NEW MEXICO ENVIRONMENT DEPARTMENT

IN THE MATTER OF: THE UNITED STATES DEPARTMENT OF ENERGY LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO ID. No. NM 0890010515, and THE REGENTS OF THE UNIVERSITY OF CALIFORNIA LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO ID. No. NM 0890010515, RESPONDENTS.	COMPLIANCE ORDERS NMHWA 93-01, 93-02, 93-03 & 93-04.

CONSENT AGREEMENT

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CONSENT AGREEMENT

I. PREAMBLE; PURPOSE OF AGREEMENT; BINDING EFFECT.

A. This Consent Agreement, effective when the Secretary signs a final order approving it, is made and entered into by and between the United States Department of Energy ("Respondent" or "DOE"), an agency of the Federal Government, the Regents of the University of California, a public educational institution of the State of California ("Respondent" or "the University") (collectively "Respondents"); and the New Mexico Environment Department ("NMED"), an agency of the State of New Mexico.

B. The purpose of this Consent Agreement is to set forth the agreement of the parties resolving all matters related to New Mexico Hazardous Waste Act Compliance Order numbers 93-01, 93-02, 93-03 and 93-04 (hereinafter collectively "Compliance Orders"), including agreement on the penalties to be paid by the University for the violations alleged in the Compliance Orders, and including the Respondents' commitment to implement an NMED-approved remedial action plan and compliance schedule for placing mixed waste currently stored at the Los Alamos National Laboratory ("LANL") Technical Area 54, Area G into storage that complies with the New Mexico Hazardous Waste Act.

C. This Consent Agreement shall apply to and be binding upon NMED and Respondents and their respective successors and assigns. Except as provided in Section VI.B., the obligations of Respondents under this Consent Agreement shall be joint and several. Respondents' obligations under this Consent Agreement,

including without limitation the payment of stipulated penalties, so long as the obligations are fulfilled, may be satisfied in whole or in part by either the University or DOE. No change in the contractual relationship between the Respondents shall in any way alter Respondents' responsibilities under this Consent Agreement. If the contract between DOE and the University is terminated or expires prior to such time as the obligations of this Consent Agreement are fully completed, DOE agrees to impose upon any successor contractor at LANL the same obligations as are now imposed upon the University.

II. BACKGROUND/HISTORY.

A. LANL is located principally in Los Alamos County, New Mexico, approximately sixty (60) miles northeast of Albuquerque and twenty-five (25) miles northwest of Santa Fe. LANL encompasses approximately forty-three (43) square miles. LANL is owned by DOE and is operated by DOE and by the University pursuant to a contract with DOE.

B. LANL was chosen in 1942 as the site for the wartime development of the atomic bomb. The area was established as a military reservation, and operations began in 1943. Since 1943, the primary mission of LANL has been nuclear weapons research and development. In addition, the facility does work in magnetic and inertial fusion, nuclear fission, nuclear safeguards and security, laser isotope separation, and medical isotope development. In association with the activities identified above, Respondents

currently generate and store mixed waste.

C. On May 4-8, 1992, NMED inspectors conducted a hazardous waste inspection at LANL.

D. As a result of that inspection, on January 28, 1993, NMED issued Compliance Orders 93-01 and 93-02 to DOE and Compliance Orders 93-03, and 93-04 to the University alleging violations of the New Mexico Hazardous Waste Act in the handling and storage of hazardous waste and mixed waste at LANL.

III. **JURISDICTION AND AUTHORITY.**

A. NMED asserts jurisdiction and authority over the subject matter of this Consent Agreement pursuant to and including without limitation, the following statutes, regulations, and laws:

1. The Resource Conservation and Recovery Act,
2. The New Mexico Hazardous Waste Act and Regulations,
3. The New Mexico Department of Environment Act,
4. The New Mexico Environmental Improvement Act, and
5. The New Mexico statutory and common law of nuisance.

B. Respondents admit the jurisdictional allegations of the Compliance Orders and consent to the relief specified herein, including stated civil penalties to be paid by the University.

IV. **DEFINITIONS.**

A. **Compliance Schedule** shall mean the schedule set forth in Attachment "C" to this Consent Agreement.

B. **Consent Agreement** shall mean this document and any

attachments incorporated by reference into this document including without limitation the Remedial Action Plan and the Compliance Schedule.

C. **Days** shall mean calendar days unless otherwise specified in this consent agreement.

D. **Deliverable** shall mean any document required to be submitted to NMED for review or comment as set forth in the Consent Agreement.

E. **Due date** shall mean those dates designated as such in the Compliance Schedule on or before which Respondents must complete an activity or submit a deliverable to NMED, or be liable for stipulated penalties as set forth in Section VII.

F. ***Force majeure*** shall mean any event arising from unforeseeable causes beyond the control of Respondents which could not be overcome by due diligence or contractual arrangement, and which delays or prevents performance by a date required by this Consent Agreement. *Force majeure* does not include unanticipated or increased costs of performance, the changed economic circumstances of either Respondent, any solely discretionary actions specifically authorized to be taken by NMED or the Secretary under this Consent Agreement, or enforcement action brought by NMED against Respondents, whether related to this Consent Agreement or not.

G. **Hazardous waste** is defined at § 74-4-3.I. of the New Mexico Hazardous Waste Act (HWA), and in New Mexico Hazardous Waste Management Regulations (HWMR) 6, § 101, which incorporates federal regulation 40 CFR § 260.10.

H. **Mixed waste** is defined as waste which contains a hazardous waste component regulated under Subtitle C of the Resource Conservation and Recovery Act, 42 U.S.C.§§ 6921 to 6939b, and the HWA; and a radioactive component consisting of source, special nuclear, or byproduct material regulated under the federal Atomic Energy Act of 1954 (AEA).

I. **Remedial Action Plan** shall mean the remedial action plan set forth in Attachment "B" to this Consent Agreement.

J. **Secretary** shall mean the Secretary of the New Mexico Environment Department or her designee.

K. **Sole discretion** when used in relation to an action or decision of the Secretary or NMED under this Consent Agreement shall mean that such action or decision is not subject to the dispute resolution procedures of Section XI, and that such decisions are binding upon the Respondents unless timely appeal is taken in accordance with §74-4-14 of the Hazardous Waste Act.

