Department of Energy
National Nuclear Security Administration
Albuquerque Operations Office
Office of Kirtland Site Operations
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. John D'Antonio, Jr., Secretary
Office of the Secretary
New Mexico Environment Department
1190 St. Francis Dr.
P.O. Box 26110
Santa Fe, NM 87502-6110

Dear Mr. D'Antonio:

On behalf of the Department of Energy (DOE) and Sandia Corporation, DOE is providing comments on the draft Order and the Secretary's Determination of an Imminent and Substantial Endangerment to Health and the Environment, issued by the New Mexico Environment Department on September 3, 2002, regarding Sandia National Laboratories, New Mexico, EPA ID No. NM5890110518. As authorized in your letter of September 24, 2002, the comment period for the draft Order has been extended until November 2, 2002.

If you have any questions regarding these comments, please contact Joe Estrada of my staff at (505) 845-5326.

Sincerely,

/S/ November 1, 2002
Michael J. Zamorski
Director

cc w/enclosures:
J. Bearzi, NMED-HWB, Santa Fe
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The National Nuclear Security Administration
Of the United States Department of Energy
And Sandia Corporation
Comments on the September 3, 2002 Draft Order
And Secretary's Determination of an Imminent and Substantial Endangerment
To Health and the Environment
From the New Mexico Environment Department
Regarding Sandia National Laboratories
(November 1, 2002)

Respondents the National Nuclear Security Administration of the United States Department of Energy ("NNSA") and Sandia Corporation ("Sandia") hereby submit comments on the Draft Order and Secretary's Determination of an Imminent and Substantial Endangerment to Health and the Environment regarding Sandia National Laboratories ("SNL" or the "Facility") issued by the New Mexico Environment Department ("Department") on September 3, 2002.

General Comments

A. Both the Draft Order and Secretary's Determination of an Imminent and Substantial Endangerment to Health and the Environment ("Determination") purport that radioactive, hazardous and solid wastes have been released into the environment at the Facility and that such releases "may present an imminent and substantial endangerment to health or the environment." Respondents contend that both the draft Order and Determination are invalid on various grounds, including that they (1) are contrary to the Atomic Energy Act ("AEA"), ch. 1073, 68 Stat. 919 (1954) (codified as amended at 42 U.S.C. §§ 2011 *et seq.* (1994 & Supp. III 1997)), and the Supremacy Clause of the United States Constitution, U.S. Const. Art. VI, cl. 2.; (2) exceed the waiver of sovereign immunity in Section 6001 of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6961(a); (3) exceed the Department's regulatory authority; and (4) are arbitrary, capricious, an abuse of discretion, not supported by substantial evidence in the record, or otherwise not in accordance with law. Respondents operate in compliance with a current and valid RCRA permit covering corrective action at SNL, and no conditions that "may present an imminent and substantial endangerment to health or the environment" exist at the SNL site. Respondents request that the Department eliminate this language from the Order and rescind the Determination.

B. If the Department does not eliminate the "imminent and substantial endangerment" language, Respondents request that the Department remove "current" from the Order wherever it refers to handling, storage, treatment, and disposal of solid or hazardous waste at SNL. Finding of Fact 49 uses the language from the New Mexico Hazardous Waste Act, Section 74-4-13.A verbatim, and thus includes "current" in the statement. Numerous audits by the Department in recent years have concluded that current practices do NOT present any endangerment to human health or the environment.

C. The investigation, cleanup and corrective action requirements described in the draft Order should be incorporated into the Hazardous and Solid Waste Act ("HSWA") Module of the RCRA Part B Operating Permit to be issued to SNL, in lieu of a final Order.

D. As written, the draft Order does not allow two major processes that have been followed by the SNL Environmental Restoration ("ER") Project for a number of years after negotiation and agreement between NNSA, Sandia and the Department. These are the "one-pass process" as instituted through Voluntary Corrective Actions or Voluntary Corrective Measures, and the existing methodologies for human-health and ecological risk assessments. If either or both of these areas are amended per the existing language in the draft Order, significant additional resources and time would be required to complete the ER Project, and the schedules contained in Section XI of the Order would be unattainable. Perhaps more importantly, resources would be diverted from cleanup to documentation, both for NNSA and Sandia and for the Department. Thus, Respondents recommend that the existing processes be included in the Order, and allowed as continuing options for conduct of work. (Pertinent detailed comments are the following: #49, 59, 60, 61, 63, 74, and 75.)

