



National Nuclear Security Administration
Sandia Site Office
P.O. Box 5400
Albuquerque, New Mexico 87185-5400

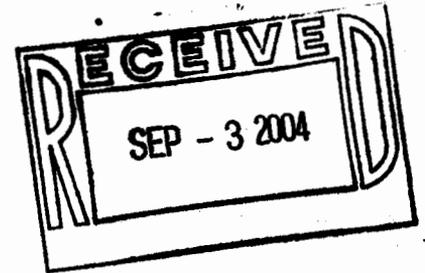
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

AUG 31 2004

Mr. James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Road East,
Building 1
Santa Fe, NM 87505



Dear Mr. Bearzi:

On behalf of the Department of Energy (DOE) and Sandia Corporation, DOE is responding to the New Mexico Environment Department (NMED) letter of July 12, 2004, Second Notice of Deficiency (NOD): Response to Comments on December 17, 2003 NMED Notice of Deficiency, Post-Closure Care Plan for the Corrective Action Management Unit (CAMU), Technical Area 3, Sandia National Laboratories/New Mexico, Environmental Restoration Project, March 2004, HWB-SNL-03-025. The CAMU is authorized under the Hazardous and Solid Waste Amendments Module of the Resource Conservation and Recovery Act Permit for Sandia National Laboratories/ New Mexico (EPA ID No. NM5890110518).

The response to the initial NOD on the CAMU Post Closure Care Plan (PCCP) was transmitted on April 9, 2004. The second NOD issued on July 12, 2004 identified a number of outstanding issues related to our NOD responses. In Enclosure 1, we have prepared responses to each of the comments identified in the second NOD.

We have also prepared, for NMED review and approval, page changes for the PCCP, dated August 2004, which incorporate NMED comments (Enclosure 2). The page changes are formatted with redline/strikeout text to identify changes to the March 2004 PCCP. Changes to two figures are presented in both redline/strikeout and normal view to aid review. Upon NMED approval, we will prepare and transmit a final version of the PCCP incorporating these changes.

As noted in your December 17, 2003 letter, the DOE requests that, upon NMED approval, the CAMU PCCP replace in its entirety the current operating permit and conditions specified in the Class III Permit Modification Request for Management of Hazardous Remediation Waste in the Corrective Action Management Unit, Technical Area III, September 1997, Reprinted June 2002, and concurrently replace the CAMU portion of the Part B permit renewal application submitted to the NMED in February 2002.



Mr. J. Bearzi

2

AUG 31 2004

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

Sincerely,



Patty Wagner
Manager

Enclosures

cc w/enclosures:

W. Moats, NMED-HWB (via Certified Mail)
J. Kieling, NMED-HWB, Santa Fe
L. King, USEPA, Region VI (via Certified Mail)
M. Gardipe, NNSA/SC/ERD
M. Reynolds, NNSA/SSO, MS 0184
C. Voorhees, NMED-OB, Santa Fe
D. Bierley, NMED-OB

cc w/o enclosures:

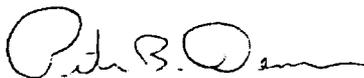
F. Nimick, SNL, MS 1089
D. Miller, SNL, MS 1088
C. Wood, SNL, MS 1087
D. Fate, SNL, MS 1089
M. J. Davis, SNL, MS 1089
A. Blumberg, SNL, MS 0141

CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

Document title: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care
Plan Report, August 2004

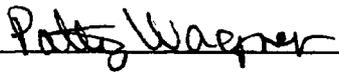
Document author: Craig Wood, Dept. 6328

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature: 
Peter B. Davies
Director
Geoscience & Environment Center
Division 6100
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185
Operator

8/25/04
Date

and

Signature: 
Patty Wagner
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Owner and Co-Operator

8-27-04
Date

Bachicha, Mary E

From: Cardoza, Jessica I
Sent: Tuesday, September 07, 2004 9:12 AM
To: Bachicha, Mary E
Cc: Otero, Janelle Y
Subject: FW: R&A Request - 5225243

-----Original Message-----

From: Review-and-Approval@sandia.gov [mailto:Review-and-Approval@sandia.gov]
Sent: Tuesday, September 07, 2004 9:05 AM
To: jicardo@sandia.gov
Subject: R&A Request - 5225243

Hello,

Your Review and Approval request for document number 5225243, titled "Response to Comments NMED Second NOD July 12, 2004", has been approved and assigned the following SAND Number: ~~2004-4433P~~. You may follow the link below for further information.

[View Request for Review and Approval](#)

If you experience difficulty accessing the above link, please go to <https://cfwebprod.sandia.gov/cfdocs/RAA/templates/index.cfm> and find the document number in the appropriate Approvals section. Please do not reply to this email, as it is auto-generated. Contact CCHD at 845-CCHD (2243) for further support.