L. **Other terms** not specifically defined herein, if defined in RCRA or the HWA or regulations promulgated under those Acts, shall be accorded their meaning in those Acts or regulations. Terms not defined in those Acts or their implementing regulations shall be accorded their usual and ordinary dictionary meaning or their common meaning in usage, case law or in the applicable trade or profession.

V. NMED's FINDINGS OF FACT AND CONCLUSIONS OF LAW.

As a result of NMED's May 4-8, 1992 inspection at LANL, NMED

made findings of fact and conclusions of law under the New Mexico Hazardous Waste Act (HWA), NMSA 1978, § 74-4-1 through 11 (Repl. Pamp. 1990), and HWMR-6 which in part incorporate by reference the United States Environmental Protection Agency hazardous waste regulations. Those findings of fact and conclusions of law are set forth in the Compliance Orders which are incorporated by reference into this Consent Agreement. Under the legal authorities set forth above, NMED makes the following supplemental findings of fact and conclusions of law:

A. **Supplemental Findings of Fact.**

1. HWMR-6, § 301, incorporated federal regulations 40 CFR § 262.34(c)(1)(i) requires Respondents to keep all hazardous waste containers closed at satellite accumulation points.

2. HWMR-6, § 301, incorporated federal regulations 40 CFR § 262.34(c)(1)(ii) requires Respondents to mark all containers at satellite accumulation points with the words "hazardous waste" or with other words that identify the contents of the container.

3. On March 15, 1993, Respondents provided written confirmation and photographic evidence acceptable to NMED that hazardous waste stored at TA 3-40 has been removed.

4. On March 15, 1993, Respondents provided written confirmation and photographic evidence acceptable to NMED that waste in those containers of the sixteen (16) exhumed at TA-54 Area G Pad #2 that were not in good condition or which were beginning to leak, had been transferred to containers that are in good condition.

5. On March 15, 1993, Respondents provided written confirmation acceptable to NMED in the form of copies of the signed, original manifests for hazardous waste shipments dated September 26, 1991, and September 19, 1991.

6. On March 15, 1993, Respondents provided satisfactory evidence that LDR hazardous waste containers at TA-54 Area L have been properly marked.

7. On March 15, 1993, Respondents provided satisfactory evidence that all individuals identified by NMED have undertaken or will undertake necessary training.

B. **Supplemental Conclusions of Law.**

1. Respondents violated HWMR-6, § 301, incorporated federal regulations 40 CFR § 262.34(c)(1)(i) for failure to keep all hazardous waste containers closed at TA-21-4-4J, a satellite accumulation point.

2. Respondents violated HWMR-6, § 301, incorporated federal regulations 40 CFR § 262.34(c)(1)(ii) for failure to properly mark all hazardous waste containers at TA-35-213-A107A, TA-21-150-607, TA-21-4-4J, TA-3-38 (west side), TA-53-1-D115, and TA-59-1-113, which are satellite accumulation points.

C. Respondents do not admit any of NMED's findings of fact or conclusions of law except to the extent such facts or legal conclusions have been admitted in Respondents' answers to NMED's Compliance Orders filed on March 1, 1993. The parties agree that the terms and conditions of this Consent Agreement do not set a precedent for any future agreements that may be entered into

between NMED and DOE and/or the University.

VI. COMPROMISE AND SETTLEMENT OF COMPLIANCE ORDERS.

In compromise and settlement of violations alleged in the Compliance Orders and of penalties proposed in certain of the Compliance Orders, and without any admission of liability, Respondents agree as follows:

A. Remedial Action.

Pursuant to the terms of this Consent Agreement, Respondents agree to retrieve all mixed waste stored in pads 1, 2, and 4 at Technical Area 54, Area G at LANL, and to place such wastes into storage meeting all applicable requirements of the New Mexico Hazardous Waste Act and Regulations. Respondents will carry out these activities in accordance with the Remedial Action Plan, Attachment "B" to this Consent Agreement, and the Compliance Schedule, Attachment "C" to this Consent Agreement.

Pursuant to direction from DOE, the Center for Risk Management, Oak Ridge National Laboratory, is conducting an assessment of the risks associated with existing TRU-Waste storage configurations and the retrieval of stored TRU-Waste throughout the DOE complex, including TRU-Waste Pads 1, 2, and 4, TA-54, Area G, at LANL. The final report resulting from this study as it relates to LANL is expected to be completed by April 1, 1994. The final report will provide information regarding the health and safety and environmental effects of waste storage and retrieval at TRU-Waste Pads 1, 2, and 4. If, based on this new information, Respondents

conclude that certain changes in the method and timing of waste retrieval described in the Remedial Action Plan and Compliance Schedule of this Consent Agreement are required to insure adequate worker safety and protection of the environment, NMED agrees to meet and discuss with Respondents an amendment, if necessary, of this Consent Agreement to incorporate any revisions to the Remedial Action Plan and Compliance Schedule that the Secretary in her sole discretion deems necessary to insure adequate worker safety and protection of the environment. Prior to the issuance of her final decision, the Secretary agrees to provide Respondents in writing her proposed final decision. Respondents shall have fourteen (14) days thereafter to provide NMED and the Secretary written and any oral comments on the proposed final decision. At the end of this fourteen (14) day period, the Secretary shall issue her final decision.

B. **Civil Penalties.**

The University, on behalf of Respondents, shall make payment of a total sum to the State of New Mexico of seven hundred thousand dollars ($700,000.00). This sum is due and payable as follows: five hundred thousand dollars ($500,000.00) within thirty (30) days of the University's receipt of the Secretary's final order approving this Consent Agreement; two hundred thousand dollars ($200,000.00) on or before the last day of federal fiscal year 1994. Respondents represent that adequate funds or appropriations have been made and are available to cover this payment within the time frame set forth above. These payments shall be made to the

State of New Mexico Hazardous Waste Emergency Fund by certified check, bank draft or other guaranteed negotiable instrument and mailed or hand-delivered to the New Mexico Environment Department, Office of General Counsel, Attention: Linda Romero, 1190 St. Francis Drive, Room N4084, Post Office Box 26110, Santa Fe, New Mexico 87502.