E. The scope of the draft Order needs clarification. The draft Order purports to address long-term environmental stewardship ("LTES") and long-term monitoring. It is the Respondents' understanding, however, that the purpose of the Order was to advance the completion of cleanup. Respondents recommend that the final Order address completion of cleanup activities only. (Also see Comment #42.)

F. At numerous places within the draft Order, the Department stipulates time intervals for the Respondents to create a document, provide responses, and perform other activities. Respondents recommend that the Department add language delineating the length of review intervals for its own activities (e.g., "The Department will review the Investigation Work Plan within 45 days. If written approval or disapproval with comments is not received within that time, the Respondents may proceed with implementation of the investigation."). Such language would help to facilitate cleanup progress by eliminating open-ended parts of the overall process.

G. The draft Order should provide (1) a dispute resolution process, in the event of disagreement concerning items such as sufficiency of deliverables, and (2) a mechanism for revising the deliverables schedule (for example, in the event that an AOC which has yet to be investigated proves to have significant contamination requiring extensive remediation).

H. The mechanism of incorporating new reports into the schedules in Tables XI-2 and XI-3 should be defined in the Order.

I. The Order should include a description of the process used to remove a Solid Waste Management Unit ("SWMU") or Area of Concern ("AOC") from further consideration under the Order.

J. Sections VI and X delineate the format for documents to be submitted pursuant to the Order. Respondents suggest that the language in these Sections be revised so that it is clear that neither the sequence of topics in each Subsection nor the

specific words used for the topics is mandatory as stated. As stated, the lists do not exactly correspond with those used in reports already deemed satisfactory by the Department. Absolute adherence to the lists in Sections VI and X would necessitate rework of a number of existing documents without the benefit of improving the technical content.

K. For completeness, Section X should have sections correlative to X.B through X.F for all deliverable documents required by the Order.

L. For completeness, the Order should state explicitly that requirements for active sites are to be stipulated in the Part B permit (as has been stated verbally by Department staff).

Detailed Comments

1. The list of acronyms is incomplete relative to those used in the text of the document.
2. Section II, p. 3, Finding of Fact 8 – Several corrections should be made to the list of Operating Units ("OUs") in this Finding of Fact. First, OUs 1332, 1333, 1334, and 1335 all need "Test Area" to be appended to their titles. (For example, rather than "Foothills", the title should read "Foothills Test Area".) Also, the Liquid Waste Disposal System (OU 1307) is no longer tracked as a separate OU; instead, work on SWMUs within this OU is performed under OU 1306 (TA-III and V).
3. Section II.A.5, p. 3 – Finding of Fact 9 uses "radioactive wastes", whereas Finding of Fact 11 uses "radionuclide wastes". Either a single term should be used in both places (and throughout the Order), or both terms should be added to the list of definitions in order to clarify the differences.
4. Section II.A.6, p. 4, Finding of Fact 15 – First, "SWMU Site", used in both bullets, is redundant; "Site" should be deleted. Second, the SWMU title in the second bullet is in error; the correct title per Table A.1 in the SNL HSWA Module is "SWMU 154 Bldg. 9960 Septic System". The ensuing text also should be corrected to reflect the correct building number.
5. Section II.A.6, p. 5 – The discussion of the Chemical Waste Landfill ("CWL") should acknowledge that a vapor-extraction Voluntary Corrective Measure has reduced TCE concentrations to below drinking water standards.
6. Section II.A.6, p. 6, Finding of Fact 17 – The description of the Tijeras Arroyo Groundwater ("TAG") setting should state that much of the overlying land surface is Kirtland Air Force Base ("KAFB") property, and, thus, that potential source areas for contaminants are not solely the responsibility of Respondents.
7. Section II.A.7, p. 6, Finding of Fact 18 – KAFB has 8 public-water supply wells, rather than the 12 mentioned in the draft text. Of these wells, several are not in operation.
8. Section II.A.8, p. 6, Finding of Fact 19 – Insert "20" in front of "NMAC".
9. Section II.A.8, p. 7, Finding of Fact 25 – Language reflecting a "HSWA Permit" should be changed to "HSWA Module to the SNL RCRA Part B Operating Permit". Also, the correct effective date is August 26, 1993 and not July 27, 1993.
10. For completeness of the ER Project chronology, add the following Finding of Fact between Findings of Fact 25 and 26: "On October 1, 1994, Respondents

submitted a proposal for NFA for 22 sites (Round 1). The United States Environmental Protection Agency ("EPA") issued a Notice of Deficiency on April 7, 1995 that disapproved 9 of the 22 sites. Currently, 3 of the 22 sites (SWMUs 135, 165, and 195) are not approved for NFA status."