Thank You



Sandia National Laboratories

Operated for the U.S. Department of Energy by
Sandia Corporation
P.O. Box 5800 / MS-1088
Albuquerque, New Mexico 87185-1088

date: August 24, 2004

to: Peter B. Davies, MS-0701 (6100)

David R. Miller for

from: Francis B. Nimick, MS-1089 (6101)

subject: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care Plan, August 2004

Enclosed please find a response to the NMED letter of July 12, 2004, Second Notice of Deficiency (NOD): Response to Comments on December 17, 2003 NMED Notice of Deficiency, Post-Closure Care Plan for the Corrective Action Management Unit (CAMU), Technical Area 3, Sandia National Laboratories/New Mexico, Environmental Restoration Project, March 2004, HWB-SNL-03-025. The response to the initial NOD on the CAMU Post Closure Care Plan (PCCP) was transmitted on April 9, 2004. The second NOD issued on July 12, 2004 identified a number of outstanding issues related to our NOD responses. We have prepared responses to each of the comments identified in the second NOD (Enclosure 1). We have also prepared, for NMED review and approval, page changes for the PCCP, dated August 2004, which incorporate NMED comments (Enclosure 2). Upon NMED approval, we will prepare and transmit a final version of the PCCP incorporating these changes.

Please review these documents and provide the necessary approval on the signature sheet. If you have questions or concerns, feel free to call David Miller at 284-2574.

Thank you.

Copy to (w/o attachments):

MS-1089	Fran Nimick, 6101
MS-1088	David Miller, 6134
MS-1087	Craig Wood, 6328
MS-1089	Dick Fate, 6135
MS-1089	M. J. Davis, 6135
MS-1088	ESHSEC Records Center, 6134



Sandia National Laboratories

Operated for the U.S. Department of Energy by
Sandia Corporation

Peter B. Davies
Director, Geoscience & Environment Center

P.O. Box 5800
Albuquerque, NM 87185-0701

Phone: (505) 844-3072
Fax: (505) 844-0591
Internet: pbdavie@sandia.gov

AUG 25 2004

Ms Patty Wagner
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
P.O. Box 5400
Albuquerque, New Mexico 87115

Dear Ms. Wagner:

Subject: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care Plan, August 2004

Enclosed please find a response to the NMED letter of July 12, 2004, Second Notice of Deficiency (NOD): Response to Comments on December 17, 2003 NMED Notice of Deficiency, Post-Closure Care Plan for the Corrective Action Management Unit (CAMU), Technical Area 3, Sandia National Laboratories/New Mexico, Environmental Restoration Project, March 2004, HWB-SNL-03-025. The response to the initial NOD on the CAMU Post Closure Care Plan (PCCP) was transmitted on April 9, 2004. The second NOD issued on July 12, 2004 identified a number of outstanding issues related to our NOD responses. We have prepared responses to each of the comments identified in the second NOD (Enclosure 1). We have also prepared, for NMED review and approval, page changes for the PCCP, dated August 2004, which incorporate NMED comments (Enclosure 2). Upon NMED approval, we will prepare and transmit a final version of the PCCP incorporating these changes.

If you have any questions, please contact David Miller of my staff at 284-2574.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter B. Davies".

Attachment

MS 0184 J. Estrada, NNSA/SSO
Mike Gardipe, NNSA/SC/ERD

Copy to:

MS 0701 P. Davies, 6100

MS 1089 F. Nimick, 6101

MS 1088 D. Miller, 6134

MS 1089 D. Fate., 6135

MS 1089 M. J. Davis, 6135

MS 1087 C. Wood, 6328

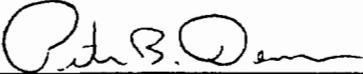
MS 1088 ESHSEC Records Center, 6134

CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

Document title: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care
Plan Report, August 2004

Document author: Craig Wood, Dept. 6328

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature: 
Peter B. Davies
Director
Geoscience & Environment Center
Division 6100
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185
Operator

8/25/04
Date

and

Signature: _____
Patty Wagner
Manager
U.S. Department of Energy
National Nuclear Security Administration
Sandia Site Office
Owner and Co-Operator

Date

SIGNED STATEMENTS OF PERSONNEL PRODUCING, REVIEWING, AND RECOMMENDING APPROVAL OF A DOCUMENT

Document title: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care Plan Report, August 2004

Document author: Craig Wood, Dept. 6328

Preparation Certification:

By my signature, I certify that I have directed the preparation or served as the author of the attached document. I understand that Sandia policy is to provide true, accurate, and complete information. To the best of my knowledge and belief, the document meets that policy.