VII. **STIPULATED PENALTIES.**

A. **General.**

If Respondents or either of them fail to comply with the performance requirements of this Consent Agreement, or fail to mail or hand-deliver a deliverable on or before its due date as set forth in this Consent Agreement, they shall be liable, jointly and severally, for stipulated penalties as follows:

1. ***Failure to timely submit any deliverable.***

$1,000.00 per day for each deliverable not received by NMED on or before its due date, from the 1st to 14th day following the due date, and $2,500.00 per day thereafter.

2. ***Failure to complete any remediation activities in accordance with the Compliance Schedule.***

$2,500.00 per day for each action not completed by a due date as set forth in this Consent Agreement, from the 1st to 14th day following the due date for completion, and $5,000.00 per day thereafter.

B. **Payment and payment procedures.**

Stipulated penalties shall begin to accrue upon the passing of a due date without performance unless an extension of

time to perform has been requested and granted by NMED prior to the expiration of the due date, in accordance with Section XV. Penalties shall continue to accrue as set forth above until Respondents cure their noncompliance. The Secretary shall confirm in writing that noncompliance was cured. Upon service of such written confirmation, penalties shall be deemed to be immediately due and payable in full. No separate written demand for payment from NMED shall be necessary. Payment shall be made by check, draft or other negotiable instrument made payable to the State of New Mexico Hazardous Waste Management Fund and mailed or hand-delivered to the New Mexico Environment Department, Office of General Counsel, Attention: Linda Romero, 1190 St. Francis Drive, Room N4084, Post Office Box 26110, Santa Fe, New Mexico 87502. Penalty payments not tendered within thirty (30) days after receipt by Respondents of the Secretary's letter confirming cure of noncompliance shall begin to accrue interest at the rate established by the United States Secretary of the Treasury pursuant to Section 2 of the federal Contract Dispute Act of 1978 (P.L. 95-563) and applicable at the time of the noncompliance and as fixed by the Secretary of the Treasury thereafter until paid in full. Nothing herein shall preclude the simultaneous or overlapping assessment of separate stipulated penalties for separate instances of noncompliance with due dates. This section shall be subject to Section XI. Although the obligation to pay stipulated penalties shall be stayed in the event a penalty is disputed under the provisions of this section or in any other forum, accrual of

penalties shall continue until noncompliance has been cured as set forth above.

VIII. **INTERIM STATUS.**

With the exception of any new construction required to take place under this Consent Agreement, and solely for purposes of this Consent Agreement, NMED agrees that Respondents may perform the actions set forth and agreed to herein as if they had interim status under state or federal law. NMED does not admit, nor shall this Consent Agreement or any of its terms or conditions be construed or interpreted as an admission by NMED, that Respondents have met all state or federal statutory and regulatory requirements necessary to achieve interim status under state and federal law. For all new construction or modifications required under this Consent Agreement, Respondents shall apply for and obtain all permits required under state and federal law in accordance with Section XVII.

IX. **DOCUMENTS, INFORMATION AND REPORTING REQUIREMENTS.**

A. **Exchange of Information.**

Respondents agree to cooperate fully with NMED in providing requested data and information. Respondents agree to freely and routinely communicate with NMED concerning the status and progress of the project. No such communications shall alter or waive any rights or obligations of the Respondents under this Consent Agreement. No guidance, suggestions or comments by NMED shall be

construed as relieving Respondents of their obligation to obtain formal approval where such approval is required by this Consent Agreement. Respondents are encouraged to confer with NMED at any time prior to submission of any proposals, plans, studies, reports or other documents required by this Consent Agreement.

B. **Records Inspection and Copying.**

Respondents shall permit NMED, its contractors, designees and agents to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Consent Agreement.

C. **Reporting Requirements.**

Throughout the course of activities performed pursuant to this Consent Agreement, Respondents shall submit quarterly, written progress reports to NMED. These progress reports shall include, at a minimum, the following:

1. a brief description of activities completed during the reporting period to implement the requirements of this Consent Agreement;

2. a brief description of activities scheduled for the following reporting period;

3. a description of any change in key project personnel which occurred during the reporting period;

4. a description of problems encountered during the reporting period and mechanisms used or proposed for resolving the problems;

5. tables and figures summarizing all data, sampling, and test results for the period.

Respondents shall furnish such progress reports to NMED as soon as possible and in no event later than the 15th day of

February, May, August, and November of each year this Consent Agreement remains in effect. The first progress report shall be due within sixty (60) days after the Secretary signs a final order approving this Consent Agreement. Subsequent reports shall be due as set forth above, unless the fifteenth day of a given month falls on a weekend day or a state or federal holiday, in which case the due date for the report shall be the next business day.

D. **Atomic Energy Act Requirements.**

All requirements of the Atomic Energy Act of 1954 and all applicable Executive Orders concerning the handling of unclassified controlled nuclear information, restricted data, and national security information including "need to know" requirements shall be applicable to any access to information furnished pursuant to this Consent Agreement. Respondents shall clearly identify all such documents.

X. **SITE ACCESS.**

A. Respondents shall at all reasonable times afford NMED, its contractors, designees and agents, unrestricted access to the Site, with or without prior notice. Respondents shall provide an authorized representative to accompany NMED's employees or contractors while at the Site.

B. NMED, its contractors, designees and agents shall abide by Respondents' safety requirements and procedures for access to and while at the Site.

XI. **RESOLUTION OF DISPUTES/ENFORCEMENT.**

A. **General.** Except as to matters over which NMED or the Secretary may exercise sole discretion under this Consent Agreement, any dispute as to the obligations of this Consent Agreement shall first be subject to this Section. Matters contained within this Consent Agreement over which NMED or the Secretary may exercise sole discretion shall not be challengeable through this Section. As to matters for which it may be invoked, the dispute resolution procedures of this Section shall be followed and exhausted before pursuing any other legal remedy in any other forum. Exchange of documents under this Section shall be in accordance with Section XIV. For purposes of this Section only, the term **days** shall mean work days.

B. **Informal resolution.** Any dispute subject to this Section shall in the first instance be the subject of informal negotiation between NMED and the Respondents. The period for informal negotiation shall not exceed twenty (20) days from the time the disputing party notifies the other parties in writing that it wishes to commence informal dispute resolution, unless an extension of time is requested in writing within the prescribed twenty-day time and agreed to by NMED. The parties shall meet and confer as necessary to attempt to resolve the dispute within the twenty-day informal resolution period.