11. For completeness of the ER Project chronology, add the following Finding of Fact between Findings of Fact 29 and 30: "In September 1995, Respondents submitted a RCRA Facility Investigations Report for the Liquid Waste Disposal System, proposing NFA status for three SWMUs (4, 5, 52). The Department issued a Request for Supplemental Information (RSI) in September 1997; another RSI was issued for SWMU 52 in March 2001. All three SWMUs remain unapproved for NFA status."
12. For completeness of the ER Project chronology, add the following Finding of Fact between Findings of Fact 30 and 31: "In March 1996, Respondents submitted a work plan for investigation of VOC-contaminated groundwater in the Sandia North study area. The Department approved the plan in February 1997."
13. For completeness of the ER Project chronology, add the following Finding of Fact between Findings of Fact 31 and 32: "In June 1996, Respondents submitted a RCRA Facility Investigations Report for Technical Areas 3 and 5. Within this report there were NFA proposals for 14 SWMUs. The Department issued a Notice of Deficiency (NOD) on the report on July 31, 1997, and another NOD on March 27, 1998. Currently, 6 of the 14 SWMUs (26, 35, 78, 107, 196, and 241) are not approved for NFA status."
14. Section II.A.8, p. 8, Finding of Fact 32 – The correct date is June 1996 and not June 1997.
15. Section II.A.8, p. 8, Finding of Fact 33 – The last sentence of this Finding is incorrect. A response to the RSI on Building 828 was submitted to the Department in July, 2001. In October, 2001, a letter was received from the Department stating that Building 828 was appropriate for NFA although it remains unapproved pending the Class 3 permit modification process.
16. Section II.A.8, p. 8 – Finding of Fact 40 should be deleted; approval of the Temporary Unit ("TU") is documented in Finding 41.
17. Section II.A.8, p. 9, Finding of Fact 41 – The EPA, rather than the Department, approved the TU.
18. For completeness of the ER Project chronology, the following five Findings of Fact should be added between Findings of Fact 42 and 43: (a) "In July, 1998, Respondents submitted a proposal for NFA for five sites (Round 10). The Department issued an RSI on June 9, 1999 that disapproved 2 of the 5 sites." (b) "In September, 1998, Respondents submitted a proposal for NFA for 9 sites (Round 11). The Department issued an RSI on June 9, 1999 that disapproved 7 of the 9 sites." (c) "In May, 1999, Respondents submitted a proposal for NFA for 5 sites (Round 12)." (d) "In August, 1999, Respondents submitted a proposal for NFA for 7 sites (Round 13). Currently, only 1 of the 7 sites (SWMU 68) has not been approved for NFA status." (e) "In August 1999, the Department approved a work plan for the investigation of VOC-contaminated groundwater in the TA-V groundwater investigation study area."

19. Section II.A.8, p. 9 – As stated in Finding of Fact 48, the Corrective Action Management Unit ("CAMU") is included in the RCRA Part B permit renewal request. Therefore, it is unnecessary and duplicative to require specific deliverables for the CAMU in the draft Order, and such requirements should be removed from the Order.
20. Section II.A.8, pp. 6-10 – The sequence of permitting actions related to the treatment units at the CAMU in the Findings of Fact is incomplete.
21. Section II.B, p. 10 – Delete "Respondent" from Bullet 2; Sandia National Laboratories is the Facility (NNSA and Sandia Corporation are the Respondents).
22. Section III.B, p. 13, definition of "Operable Unit" – The last sentence of the definition should be deleted. Broad, multi-SWMU investigations or remediations have been conducted without regard to any constraints imposed by OU groupings; the basis for the OU construct was primarily for baselining purposes rather than the conduct of technical work.
23. Section III.B, p. 14 – The definition for "Groundwater" has been inadvertently included in the definition for "Facility"; they should be separated.
24. Section III.B, pp. 14 and 15 – The definition of "Groundwater" on p. 14 differs from the definition of "groundwater" from the WQCC Regulations that are defined on p. 15. In particular, the definition in the draft Order would include liquid water in the vadose zone, whereas the WQCC definition excludes vadose-zone water. This discrepancy should be explicitly resolved for clarity in the final Order.
25. Section III.B, p. 15 – In the definition for "Solid Waste Management Unit", "radioactive" should be deleted from the second sentence.
26. Section III.G, p. 17 – "Within 30 days" is generally not enough time to generate a revised work plan or report; Respondents suggest revising this requirement to 60 calendar days.
27. Section III.I, p. 17 – The first sentence of this Section should be revised, in part, to read as follows: "...at reasonable times and in accordance with applicable security requirements...."
28. Section III.I, pp. 17-18 – At the end of the phrase "...to inspect and copy...and other relevant records and documents", the following text should be added: "(such inspection and copying is understood to be subject to normal security restrictions related to classified information; all reasonable efforts shall be made by Respondents to ensure access to such information when necessary)".
29. Section III.I, p. 18, 1st full paragraph – Frequently, the Department has taken its own split samples. It is suggested that the text concerning split samples be revised to state that such sampling will be conducted either by the Department or by the Respondents.
30. Section III.I, p. 18, first two full paragraphs – In the interest of expediting work, written notification of field sampling or corrective action activities to the on-site staff of the Hazardous Waste Bureau ("HWB") rather than to the HWB in Santa Fe should be sufficient. (Even more efficiency would be gained if these 15-day notifications were replaced by a general requirement for written submission of schedules on a monthly or quarterly basis.)