<u>Craig Wood</u> Signature of author Craig Wood	<u>06328</u> Department	<u>8/24/04</u> Date	_____ Signature of project leader (If different than author)	_____ Department	_____ Date
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Technical/Content Review Certification (if deemed applicable):

By my signature I certify that I have reviewed the attached document for technical adequacy and/or presentation of content. I understand that Sandia policy is to provide true, accurate and complete information. To the best of my knowledge and belief, the portion of material reviewed by me meets that policy.

<u>M.J. Davis</u> Signature of reviewer M.J. Davis	<u>06135</u> Department	<u>8/24/04</u> Date	_____ Signature of reviewer	_____ Department	_____ Date
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_____ Signature of reviewer	_____ Department	_____ Date	_____ Signature of reviewer	_____ Department	_____ Date
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Legal Review Certification:

By my signature, representing legal counsel for Sandia National Laboratories/New Mexico, I certify that I have reviewed or directed the review of and approve the attached document for legal sufficiency. I understand that Sandia policy is to provide true, accurate and complete information. To the best of my knowledge and belief, the document meets that policy.

<u>See attached</u> Signature of reviewer Amy Blumberg	<u>11100</u> Department	_____ Date
--	----------------------------	---------------

AOP 95-45, 06

SIGNED STATEMENTS OF PERSONNEL PRODUCING, REVIEWING, AND RECOMMENDING APPROVAL OF A DOCUMENT

Document title: Response to 2nd Notice of Deficiency, CAMU Post-Closure Care Plan, August 2004

Document author: Craig Wood, Dept. 7132

Preparation Certification:

By my signature, I certify that I have directed the preparation or served as the author of the attached document. I understand that Sandia policy is to provide true, accurate, and complete information. To the best of my knowledge and belief, the document meets that policy.

_____ Signature of author	_____ Department	_____ Date	_____ Signature of project leader (If different than author)	_____ Department	_____ Date
------------------------------	---------------------	---------------	--	---------------------	---------------

Technical/Content Review Certification (if deemed applicable):

By my signature I certify that I have reviewed the attached document for technical adequacy and/or presentation of content. I understand that Sandia policy is to provide true, accurate and complete information. To the best of my knowledge and belief, the portion of material reviewed by me meets that policy.

_____ Signature of reviewer	_____ Department	_____ Date	_____ Signature of reviewer	_____ Department	_____ Date
--------------------------------	---------------------	---------------	--------------------------------	---------------------	---------------

_____ Signature of reviewer	_____ Department	_____ Date	_____ Signature of reviewer	_____ Department	_____ Date
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Legal Review Certification:

By my signature, representing legal counsel for Sandia National Laboratories/New Mexico, I certify that I have reviewed or directed the review of and approve the attached document for legal sufficiency. I understand that Sandia policy is to provide true, accurate and complete information. To the best of my knowledge and belief, the document meets that policy.

 Signature of reviewer	<u>11100</u> Department	<u>8/24/04</u> Date
---	----------------------------	------------------------

Approval Recommendation:

By my signature I certify that the author and technical reviewers of the document are qualified, and that the process defined in AOP95-45, Revision 6, "Review and Approval of Regulatory Deliverables" has been followed. I understand that Sandia policy is to provide true, accurate and complete information to all government regulators. To the best of my knowledge and belief, based upon the process followed and my inquiry of the person(s) responsible for overseeing the implementation of that process, the document meets that policy.

David R. Miller
Signature of department manager
David R. Miller

06134
Department

8/25/04
Date



Approval Recommendation:

By my signature I certify that I am responsible for ensuring that the attached document was prepared in accordance with the process defined in AOP95-45, Revision 6, "Review and Approval of Regulatory Deliverables". I understand that Sandia policy is to provide true, accurate and complete information to all government regulators. To the best of my knowledge and belief, based upon the process followed and my inquiry of the person(s) responsible for overseeing the implementation of that process, the document meets that policy. Furthermore, I agree that the Center accepts responsibility for meeting any commitments made in the attached document.

Peter B. Davies
Peter B. Davies
Director
Geoscience & Environment Center
Division 6100
Sandia National Laboratories/New Mexico
Albuquerque, New Mexico 87185
Operator

8/25/04
Date

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

**Ms. James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Road East
Building 1
Santa Fe, NM 87505**

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

Sincerely,

**Patty Wagner
Manager**

cc w/enclosures:

W. Moats, NMED (via Certified Mail)
J. Kieling, NMED
L. King, USEPA, Region VI (via Certified Mail)
M. Gardipe, NNSA/SC/ERD
M. Reynolds, NNSA/SSO, MS 0184
C. Voorhees, NMED-OB, Santa Fe
D. Bierley, NMED-OB-DOE

cc w/o enclosures:

J. Estrada, NNSA/SSO, MS 0184
F. Nimick, SNL, MS 1089
D. Miller, SNL, MS 1088
C. Wood, SNL, MS 1087
D. Fate, SNL, MS 1089
M. J. Davis, SNL, MS 1089
A. Blumberg, SNL, MS 0141

ENCLOSURE 1

RESPONSE TO COMMENTS NEW MEXICO ENVIRONMENT DEPARTMENT (NMED) SECOND NOTICE OF DEFICIENCY JULY 12, 2004

Comments by the Permits Management Program, Hazardous Waste Bureau, NMED
for
U.S. Department of Energy (DOE) / Sandia National Laboratories (SNL)
Response to December 17, 2003 NMED Notice of Deficiency for
Post-Closure Care Plan (PCCP) for the Corrective Action Management Unit (CAMU)
Technical Area 3
March 2004

Comments and Responses August 2004

1. Revised Post Closure Care Plan (PCCP), List of Figures, page 6, Figure 2-14 – The title of Figure 2-14 is shown as “CAMU Containment Cell Area Boundary and Access Point.” The actual Figure 2-14 is entitled “Post-Closure Perimeter Boundary for the CAMU Containment Cell Area.” Correct this discrepancy.

Response: The title for Figure 2-14 in the List of Figures has been revised as requested.

2. Revised PCCP, Section 1.0, page 17, 3rd paragraph, 1st sentence – This sentence states “Post-closure care began on October 7, 2003, and will continue for 30 years after that date.” Add the following to the end of this sentence: “...unless the Secretary of the NMED determines that the post-closure care period needs to be extended pursuant to 20.4.1.500 NMAC, incorporating 40 CFR 264.117(a)(2)(ii).”

Response: The sentence has been revised as requested.

3. Revised PCCP, Section 3.4, page 27, 2nd paragraph (Assessment), 3rd sentence – The original (June 2003) PCCP stated that an unexplained soil moisture increase greater than approximately 3 percent would trigger a secondary assessment. The revised (March 2004) PCCP places this threshold at 4 percent. Justify the reason for this increased threshold.

Response: Both of the proposed values fall within the range originally established in the CAMU permit application for unexplained soil moisture increases that would trigger a secondary assessment. The current CAMU permit application (Appendix E-3, Section 2.1) specifies: “Unexplained moisture increases above approximately 3 to 4 percent over the initial value (neutron probe sensitivity is ± 2 percent and precision is 0.1 to 1.0 percent) that might suggest a leak from the

containment cell will trigger a secondary assessment and confirmation/rejection phase, which is described under sampling methods below.”

When the June 2003 PCCP was prepared, the lower value was proposed as a trigger point, with the idea that a single value, rather than a range, would be a more useful tool. On reflection, the choice of the lower value was considered overly conservative based on the potential for false positive readings. (With a probe sensitivity of 2 percent, a trigger value of just 3 percent heightened the potential for false positive readings.) In the revised PCCP, the upper value of the range, 4 percent, was selected as an adequate indicator that limits false positives and falls within the original range established in the permit.

4. Revised PCCP, Section 3.5.1, page 29, 1st paragraph (Maintenance/Repair), 1st sentence and Attachment 1 and Attachment 2 – The original (June 2003) PCCP stated that when vegetative cover exceeds a height of 6 inches, it would be mowed. The revised (March 2004) PCCP places this threshold at 12 inches. Justify the reason for this increased threshold.

Response: The mowing threshold was increased from 6 inches to 12 inches for two reasons. First, the lower threshold was expected to result in a high frequency of mowing, subjecting the cover and vegetation to excessive equipment traffic. (With an expected vegetative height of 3 to 4 inches after mowing and a maximum height of 6 inches before mowing was required again, the intervals between required mowings were expected to be short.) Second, this mowing frequency would not allow the established vegetation to produce seeds between mowing events and therefore would limit natural reseeding and improvement of the vegetative cover. The mowing threshold of 12 inches is adequate to prevent the establishment of deep-rooted plants.

5. Revised PCCP, Section 3.5.3, page 29, 3rd sentence – This sentence states, “Following site closure, the LCRS pump will be manually activated on a schedule consistent with the inspection and maintenance schedule for the VZMS outlined in Attachment 1.” Change VZMS to read LCRS.

Response: The sentence has been revised as requested.

6. Revised PCCP, Figure 2-3 – A leachate collection tank on a secondary containment pad is shown within the area subject to post-closure care. This tank has already been decommissioned and 55-gallon drums for leachate storage are being used at the less-than-90-day area. As this pad is intended to serve as the less-than-90-day area, this figure should be labeled as such and reference to the leachate collection tank deleted.