C. **Formal Resolution by Technical Group.**

1. *Composition.* The Technical Group shall consist of the LANL Environmental Protection (EM-8) Group Leader for the

University, and the Los Alamos Area Office Environment, Safety and Health Branch Chief for DOE, and the Bureau Chief of the Hazardous and Radioactive Materials Bureau and a designated staff person of that Bureau for NMED.

2. *Invoking formal procedure.* In the event that the parties cannot resolve a dispute by informal negotiation, then the disputing party may invoke formal dispute resolution by submitting to the other parties and the members of the Technical Group a written Statement of Position on the matter in dispute, including, but not limited to any factual data, analysis, opinion, or documentation supporting its position.

3. *Responses.* Within fifteen (15) days of receipt of the disputing party's Statement of Position, the responding parties shall submit to the disputing party and the members of the Technical Group their Statement(s) of Position, including but not limited to any factual data, analysis, opinion, or documentation supporting that position.

4. *Technical Group Resolution.* After receipt of the responding parties' Statement(s) of Position, the Technical Group shall have fifteen (15) days to resolve the dispute.

D. **Formal Resolution by Advisory Group.**

1. The Advisory Group shall consist of the Area Manager for DOE's Los Alamos Area Office, the LANL Division Director of Quality, Environment, Safety and Health Assurance for the University, the Deputy Secretary of NMED and the Director of the Water and Waste Management Division for NMED.

2. In the event the Technical Group has been unable to resolve the dispute within the time prescribed, the disputing party shall, within fifteen days after such period, submit to the members of the Advisory Group copies of all documents furnished to the Technical Group.

3. *Advisory Group Resolution.* After receipt of this documentation, the Advisory Group shall have fifteen (15) days to resolve the dispute.

E. **Final Decision by the Secretary.** In the event the Advisory Group has been unable to resolve the dispute within the time prescribed, the disputing party shall submit a written Request for Final Decision to the Secretary. The written request shall be accompanied by all documentation furnished to the Technical and Advisory Groups. Within thirty (30) days of receipt of the written Request for Final Decision, the Secretary shall issue a final decision, including a written statement of the reasons for the decision. The Secretary's decision shall be binding upon the parties unless timely appeal is taken.

F. **Extension of Time for Formal Dispute Resolution.**

If, during the formal dispute resolution process, it appears that resolution may be achieved by an extension of time, the Technical Group may petition the NMED member of the Advisory Group, and the Advisory Group may petition the Secretary for an extension of time in which to resolve the dispute.

G. **Effect of Dispute Resolution on Respondents' Obligations.**

The Respondents' obligations under this Consent Agreement are

not waived by the invocation of this dispute resolution process. The performance of such obligations may, in the discretion of the Respondents be suspended until conclusion of the dispute resolution process of this Section. The accrual of stipulated penalties for obligations Respondents elect to suspend shall not be stayed during the pendency of any dispute under this Section, unless an extension of the performance due date for the disputed obligation has been granted by NMED pursuant to Section XV.

H. **Incorporation by amendment.** Upon resolution of a dispute pursuant to this Section, the resolution shall be incorporated into this Consent Agreement by appropriate amendment.

XII. **COURT JURISDICTION/VENUE.**

The parties shall endeavor to bring and maintain all actions arising out of this Consent Agreement in the New Mexico First Judicial District Court, the New Mexico Court of Appeals, or in the United States District Court for the District of New Mexico.

XIII. **COMPUTATION OF TIME.**

In computing any period of time prescribed in this Consent Agreement, the day of the act, event, requirement or noncompliance from which the designated period of time begins to run shall not be included. Except as to penalties which could accrue under Section VII.A.2., the last day of the period so computed shall be included, unless it is a Saturday, Sunday or federal or State of New Mexico holiday, in which event the period runs until the end of the next

day which is not a Saturday, Sunday or holiday.

XIV. **EXCHANGE OF DOCUMENTS.**

A. Whenever the terms of this Consent Agreement require exchanges of documents, such exchanges shall be made by mail, by facsimile if followed within twenty-four (24) hours by a mailed copy, or by hand-delivery to the individuals at the addresses below, unless those individuals or their successors give notice in writing to the other Parties of a change in designated recipient or address. Exchanges of documents required under this Consent Agreement shall be complete upon mailing or upon hand-delivery to a designated representative of the individuals listed below:

For NMED:

BENITO GARCIA, Bureau Chief
NMED Hazardous & Radioactive Materials Bureau
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-4358
(505) 827-2836 (fax)

For the U.S. Department of Energy:

Jon Mack, Environmental Engineer
Environment, Safety and Health Branch
Department of Energy
Los Alamos Area Office
528 35th St.
Los Alamos, N.M. 87544
(505) 665-5026
(505) 665-4504 (fax)

For the University of California:

John Krueger, Section Leader
Los Alamos National Laboratory
EM-7, MS-J595

Los Alamos, N.M. 87545
(505) 665-8467
(505) 665-8347 (fax)

For the Technical Group:

BENITO GARCIA, Bureau Chief
NMED Hazardous & Radioactive Materials Bureau
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-4358
(505) 827-2836 (fax)

For LANL:

Kenneth Hargis, Group Leader
Environmental Protection
LANL EM-8, MS-K490
Los Alamos, N.M. 87545
(505) 667-5021
(505) 667-0486 (fax)

For DOE:

Joe Vozella, Chief
Environmental Safety and Health Branch
DOE Los Alamos Area Office
528 35th St.
Los Alamos, N.M. 87544
(505) 667-5288
(505) 665-4504 (fax)

For the Advisory Group:

Division Director
NMED Water & Waste Management Division
Office of the Secretary
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2836 (fax)

Deputy Secretary
New Mexico Environment Department
Office of the Secretary
1190 St. Francis Drive
P.O. Box 26110
Santa Fe, NM 87502
(505) 827-2850

(505) 827-2836 (fax)

Jerry L. Bellows
DOE Los Alamos Area Manager
DOE Los Alamos Area Office
528 35th St.
Los Alamos, N.M. 87544
(505) 667-5105
(505) 665-4873 (fax)

Dennis J. Erickson
Quality, Environment, Safety and Health Assurance Division
LANL MS-K491
Los Alamos, N.M. 87545
(505) 667-4218
(505) 665-3811 (fax)

XV. **TIME FRAMES; EXTENSIONS;** ***FORCE MAJEURE.***

A. **Extensions for Good Cause.**

Before the due dates for performance of obligations or delivery of documents as set forth in this Consent Agreement, and for good cause shown, due dates may be extended with the written permission of the Secretary as follows:

1. ***Extensions of more than 30 days.*** Any request for extension of 30 days or more shall be made in writing and received by NMED at least 30 days prior to the due date for which the extension is sought. The Secretary shall approve or deny the request in writing within 21 days after receipt of the extension request.