31. Section III.K, p. 18 – It is unclear whether the "completion of the corrective action for the entire Facility" (which starts the 25-year clock for records retention) is synonymous with the date on which the Department states in writing that all of the requirements of the Order have been met (per Section III.D). This should be clarified in the final Order.
32. Section III.L, p. 19 – In the third paragraph, the following text should be deleted as duplicative and unnecessary: "...and to require that the Respondents perform tasks in addition to those required by this Order". First, the Department already has the authority to mandate such tasks. More importantly, if the Department determines that the Order is incomplete, it should be modified to include the task rather than creating a path for open-ended, informal imposition of requirements.
33. Section III.L, p. 19, paragraph beginning "This Order is not a permit..." – To avoid confusion, the Department should state whether the Order or a permit (and particularly the Part B permit) would have precedence in the event of conflicting regulatory requirements on SNL. This highlights the desirability of working through the existing permit process to effect any additional monitoring, investigation or cleanup requirements, rather than attempting to impose additional requirements via an Order.
34. Section III.R, p. 20, 2nd and 3rd paragraphs – The Facility's comment periods are of different lengths in these two paragraphs. According to 20 NMAC 4.1 900 incorporating by reference 40 CFR 270.42, a 60-day comment period must be provided.
35. Section III.R, pp. 20-21, general – This Section should be clarified to distinguish requirements from recommendations or descriptions. For example, if it is a requirement for the Facility to issue public notice of a proposed Permit Modification, the text in the second paragraph of the Section should read, in part, "...a notice shall be issued through local newspapers...."
36. Section IV.B, p. 22 – In the first numbered list, "Tijeras Arroyo" should be changed to "Tijeras Arroyo Groundwater".
37. Section IV.D, p. 23 – The stipulated topics for consideration for the CWL Corrective Measures Evaluation ("CME") include long-term monitoring and site controls. Two aspects of this merit comment. First, Section X.F on CME Reports does not mention either long-term monitoring or site controls, which is an inconsistency between the two sections. Second, it has been understood by Respondents that it is inappropriate to define specifics for either long-term monitoring or site controls until covenants legislation is passed by the New Mexico legislature. The draft Order has a delivery date of 5/31/2003 for the CWL CME Report; this date is incompatible with the availability of legislative language related to covenants (and, thus, to institutional control measures).
38. Section IV.D, p. 24 – The last sentence of the Section requires submittal of the Post-Closure Care Application in accordance with the schedule in Section XI. However, this document is not included in Section XI. Furthermore, it is not clear whether the Post-Closure Care Application is the same as the Post-Closure Care Plan (which also is not mentioned in Section XI, but is mentioned earlier in Section IV.D).

