4 8	54-013(b), 54-014(b-d), 54-015(k), 54-017, 54-018, 54-019, 54-020 (MDA G)	Investigation Work Plan 1/31/03; Investigation Report 7/31/03; Corrective Measures Study Plan 4/31/04.	<p>See the discussion of MDA H above. In addition a RCRA closure plan was filed in April 2002.</p> <p>NMED should require that RFI reporting concerning MDAs G, H, and L be completed in of 2002 and that a CMS be conducted and reports be submitted before the end of 2003.</p>
73	1 0 7 1	73-001(a-d), 73-004(d) (Airport Landfills) (Drainages)	Interim Measures Report 6/31/03.	<p>Concerning the Los Alamos airport landfill sites, PRSs 73-001(a-d) and 73-004(d), a RFI report was submitted by LANL in November 1998 and reviewed by EPA. Since this area is partially open to the public, corrective measures should not be further delayed. A CMS has not been carried out, nor has an implementation plan been prepared. The AGO recommends that sufficient</p>

			planning, risk assessment, and fieldwork, including a CMS and interim measures to reduce the public hazards, be completed in 2002.
73	73-001(a-d), 73-004(d) (Airport Landfill) —Mesa Top	Phase I Investigation Work Plan 9/30/02; Phase II Investigation Work Plan 4/30/04; Investigation Report 12/31/06.	See the discussion of TA-73 drainages above.
73	73-002	Investigation Work Plan 5/31/05; Investigation Report 2/28/06.	See the discussion of TA-73 drainages above.
LA/Pueblo watershed			
R-1		Well Completion Report 12/31/04	This well cannot now be deleted; sufficient if done in FY 04.
R-2		Well Completion Report 12/31/03	To characterize Pueblo Canyon; should be completed by FY 03.
R-3		Well Completion Report 12/31/03	To characterize Pueblo Canyon; should be completed by FY 03.
R-4		Well Completion Report 12/31/03	To characterize Pueblo Canyon; should be completed by FY 03.
R-6		Well Completion Report 12/31/05	To characterize Los Alamos Canyon; should be completed by FY 03.
R-8		Well Completion Report 12/31/02	Should be completed in FY 02.
Mortandad Watershed			
R-13		Well Completion Report 12/31/02	Should be completed in FY 02.
R-14		Well Completion Report 12/31/02	Should be completed in FY 02.
R-16		Well Completion Report 12/31/03	To characterize lower Mortandad Canyon; should be completed in FY 04.
Water Canyon/ Cañon de Valle watershed			

R-23		Well Completion Report 12/31/04	To characterize Potrillo Canyon; should be completed in FY 04.
R-24		Well Completion Report 12/31/04	To characterize upper Cañon de Valle; should be completed by FY 04.
R-26		Well Completion Report 12/31/05	To characterize upper Water Canyon; should be completed by FY 04.
R-27		Well Completion Report 12/31/02	To characterize Water Canyon; should be completed in FY 02.
R-28		Well Completion Report 12/31/04	To characterize Water Canyon; should be completed in FY 03.
R-29		Well Completion Report 12/31/05	To characterize Water Canyon; should be completed in FY 04.
Sandia Watershed			
R-10		Well Completion Report 12/31/03	To characterize Sandia Canyon; should be completed in FY 03.
R-11		Well Completion Report 12/31/02	To characterize Sandia Canyon; should be completed in FY 02.
Pajarito Watershed			
R-17		Well Completion Report 12/31/04	To characterize Twomile Canyon; should be completed in FY 03.
R-18		Well Completion Report 12/31/02	To characterize Pajarito Canyon; should be completed in FY 02.
R-20		Well Completion Report 12/31/02	To characterize Pajarito Canyon; should be completed in FY 02.
R-21		Well Completion Report 12/31/02	To characterize Pajarito Canyon; should be completed in FY 02.
Ancho Watershed			
R-30		Well Completion Report 12/31/03	To characterize the TA-49 sites; should be completed in FY 03.
R-32		Well Completion Report 12/31/05	To characterize Ancho Canyon; should be completed in FY 04.
Ancho/Chaquehui/Indio Canyons		Investigation Work Plan 6/30/05; Investigation Report 2/28/07	The Canyons Core Document calls for completion of a report on Ancho, Chaquehui, and Indio Canyons by December 15, 2003. NMED should require that this date be met.
LA/Pueblo Canyons		Investigation Work Plan Addendum 5/31/03; Investigation Report 7/31/04	The Canyons Core Document calls for reports on reaches in Los Alamos/Pueblo Canyon by May 1998. Some have been filed. NMED should require that such reports be completed within one year of the date of the CAO.
Mortand		Investigation Report	The Mortandad Canyon Work Plan, incorporating the

ad Canyon		1/7/00; Ground Water Investigation Work Plan 3/31/03; Investigation Report 10/31/04	Canyons Core Document, calls for a report by January 7, 2000. Such report has not been filed. We suggest that NMED allow one year from the date of the CAO to complete such report.
North Canyons		Investigation Report 5/31/07	The North Canyons Work Plan, incorporating the Canyons Core Document, calls for a report on Guaje, Bayo, Barrancas, and Rendija Canyons by September 30, 2005. NMED should require that such date be met.
Pajarito Canyon		Investigation Report 3/31/05	The Pajarito Canyon Work Plan, incorporating the Canyons Core Document, calls for a report by December 27, 2000. Such report has not been filed. NMED should allow such report to be filed one year from the date of the CAO.
Potrillo/ Fence Canyons		Investigation Work Plan 7/31/05; Investigation Report 10/31/06	The Canyons Core Document calls for completion of a report on Potrillo and Fence Canyons by November 30, 2004. NMED should require that this date be met.
Sandia Canyon/ Cañada del Buey		Investigation Report 5/31/05	The Sandia Canyon/Cañada del Buey Work Plan, incorporating the Canyons Core document, calls for a report by December 13, 2001. Such report has not been filed. NMED should allow such report to be filed one year from the date of the CAO.
Water Canyon/ Cañon de Valle		Investigation Work Plan 3/31/03; Investigation Report 11/30/04	The Canyons Core Document calls for completion of a report on Water Canyon and Cañon de Valle by January 3, 2003. NMED should allow such report to be filed one year from the date of the CAO.