2. ***Extensions of less than 30 days.*** Any request for extension of less than 30 days shall be made in writing and received by NMED at least 7 days prior to the due date. The Secretary shall approve or deny the request before the due date either in writing or orally with written confirmation within 24

hours.

3. *Requests for extension; required content.* All requests for extension claiming good cause shall include:

a. the due date sought to be extended;

b. the length of the extension sought;

c. the good cause(s) alleged to support the requested extension;

d. a description of all related due dates that may be affected if the extension is granted.

4. The grant or denial of a request for extension of a due date based upon good cause shall be within the sole discretion of the Secretary.

B. **Extensions for *Force Majeure*.** Respondents agree to implement this Consent Agreement in accordance with the schedules set forth herein. Respondents further agree to adopt all reasonable measures including contractual arrangements with third parties to avoid and minimize any delays in the implementation of this Consent Agreement.

1. *Claiming force majeure.* To claim *force majeure* Respondents shall give prompt oral notification to NMED within forty-eight (48) hours after the event, with written confirmation within 24 hours. No claim of *force majeure* shall be made after the expiration of a due date claimed to be affected.

2. *Required content of written notice.* All written notifications of *force majeure* shall include:

a. a description of the event claimed to

constitute *force majeure*;

b. an estimate of the anticipated length of delay;

c. a description of all related due dates that may be affected, and;

d. the length of the extension sought and a plan of corrective action and, if applicable, of proposed measures to prevent recurrence.

3. ***NMED acknowledgement.*** NMED shall, within 7 days after receipt of a notification of *force majeure* but in no event later than the affected due date, accept or deny in writing Respondents' claim of *force majeure*. NMED's written acceptance of *force majeure* shall include a grant of the requested extension, or of a different period of extension deemed reasonable under the circumstances. NMED denial of Respondents' claim of *force majeure* shall be subject to the dispute resolution procedures of Section XI.

C. **Extensions due to delays by NMED.** In the event NMED fails to meet a due date for which it is responsible in the Compliance Schedule, all due dates subsequent to that NMED due date shall be extended by a period of time equal to the number of days between the NMED due date specified in the Compliance Schedule and the date NMED actually completes the action.

D. **Waiver.** Unless Respondents have timely requested an extension for good cause or timely notified NMED of a claim of *force majeure*, failure of Respondents to timely submit a deliverable or complete an activity shall constitute a waiver of

any right to dispute the due dates for such obligations. No extension of time, deferral, grant, or waiver by NMED or the Secretary as provided in this Consent Agreement shall be construed as waiver or authorization for any other delays, defaults or omissions.

XVI. **TERMINATION.**

A. **Generally.** This Consent Agreement shall terminate upon satisfactory completion by Respondents of all obligations under this Consent Agreement as determined in accordance with this Section:

1. *Certification of Completion.* When Respondents determine that they have completed all the obligations of this Consent Agreement they shall submit to NMED a Request for Certification of Completion. NMED shall evaluate the request by performing an on-site inspection and reviewing all relevant documents and data. Within 90 days after receipt of Respondents' Request for Certification of Completion, NMED shall either issue a written Certification of Completion or deny the request. If NMED denies the Request for Certification of Completion, its denial shall describe all remaining obligations deemed to be incomplete. This Consent Agreement shall terminate upon the issuance of NMED's written Certification of Completion.

B. **Termination by NMED.** The Secretary in her sole discretion reserves the right to terminate this Consent Agreement by written notice to the Respondents if the Secretary at any time

determines that for any reason whatsoever the obligations of the Consent Agreement are not being satisfactorily met or are not being met in accordance with the terms of this Consent Agreement.

XVII. COMPLIANCE WITH APPLICABLE LAW.

A. **Generally.**

All activities required by this Consent Agreement shall be undertaken in compliance with the requirements of all applicable federal, state, and local laws, regulations, and ordinances. Nothing in this Consent Agreement shall be construed as relieving Respondents of any liability under, or obligation to comply with applicable laws.

B. **Anti-Deficiency Act.** It is Respondents' position that any requirement for payment or obligation of funds by Respondents established by this Consent Agreement shall be subject to the federal Anti-Deficiency Act, 31 U.S.C. Section 1341. It is NMED's position that the federal Anti-Deficiency Act does not apply to the obligations described in this Consent Agreement. NMED believes that the obligations of this Consent Agreement, including the obligation to pay stipulated penalties when properly assessed, are joint and several and unaffected by DOE's failure to obtain adequate funds or appropriations from Congress. The parties agree that failure to obtain adequate funds or appropriations from Congress does not, in any way, release Respondents from their obligation to comply with RCRA and applicable State hazardous waste laws and requirements.

C. **Permits.** This Consent Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation. Where any portion of the work requires a federal or state permit or approval for new construction, modifications or otherwise, Respondents shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Respondents agree to act with due diligence and in good faith in seeking all legal permissions and permits which may from time to time be required in order to comply with this Consent Agreement. The failure to submit a timely and technically complete permit application required for any work to be conducted pursuant to this Consent Agreement shall bar any claims for *force majeure* alleging inability to obtain a permit, and shall constitute grounds for denial of a request for extension of a due date for the work based upon good cause as set forth in Section XV.

XVIII. **HOLD HARMLESS CLAUSE.**

Neither NMED nor its agents, employees or contractors shall be liable to Respondents or third parties for any injuries or damages, whether contractual, tortious or otherwise in nature, which arise directly or indirectly out of, or result directly or indirectly from, the actions required of Respondents under this Consent Agreement. Neither NMED nor its agents, employees or contractors shall be held out as a party to any contract, agreement or understanding entered into by the Respondents in carrying out the

obligations of this Consent Agreement. Specifically and without limitation, neither NMED nor its agents, employees or contractors shall be liable to Respondents or third parties for termination of this Consent Agreement by the Secretary.