39. Section IV.F, p. 24 – The first paragraph should include a statement that, although the permit expired September 20, 2002, submission of a substantially complete renewal application effectively extends the existing permit until such time that the renewed permit is issued.
40. Section IV.F, p. 24 – The second paragraph should recognize the initiation of treatment at the CAMU in September 2002. (In general, this discussion of permitting of treatment units at the CAMU should be enhanced for completeness.)
41. Section IV.G, p. 24 – The 15-day extension option is too short. Respondents suggest that this time interval not be specified in the Order, but rather that the option of requesting extension be stated without a specification of time.
42. Section IV.H, p. 25 – Respondents believe that the general intent of the draft Order is to facilitate timely and effective cleanup of SWMUs and AOCs for which Respondents are responsible. Organizationally, such cleanup is the responsibility of the ER Project. In contrast, LTES activities will become the responsibility of the Facility's landlord organization after the completion of the ER Project and termination of ER funding. Thus, Respondents suggest that the scope of the Order be limited to ER activities and that any requirements pertaining to LTES, including this Section, be deleted from the Order.
43. Section V, p. 26 – "Within 15 days" and "within 60 days" should be amended to indicate whether these are calendar or business days.
44. Section VI.A, p. 27 – The fourth sentence should be reworded as follows: "An individual work plan may cover several SWMUs or AOCs." (Per Comment #22, an OU may not form a reasonable grouping for efficient accomplishment of technical work.)
45. Section VI.B, p. 27 – For consistency with Section III.I, notification should be "written notification". In addition, per Comment #30, notification to on-site Department staff should be sufficient to meet this requirement.
46. Section VI.C, p. 27, 2nd sentence – Same comment here as for Comment #44.
47. Section VI.D, p. 27 – "Within 90 days" should be amended to specify either calendar or business days.
48. Section VI.E, p. 27 – In the first sentence, text should read "Respondents shall prepare a Corrective Measures Implementation Plan for the remedy approved by the Department, then shall implement the remedy upon approval of the Plan by the Department. In addition, the second sentence uses "corrective measures completion report", whereas Table XI-2 uses "Corrective Measures Implementation Report" – the inconsistency should be resolved.
49. Section VI, p. 27 – Respondents suggest that a new Section be added, with text as follows, adopting the existing "one-pass" process when it is appropriate for a SWMU or AOC:

VI.F VOLUNTARY CORRECTIVE ACTIONS/MEASURES

At any time, if the Respondents identify a corrective action or measure that, if implemented voluntarily, would reduce impacts to human health and the environment, reduce cost and/or reduce overall schedule, the Respondents may implement the corrective action or measure as provided in this Section, in lieu of the process established in Sections VI.A through VI.E.

The proposed corrective action/measure will be documented in a Voluntary Corrective Action Plan or Voluntary Corrective Measure Plan, which shall include: (1) a description of the remediation initiative, including the details of the unit or activity that is subject to the requirements of this Order; and (2) an explanation of how the proposed action is consistent with the overall corrective action objectives and requirements. The Respondents shall notify the Department of the planned action/measure a minimum of 15 calendar days prior to the commencement of any voluntary field activity; the notification shall include the submittal of the Plan. The Department may screen the Plan to ensure that it would not pose unacceptable risks to human health and/or the environment. Within 90 calendar days after completion of the voluntary corrective action/measure, the Respondents shall submit to the Department a Remedy Completion Report, as specified in Section VII.E.6.a.

Together with the above change, definitions of Voluntary Corrective Action Plan and Voluntary Corrective Measure Plan (from 20.4.2.107 NMAC) should be added to the definition list.

50. Section VI.F, p. 28 - "Within 90 days" should be amended to specify either calendar or business days.
51. Section VI.F, p.28 – This Section should explicitly recognize the possibility that, in some circumstances, the initiation of emergency interim measures might be warranted prior to written approval.
52. Section VI.G, p. 28 - "Within 90 days" should be amended to specify either calendar or business days.
53. Section VII.A, p. 29 – This Section is unnecessary. The Section itself notes that erosion-control requirements are imposed by other statutes and regulations. As pertinent, the final sentence of the Section could be included elsewhere in the Order for emphasis as an alternative to this stand-alone Section. (If the Department decides to retain the Section, "used" should be deleted from the first sentence, because the Facility uses many roads owned and maintained by KAFB, and has no authority to implement, or responsibility for, erosion controls on those roads.)
54. Sections VII.B.2 through VII.B.6 are largely duplicative of Sections VI.F and VI.G. Because the detail for Interim Measures is contained in Section VII, the text in Section VI should be reduced or eliminated, and a reference to Section VII should be added.
55. Section VII.B.2, p. 29 - "Within 90 days" should be amended to specify either calendar or business days.
56. Section VII.B.5, p. 30 – This Section should contain a provision for implementation of an emergency interim measure by the Respondents prior to receipt of written approval from the Department, should the situation reasonably appear to be one in which waiting for written approval before implementation would greatly increase the potential harm to human health or the environment. Verbal approval prior to initiation of emergency measures should be sufficient.
57. Section VII.B.6, p. 30 - "Within 90 days" should be amended to specify either calendar or business days.