Response: Figure 2-3 has been revised to delete the leachate collection tank and pad, and to include the less-than-90-day area. The less-than-90-day area is used to stage drums on secondary containment pallets on a gravel base course, approximately 3 inches deep. In addition, we noted that Figure 2-3 still included the storm water retention ponds, the containerized waste staging area, and the decontamination pad; because these areas were removed during CAMU closure, we have deleted them from Figure 2-3.

7. Revised PCCP, Figure 2-6, Detail 10, Plan of Leachate Collection and Storage Area – This detail should be revised to reflect that the leachate collection tank and appurtenances are no longer in use and it should be shown as the less-than-90-day drum storage area with the appropriate controls.

Response: Figure 2-6 has been updated to reflect all changes occurring as the result of CAMU closure, including the deletion of Detail 10, as requested. The other changes are as follows: Details 1 and 3, both related to the now-removed decontamination pad, have been deleted. Detail 11, related to the leachate collection pad, has been deleted. (The NOD comment implied that the leachate collection pad is now used for less-than-90-day storage, but this is not the case; the pad has been removed and the less-than-90-day area is now shown on Figure 2-3.) Detail 12 has been modified to delete all components related to the leachate collection tank and piping system.

8. Revised PCCP, Appendix A, Waste Analysis Plan, page 8, Section 2.2 – This section should include a reference as to which figure(s) the location of the less-than-90-day area can be found.

Response: The text has been modified to include a reference to Figure 2-3, which now includes the location of the less-than-90-day area.

9. Revised PCCP, Appendix A, Waste Analysis Plan, page 8, Section 2.2, 4th sentence – Describe the hazardous waste or constituents expected to be found in the leachate.

Response: The following information on expected leachate constituents has been added to the text: “Leachate analysis is performed to evaluate compliance with City of Albuquerque sanitary sewer discharge limits. Currently, leachate is sampled for the following constituents prior to discharge to the sanitary sewer: aluminum, arsenic, benzene, cadmium, total chromium, copper, cyanide, fluoride, formaldehyde, lead, mercury, molybdenum, nickel, selenium, silver, zinc, oils-petroleum/mineral, oils & grease-animal/vegetable, phenolic compounds, total toxic organics, and BTEX (the summation of results for benzene, toluene, ethyl benzene, and xylene). With the exception of formaldehyde, each of these constituents has been detected at least once over the sampling history. A complete list of potential constituents may be found in Table 3-1 of the CAMU permit application (SNL/NM, September 1997).”

10. Response to Comment #38. DOE/SNL’s response to this comment is not clear to the NMED. Clarify this response.

Response: Based on our reading of the cited provision, the conditions specified in 20.4.1.900 NMAC incorporating 40 CFR 270.30 are required to be included in the NMED-issued permit, but not in the permit application. When approved, the CAMU PCCP will be implemented as new conditions in the HWSA module of the SNL/NM operating permit. Because the SNL/NM operating permit already contains the cited conditions, these conditions are in place and effective for the CAMU.

ENCLOSURE 2

List of Figures

<i>Figure</i>	<i>Title</i>
2-1	Sandia National Laboratories/New Mexico, Technical Areas (TA) and the Corrective Action Management Unit (CAMU) in Relation to KAFB
2-2	Sandia National Laboratories/New Mexico, CAMU Location Map
2-3	Areal Configuration of the Corrective Action Management Unit (CAMU) Showing Area Subject to Post-Closure Care
2-4	Corrective Action Management Unit Containment Cell Site Plan
2-5	Corrective Action Management Unit Containment Cell Liner Details
2-6	Corrective Action Management Unit Containment Cell Design Details
2-7	Plan View of Completed Corrective Action Management Unit (CAMU) Containment Cell Showing Proposed Final Cover Configuration and Associated Perimeter Drainage Pathways
2-8	Schematic Cross-Section of Final Cover System
2-9	Plan View of CAMU Containment Cell and Vadose Zone Monitoring System
2-10	Block Diagram of CAMU Containment Cell and Vadose Zone Monitoring System
2-11	Cross-Sectional View of CAMU Containment Cell and Primary Subliner Monitoring Subsystem
2-12	Configuration of Vertical Sensor Array Monitoring Subsystem
2-13	Configuration of Chemical Waste Landfill and Sanitary Sewer Monitoring Subsystem
2-14	<u>Post-Closure Perimeter Boundary for the CAMU Containment Cell Area</u>

Deleted: CAMU Containment Cell Area Boundary and Access Point

1.0 Introduction

This post-closure care plan identifies the post-closure activities that will be performed at the Corrective Action Management Unit (CAMU) in Technical Area (TA)-III at Sandia National Laboratories/New Mexico (SNL/NM). The CAMU is used for the containment of hazardous remediation waste that was generated during Environmental Restoration (ER) Project remediation activities. The CAMU was designed and operated in compliance with the "Class III Permit Modification for the Management of Hazardous Remediation Wastes in the Corrective Action Management Unit, Technical Area III, Sandia National Laboratories/New Mexico Environmental Restoration Project," as modified (SNL/NM, September 1997, reprinted June 2002), hereafter referred to as the CAMU Permit. This plan is designed to meet the Resource Conservation and Recovery Act (RCRA) post-closure requirements in Title 40 of the Code of Federal Regulations (CFR) §264.552(e)(4)(iv).