XIX. **GOOD FAITH PERFORMANCE.**

The parties agree that they will act reasonably and in good faith at all times to accomplish the objectives of this Consent Agreement. Respondents agree to perform all evaluations and actions required by this Consent Agreement using sound scientific judgment. It is the expectation of the parties that all obligations of Respondents imposed under this Consent Agreement will be fully funded by DOE. DOE shall take all necessary steps and use its best efforts to obtain timely and sufficient funding to meet Respondents' obligations under this Consent Agreement, including without limitation, submission of timely budget requests.

XX. **TIME OF THE ESSENCE.**

The Parties understand and agree that time is of the essence in accomplishing the goals and objectives of this Consent Agreement even when no specific time frame or due date has been specified.

XXI. **AMENDMENTS.**

This Consent Agreement may be amended only by agreement of the Parties. Such amendments shall be in writing, signed by the Parties and subject to the approval of the Secretary, and shall

become effective upon written approval of the Secretary. Amendments to the Remedial Action Plan may be agreed upon and signed by the Technical Advisory Group, subject to the written approval of the Secretary.

XXII. **COVENANT NOT TO SUE.**

NMED agrees that as long as Respondents remain in compliance with the terms and conditions of this Consent Agreement, NMED will not initiate or pursue civil or administrative relief in any other forum which might otherwise be available under New Mexico and federal law, including without limitation the right to seek and recover damages or penalties against Respondents, their successors, assigns and employees for the allegations set forth herein or for the actions required to be performed under this Consent Agreement.

XXIII. **RIGHTS EXPRESSLY RESERVED/ENFORCEMENT.**

A. **Reservation of rights.** NMED reserves the right to pursue civil or administrative relief for any other violations of state or federal law, past or future, which are not the subject matter of this Consent Agreement. NMED reserves the right to take emergency response action at property owned or controlled by Respondents in the event conditions pose an imminent and substantial endangerment to human health or the environment. NMED specifically retains the right to conduct other environmental studies, investigations, monitoring, or emergency activities at property owned or controlled by Respondents, and to enforce all laws, statutes and regulations

NMED is authorized to enforce. NMED's failure to exercise any power, authority, or right in this Consent Agreement, or its election not to exercise such power, authority or right, shall not be construed as a waiver or relinquishment of such power, authority or right at other times or under other circumstances.

B. **Enforcement.** In the event Respondents fail to perform any obligations under this Consent Agreement, including those that have not been resolved pursuant to the dispute resolution mechanism under Section XI, this Consent Agreement shall be enforceable by NMED by the filing of a civil action either in the New Mexico District Court for Santa Fe County or in the United States District Court for the District of New Mexico.

XXIV. **COSTS AND FEES.**

Each party shall bear its own costs and fees arising out of this Consent Agreement. Respondents shall arrange and pay for any transcripts required or agreed to be made under the provisions of this Consent Agreement.

XXV. **SEVERABILITY.**

The provisions of this Consent Agreement are severable. If any provision of this Consent Agreement is declared by a court of law to be invalid or unenforceable, all other provisions of this Consent Agreement shall remain in full force and effect, unless NMED in its sole discretion determines that the objectives of this Consent Agreement are substantially impaired by the court's ruling.

In that event, NMED may, in its sole discretion, elect to terminate this Consent Agreement by so notifying the Respondents in writing signed by the Secretary.

XXVI. **DELEGATION.**

Except with respect to final orders or decisions to terminate this Consent Agreement, and other matters committed to the sole discretion or decision of the Secretary, NMED's powers and authorities under this Consent Agreement shall be exercised by its Deputy Secretary, its Division Director for the Water and Waste Management Division, and the Bureau Chief for the Hazardous and Radioactive Materials Bureau as set forth herein or if not set forth in this Consent Agreement, as determined and allocated amongst them.

XXVII. **MERGER & INTEGRATION.**

This Consent Agreement merges all prior written and oral communications between the parties concerning this matter, and contains the entire agreement reached between the parties. This Consent Agreement shall not be altered, amended or construed by any communications whether written or oral, which are not contained herein. This Consent Agreement may only be amended in accordance with Section XXI.

XXVIII. **EFFECTIVE DATE.**

This Consent Agreement is effective on the day on which the

Secretary signs a final order approving it.

XXIX. **AUTHORITY OF SIGNATORY.**

The persons executing this Consent Agreement respectively represent that they have the requisite authority to bind the U.S. Department of Energy, the University of California, and the New Mexico Environment Department to the terms of this Consent Agreement, and further agree that this representation of authority as to each such entity shall be legally sufficient evidence of actual or apparent authority to bind each of them to all of the terms and conditions of this Consent Agreement.

APPROVED:

Kathleen M. Sisneros

Kathleen Sisneros, on behalf of the
New Mexico Environment Department

APPROVED:

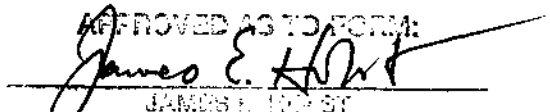
Jerry L. Bellows

on behalf of the United States
Department of Energy

APPROVED:

on behalf of the Regents of
the University of California

APPROVED AS TO FORM:



JAMES E. HOLST
GENERAL COUNSEL OF THE REGENTS
OF THE UNIVERSITY OF CALIFORNIA

NEW MEXICO ENVIRONMENT DEPARTMENT

IN THE MATTER OF: THE UNITED STATES DEPARTMENT OF ENERGY LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO ID. No. NM 0890010515, and THE REGENTS OF THE UNIVERSITY OF CALIFORNIA LOS ALAMOS NATIONAL LABORATORY LOS ALAMOS, NEW MEXICO ID. No. NM 0890010515, RESPONDENTS.	)	COMPLIANCE ORDERS NMHWA 93-01, 93-02, 93-03 & 93-04.

FINAL ORDER

The Secretary, having reviewed the above-captioned Consent Agreement including all attachments incorporated by reference, and having determined that it is consistent with the New Mexico Hazardous Waste Act, hereby approves the Consent Agreement and orders that it take full force and effect on this 10th day of December, 1993.

JUDITH M. ESPINOSA

ATTACHMENT "A"

Attachment B.