58. Section VII.C, p. 30 – The heading should be changed to "Risk Assessment", and similar changes should be made wherever "risk analysis" is used in the Order.
59. Section VII.C.1, p. 30 – The following text in the first sentence should be amended: "...or attain the cleanup goals outlined in ...*(March 2000)*". The risk-assessment methodology currently used by the ER Project (including input parameters and pathways), which was negotiated with, and approved by, the Department, is not entirely consistent with the Department's Position Papers. Rigid adherence to those Papers would invalidate all risk assessments performed to date; the resulting rework would severely impair the ability of the ER Project to focus resources on completion of required fieldwork (investigations and cleanups).
60. Section VII.C.2.a, p. 31 – The final paragraph of this Section should allow reference to the blanket document *Predictive Ecological Risk Assessment Methodology, Environmental Restoration Program, Sandia National Laboratories, New Mexico* rather than requiring a full description of the conceptual site model for ecological risk assessment for each SWMU individually.
61. Section VII.C.2.b, p. 31 – Text of this Section should be amended to account for the existing screening process used by the SNL ER Project. This process has previously been approved by the Department, and does not include use of the Department's soil screening levels ("SSLs") for residential soil. Prescriptive requirements to include SSLs in the process would add work to future risk assessments (as well as potentially adding a large amount of rework for past risk assessments for consistency) without changing the conclusions of the risk assessments, which are based on quantitative calculations of risks which are more detailed than screening comparisons.
62. Section VII.D.1, p. 32 – "...at a site..." and "...at the site..."should be changed to "...at a SWMU or AOC..." and "...at the SWMU or AOC...", respectively.
63. Section VII.D.1, p. 32 – This Section does not allow for implementation of a simple and/or presumptive remedy at a SWMU or AOC. (For example, if characterization sampling indicated that excavation of a very small amount of soil would eliminate a "hot spot" and effectively remediate a SWMU, the draft Order would still require a complete CME.) Text should be added to differentiate between SWMUs or AOCs requiring a CME and those for which simple, expedited solutions are reasonable.
64. Section VII.D.2, p. 32 - "Within 90 days" should be amended to specify either calendar or business days.
65. Section VII.D.2, p. 32 – "Site" should be replaced by "SWMU or AOC" in the numbered list.
66. Section VII.D.7, p. 35 – The first phrase should be revised to read "Upon approval of the Corrective Measures Evaluation Report,".
67. Section VII.D.7, p. 35 – "...for 60 days..." and "...within 90 days..."should be amended to specify either calendar or business days.
68. Section VII.E.2, p. 35 - "Within 90 days" should be amended to specify either calendar or business days.

69. Section VII.E.2, p. 36, Point 8 (top of page) – Similar to Comment #37, this requirement may rely in part on covenants legislation that has yet to be promulgated by the NM legislature (depending on the time frame over which monitoring for remedy performance may be required). Explicit recognition of this possibility is recommended.
70. Section VII.E.4, p. 36 – "Plan" should be deleted from the Section title.
71. Section VII.E.6.a, p. 36 - "Within 90 days" should be amended to specify either calendar or business days.
72. Section VII.E.6.a, p. 37 – Points 2 and 3 at the top of the page implicitly assume that the implemented remedy is one for which the services of a professional registered engineer would be required. However, there are a number of simple remedies which might be preferred and which do not require engineering design or construction. Thus, these two Points should be caveated with "as appropriate".
73. Section VII.E.6.b, p. 37 – The function of a Certification of Completion is unclear. Any difference from an NFA determination should be clarified.
74. Section VII.F, p. 37 – The following text should be added to the end of this paragraph: "Alternatively, ecological risk assessements may be performed in accordance with the methodologies detailed in *Predictive Ecological Risk Assessment Methodology, Environmental Restoration Program, Sandia National Laboratories, New Mexico*, as previously approved by the Department."
75. Section VII.G, pp. 37-38 – See Comments #59 through #61.
76. Section VIII.A, p. 39 – The Order should state whether the justification for selection of drilling method that must be provided to the Department is to be verbal or written. In addition, a schedule for submittal of the justification relative to actual drilling is not provided. Finally, it is not clear whether the Department must approve the method prior to implementation. All of these points should be clarified.
77. Section VIII.A, p. 39 – The last paragraph on the page states, in part, that groundwater wells must be designed and constructed to "...last the duration of the project...." Currently, the Department has not allowed screened intervals to be longer than 20 feet, yet water levels are declining as much as 2 feet per year. This combination makes it unlikely that the Respondents can meet the requirement that wells last for the duration of the project. Furthermore, "project" is undefined. Table XI-1 indicates no end dates for groundwater monitoring, so that there is no time interval to be used in defining what "duration" the wells must last.
78. Section VIII-C, p. 40 – Additional criteria for well abandonment should be added to the first sentence; these criteria should allow for the possibilities of the water level dropping below the bottom of the well screen or of a decline in yield in a well such that meaningful or representative samples cannot be obtained.
79. Section VIII.C, p. 40 – It is not clear whether the Department needs to provide written approval for well abandonment before the abandonment can proceed. If so, it should be made explicit in the text.
80. Section VIII.D, pp. 40-41 – Three changes to the numbered list are suggested: (a) In Bullet 2, delete the "time" of well construction. (b) In Bullet 4, add "/Name of driller". (c) Add an additional bullet as follows: "Name of geologist".