If this post-closure care plan requires amending, the U.S. Department of Energy (DOE) and the ER Project will notify the New Mexico Environment Department (NMED) and U.S. Environmental Protection Agency (EPA) Region 6 in writing. The written notification will include a copy of the amended post-closure care plan for review and approval.

Post-closure care began on October 7, 2003, and will continue for 30 years after that date unless the Secretary of the NMED determines that the post-closure care period needs to be extended pursuant to 20.4.1.500 NMAC, incorporating 40 CFR 264.117(a)(2)(ii). Future permit modifications may be undertaken to propose alternative post-closure conditions, including the time frame for the post-closure period. A detailed discussion of the post-closure care activities and frequencies is presented in Section 3.0.

2.0 Facility Description

This chapter presents the facility characteristics and provides the context within which post-closure activities will occur.

2.1 General Description of SNL/NM

SNL/NM (EPA Identification Number NM5890110518) is a multidisciplinary laboratory engaged in the research and development of weapons and alternative energy sources. SNL/NM is managed for the DOE by Sandia Corporation, a wholly-owned subsidiary of Lockheed Martin Corporation, with work also performed for the U.S. Department of Defense and the Nuclear Regulatory Commission. Generation and management of hazardous waste occur at SNL/NM as

Maintenance/Repair. Annually and when the vegetative cover exceeds a height of 12 inches, it will be mowed to a height of 3 to 4 inches to prevent the establishment of deep-rooted plants. Cover damage that exceeds the limits described under "Inspection" will be repaired to a condition that meets or exceeds the original design. Repair specifications are listed as follows:

- Backfilling and compacting settlement areas, animal intrusion burrows, and areas of erosion using off-site soil with properties similar to the soil in the vicinity of the CAMU
- Re-seeding areas with no vegetation in excess of 100 square feet and, where necessary, re-establishing the topsoil layer and gravel mulch surface treatment to provide a suitable seedbed

3.5.2 Storm-Water Diversion Structures Inspection/Maintenance/Repair

Inspection. During the post-closure care period, the function of storm-water diversion structures associated with the containment cell will be to prevent run-on and runoff from eroding the final cover. The storm-water diversion structures will be inspected on a quarterly basis to verify structural integrity. Inspections will note erosion of the channels or side-walls in excess of 6 inches deep and accumulations of silt greater than 6 inches deep or debris that blocks more than one-third of the channel width.

Maintenance/Repair. Based upon the results from the storm-water diversion structure inspections, erosion that exceeds the limits described under "Inspection" will be repaired to a condition that meets or exceeds the original design. Silt and debris accumulations that exceed these limits will be removed.

3.5.3 LCRS Inspection/Maintenance/Repair

Inspection. Following closure, the amount of leachate that accumulates within the leachate collection system is expected to gradually diminish because the primary hydraulic control provided by the containment cell cover system will inhibit percolation of meteoric water through the waste, and the majority of soil placed in the cell has been stabilized with cement, causing it to be hydrophilic. As described in Section 2.3.4, liquids that collect in the LCRS sump will be pumped directly into portable, 55-gallon drums. Following site closure, the LCRS pump will be manually activated on a schedule consistent with the inspection and maintenance schedule for the LCRS outlined in Attachment 1. During post-closure care, if no leachate can be pumped from the collection sump for a 12-month period, the pump assembly will be removed and properly stored. If the pump is removed, the LCRS will be inspected on a quarterly basis for