Remedial Action Plan

The following sections present listed actions and a phased plan necessary to retrieve TRU radioactive and TRU mixed waste from TRU Pads 1, 2 and 4 and place into inspectable storage. Because the Safety Analysis Report, which is being prepared for this remedial action, is not final, and because the RCRA Part B Permit Application, and the Facility Final Design are currently being reviewed by NMED, this plan may have to be modified to ensure:

- worker and public safety
- protection of the environment
- the most safe and efficient method is used to retrieve the waste
- compliance with State requirements.

Listed Actions

1. Establish site specific environmental surveillance program.
2. Install high volume air samplers.
3. Prepare and complete ES&H documentation, as necessary.
4. Procure Special Equipment for Retrieval and Storage operations.
5. Prepare Preliminary Safety Analysis Report.
6. Prepare Final Safety Analysis Report.
7. Design Upgrade to existing Drum Prep Facility.
8. Complete Final Design for TRU Waste Retrieval Dome Project[1].
9. Complete Final Design for TRU Waste Temporary Storage Dome Project[1].
10. Complete Design of Drum Vent System.
11. Prepare Detailed Operating Procedures.
12. Fabricate and Test Drum Vent System.
13. Procure Contractor.
14. Complete Construction of Retrieval Dome over Pad 1; Complete Construction of Storage Domes for Pad 1 waste.
15. Personal Training/Operational Readiness Review.

Listed Actions

16. Complete Retrieval Operations on Pad 1.

17. Complete Construction of Retrieval Dome Over Pad 4; Complete Construction of Storage Domes for Pad 4 waste.

18. Complete Retrieval Operations on Pad 4.

19. Complete Construction of Retrieval Dome over Pad 2; Complete Construction of Storage Dome over Pad 1.

20. Complete Construction of Storage Dome over Pad 4.

21. Complete Retrieval Operations on Pad 2.

22. Complete Salvage of Retrieval Equipment and Retrieval Dome..

1) The retrieval of waste from TRU Pads 1, 2 and 4 is divided up into two projects - The TRU Waste Retrieval Dome Project and TRU Waste Temporary Storage Dome Project.

The Retrieval Operation

A. Construction and Retrieval Phasing

The retrieval of waste from TRU Pads 1, 2 and 4 is organized into four construction phases. After each of the first three construction phases, waste is retrieved from TRU Pads 1, 4, and 2, respectively. The fourth construction phase is necessary to salvage equipment, and disassemble the retrieval dome. Each construction phase is divided up into two separate projects; the Retrieval Dome Project and the Storage Dome Project.

Project site activities will begin with Construction Phases I-R and I-S (-R refers to the Retrieval Dome Project and -S refers to the Storage Dome Project). Activities within Phases I-S and I-R are clearly identified in Figures 1 and 2.