81. Section IX.A, p. 42 – "...or in accordance with sampling and analysis plans approved by the Department..." – if the Department is going to approve such plans, criteria for their content, as well as the mechanism of Department response (e.g., written or verbal approval or disapproval), need to be stipulated in the Order.
82. Section IX.A, p. 42 – "All requests for variances from the groundwater sampling schedule..." – The mechanism of Department approval (or disapproval) of such requests should be addressed explicitly.
83. Section IX.A, p. 42 – The last sentence of the first paragraph requires collection of groundwater samples from all saturated zones encountered in any exploratory borings. However, groundwater samples collected from anything but a properly constructed and developed monitoring well are not representative of natural conditions. Respondents request that this requirement be deleted.
84. Section IX.A, p. 42 – In the second paragraph of the Section, text reads "...in accordance with an approved plan or in accordance with the EPA Technical Enforcement Guidance Document..." Respondents have received written Department approval for groundwater investigation plans for Tijeras Arroyo Groundwater and TA-V Groundwater investigations, both of which contain provisions for low-flow sampling. Verbal direction from on-site Department staff contradicts approved procedures in those plans. The Order should explicitly address the mechanism for resolving discrepancies between formal written approvals and informal verbal directions, both originating from the Department.
85. Section IX.A, p. 42 - Exclusion of reference to the Department's Position Paper on low-flow groundwater sampling from this paragraph suggests exclusion of low-flow sampling at the Burn Site and at the Mixed Waste Landfill; the Department's intent relative to this topic should be made explicit.
86. Section IX.B, p. 42 - Suggest deleting "...from all zones..." from the first sentence; all SNL monitoring wells are screened across only one water-bearing zone.
87. Section IX.B, p. 42 – This Section allows for sampling in accordance with the Department's Position Paper on low-flow groundwater sampling. However, that Position Paper allows the Department's on-site representative considerable latitude in defining certain aspects of the sampling. The Order should acknowledge that compliance with direction from the Department's on-site representative satisfies the requirements of this Section. All such sampling requirements imposed by the on-site representative in accordance with the Position Paper and for the purposes of clarifying the Position paper should be provided in writing, should be consistent both with Respondents' practices at all areas of groundwater contamination and with Department practices for other facilities, and should be clarified when there is a potential for confusion or conflict with previous directions from the Department [e.g., the prior approvals mentioned in Comment #84].)
88. Sections IX.A and IX.B, p. 42 – Both of these sections contain references to OSWER-9950.1, the EPA Technical Enforcement Guidance Document. However, this is not the most recent guidance document; it has been updated by EPA/530-R-93-001 (November, 1992), as cited on p. 39 of the draft Order. The cover of the

more recent EPA document explicitly states that it is an update to the Technical Enforcement Guidance Document; thus, the draft Order should be updated to cite only the more recent guidance.