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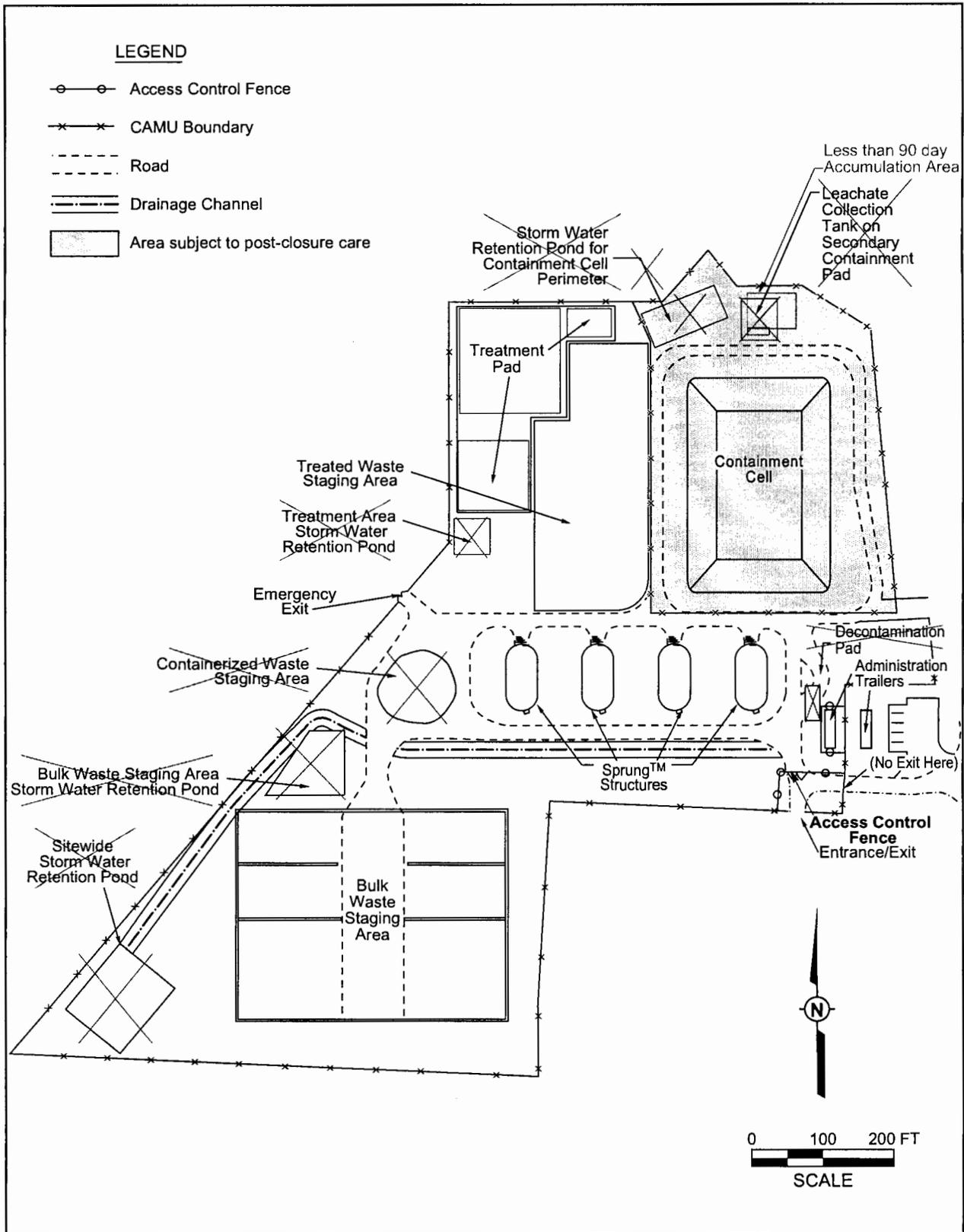


Figure 2-3
Areal Configuration of the Corrective Action Management Unit (CAMU)
Showing Area Subject to Post-Closure Care