89. Section X.A, p. 43 – The requirement for "...one electronic copy..." may not be possible to satisfy for some figures and attachments. It is suggested that the following text be added to the end of the sentence: "...unless an alternative arrangement is made with the Department before submittal."
90. Section X.C, p. 44 – "...during a site investigation..." should be replaced by "...during investigation of a SWMU or AOC...."
91. Section X.D, p. 45 – No schedule is stipulated for submittal of these periodic monitoring reports. Also, the fourth sentence cannot be implemented as written. The following revision is suggested: "All relevant monitoring and sampling data received by the Facility during the reporting period shall be included in the reports." (Because there is a time lag between sampling and receipt of data, a sampling event may occur during a reporting period but the data may not be available until the following reporting period.)
92. Section X.E, p. 46 – "...sites..." should be replaced with "...SWMUs or AOCs...." Also, in the fifth line of the first paragraph, "...Risk Analysis report..." should be replaced by "...Risk Assessment report..." for consistency with the Section title.
93. Section X.E., p. 46 – It should be explicit in this section that Risk Assessment Reports can be appended to, or combined with, CME or Investigation Reports to create a single final document for a given SWMU or AOC.
94. Section XI, p. 48 – This text incorrectly refers to the Tables using the prefix "XII".
95. Table XI-1, p. 49 – For the new wells for the Chemical Waste Landfill, "generally" should be replaced by "quarterly".
96. Table XI-1, p. 49 – For Tijeras Arroyo Groundwater, a "Characterization Plan" is mentioned. However, nowhere else in the document is such a plan described. If this is the CME mentioned for areas with groundwater contamination in Section IV.B, it should be made clear.
97. Table XI-1, p. 49 – It is suggested that all new wells for TA-V and the Burn Site follow the same logic as for the Mixed Waste Landfill, with quarterly sampling for eight quarters followed by reduction in frequency to semi-annual or annual sampling.
98. Table XI-1, p. 49 – Stopping criteria, criteria for making changes to sampling frequency and/or analytes, or processes for defining such criteria should be included in the Order relative to groundwater monitoring. As written, there is no mechanism for ending any monitoring, changing the frequency or type of monitoring at any location, or transitioning a monitoring program to be the responsibility of an LTES program.
99. Table XI-2, p. 50 – For SWMU 76, Respondents request that the due date for the Corrective Measures Evaluation Report be changed from January 15, 2003 to February 28, 2003 to accommodate the time necessary to complete the independent review by the WERC team.

100. Table XI-2, p. 54 – For SWMU 1, Respondents request that the due date for the Corrective Measures Investigation Report be changed from December 31, 2002 to March 31, 2003 to accommodate data validation needs not addressed when the original NFA proposal was submitted.
101. Table XI-2, p. 55 – For SWMU 26, the Department transmitted a letter on 3/14/2002 stating that the SWMU was appropriate for NFA. Thus, "Investigation Report" should be changed to "Meets Residential Risk", and "December 31, 2002" should be changed to "NA".
102. Table XI-2, p. 55 – For SWMU 35, the Department transmitted a letter on 3/5/2002 stating that the SWMU is appropriate for NFA. Thus, "Investigation Report" should be changed to "Meets Residential Risk" and "June 30, 2005" should be changed to "NA".
103. Table XI-2, p. 55 – For SWMU 196, Respondents request that the deliverable date be changed from March 31, 2005 to September 30, 2005 to match the baseline plan.
104. Table XI-2, p. 56 – For SWMU 45, Respondents request that the deliverable date be changed from December 31, 2003 to December 31, 2004 to match the baseline plan to address SWMUs 45 and 46 jointly.
105. Table XI-2, p. 56 – For SWMU 227, Respondents request that the deliverable date be changed from March 31, 2004 to March 31, 2003 to match the baseline plan.
106. Table XI-2, p. 56 – For SWMU 229, Respondents request that the deliverable date be changed from March 31, 2004 to March 31, 2003 to match the baseline plan.
107. Table XI-2, p. 57 – For Building 828, the Department indicated in October 2001 that this AOC was appropriate for risk-based NFA under industrial land use. Thus, "Investigation Report" should be changed to "Meets Industrial Risk" and "March 31, 2004" should be changed to "NA".
108. Table XI-2, p. 57 – "NFS" should be "Site 277". This SWMU was approved for NFA through the Class 3 permit modification process in November 2001 and should be removed from the Order.
109. The changes described in Comments #100 through 108 should also be incorporated into Table XI-3.
110. The deliverable for CAMU closure is a "report" in Table XI-2 and a "plan" in Table XI-3; the discrepancy should be resolved. Respondents request that the deliverable date for this document be changed from "December 31, 2003" to "March 31, 2004" to match the baseline plan.
111. Table XI-3, p. 65 – See Comment #42.
112. Table XI-3 – The entries in this table do not match those in Table XI-2 one-to-one. Because dates in Table XI-2 match those planned by SNL (with the exceptions noted in Comments #99, 100, 103, 104, 105 and 106), Table XI-3 should be cross-checked against Table XI-2.