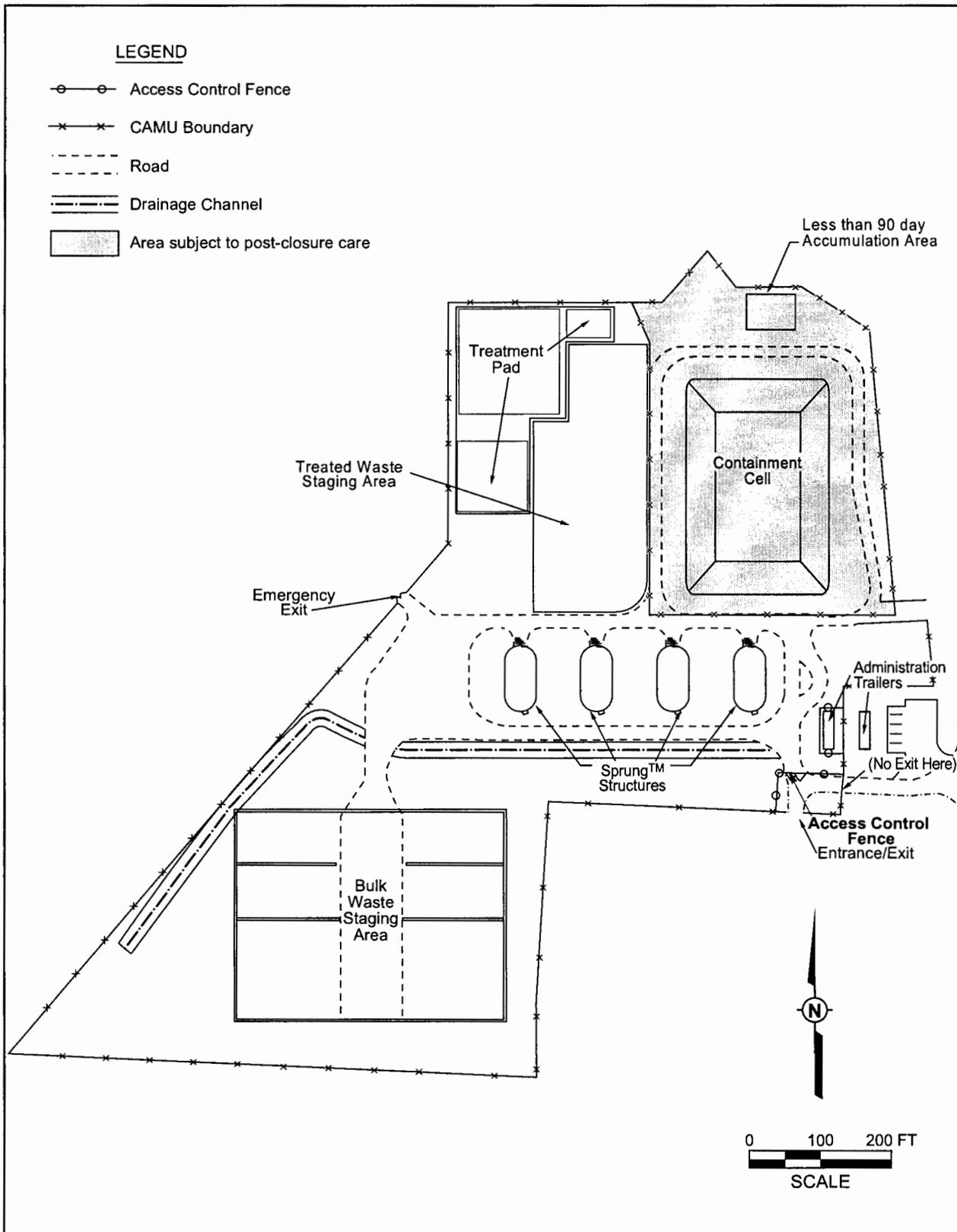


Figure 2-3
Areal Configuration of the Corrective Action Management Unit (CAMU)
Showing Area Subject to Post-Closure Care

The waste management unit to which this WAP applies is the CAMU, which is located in TA-III. The CAMU was used as a staging, treatment, and containment area for the management of hazardous remediation wastes generated during ER Project activities.

In October 2003, all hazardous waste and hazardous waste residues were removed, and the staging, treatment, and support areas at the CAMU were closed under RCRA. The CAMU containment cell was closed with waste remaining in place.

2.2 Description of Hazardous Remediation Waste

The post-closure configuration of the CAMU consists of a capped containment cell that incorporates an LCRS. Leachate water that has accumulated below the containment cell will be pumped to the surface and stored in 55-gallon drums at the CAMU-containment cell less-than-90-day RCRA waste accumulation area shown in Figure 2-3 of the Post-Closure Care Plan, hereafter referred to as the less-than-90-day area. The staged leachate will be managed as hazardous waste generated on site.

Based upon analytical data collected from leachate previously pumped from the LCRS, the leachate consists of water containing very low concentrations of RCRA contaminants, polychlorinated biphenyls (PCBs), and tritium. Leachate analysis is performed to evaluate compliance with City of Albuquerque sanitary sewer discharge limits. Currently, leachate is sampled for the following constituents prior to discharge to the sanitary sewer: aluminum, arsenic, benzene, cadmium, total chromium, copper, cyanide, fluoride, formaldehyde, lead, mercury, molybdenum, nickel, selenium, silver, zinc, oils-petroleum/mineral, oils and grease-animal/vegetable, phenolic compounds, total toxic organics, and BTEX (the summation of results for benzene, toluene, ethyl benzene, and xylene). With the exception of formaldehyde, each of these constituents has been detected at least once at low concentrations over the sampling history. A complete list of potential constituents may be found in Table 3-1 of the CAMU permit application (SNL/NM, September 1997). These constituents are known to be compatible with the polyethylene or carbon steel drums used to manage it. Personal protective equipment (PPE) that is used during leachate collection and management operations will also be managed as hazardous waste generated on site.

3.0 Selecting Waste Analysis Parameters

3.1 Criteria and Rationale for Parameter Selection

Hazardous remediation waste management activities at the CAMU during the post-closure care period are limited to the management of leachate and associated PPE.

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