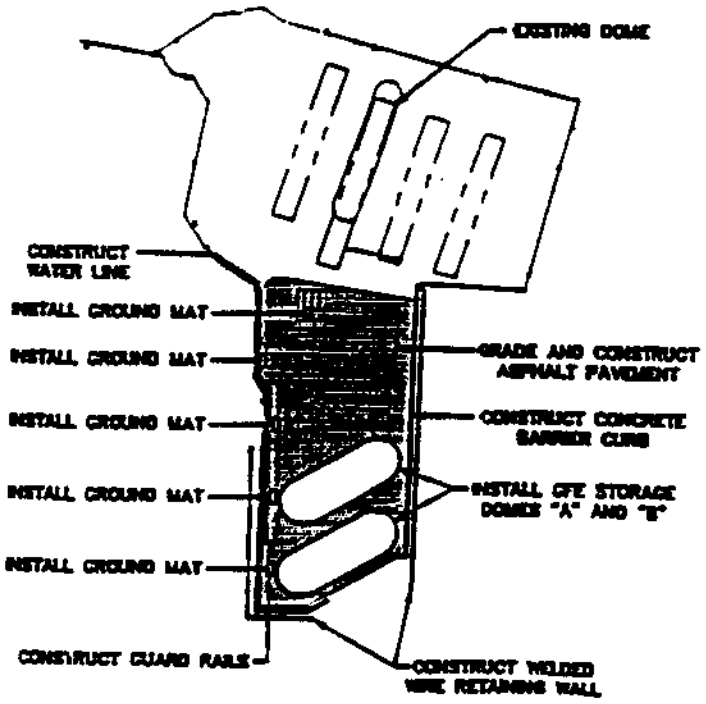


Figure 1. Construction Phase I-S

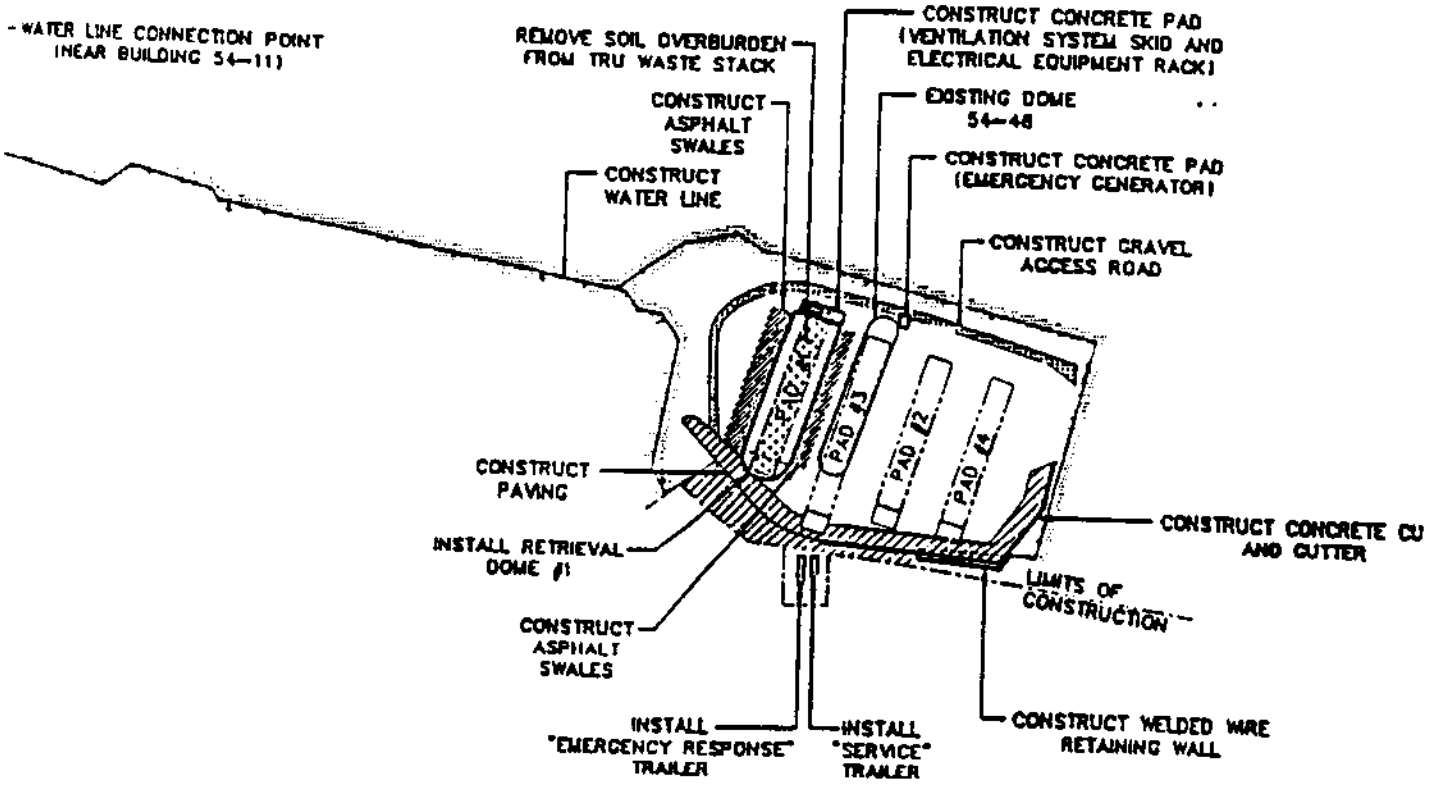


Figure 2. Construction Phase I-R

Retrieval of waste will begin at Pad 1. Once waste retrieval operations are complete on Pad 1, Construction Phases II-S and II-R will begin. Major activities within these phases are identified within Figures 3 and 4, respectively.

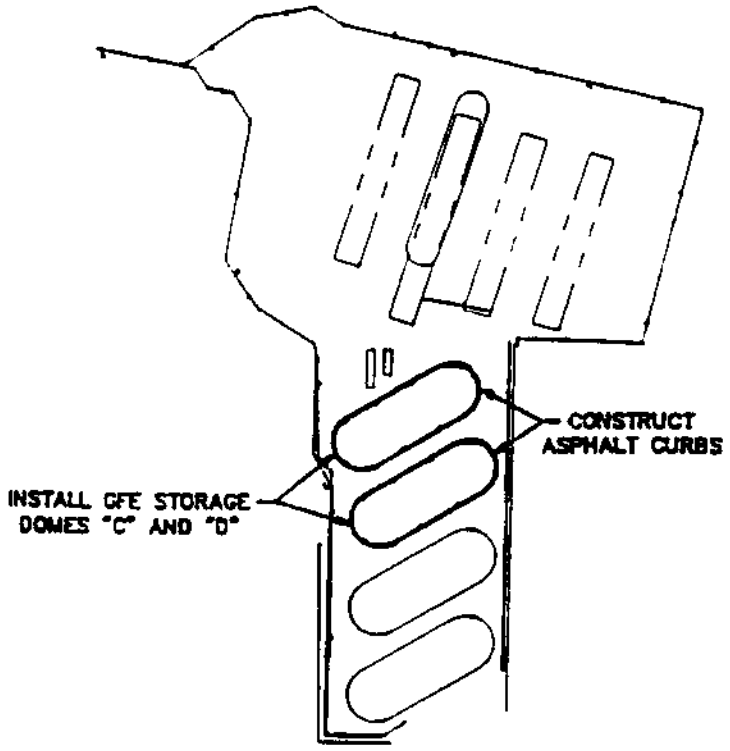


Figure 3. Construction Phase II-S

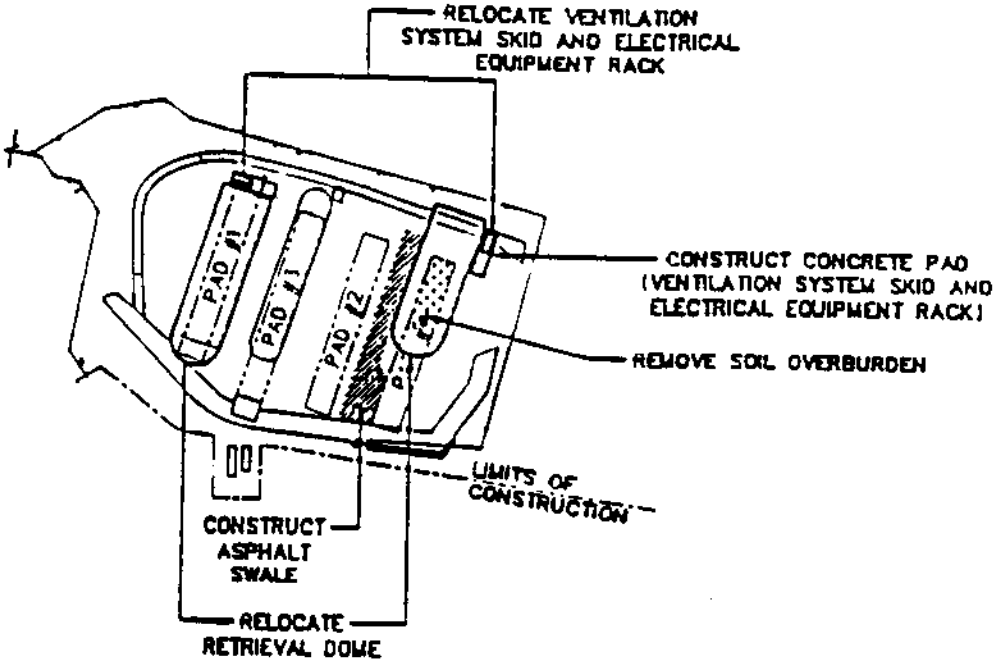


Figure 4. Construction Phase II-R

Following the completion of Construction Phases II-S and II-R, waste retrieval from Pad 4 will begin. After retrieval operations at Pad 4 are complete, Construction Phases III-S and III-R will begin. Major activities within Phases III-S and III-R are identified within Figures 5 and 6, respectively.

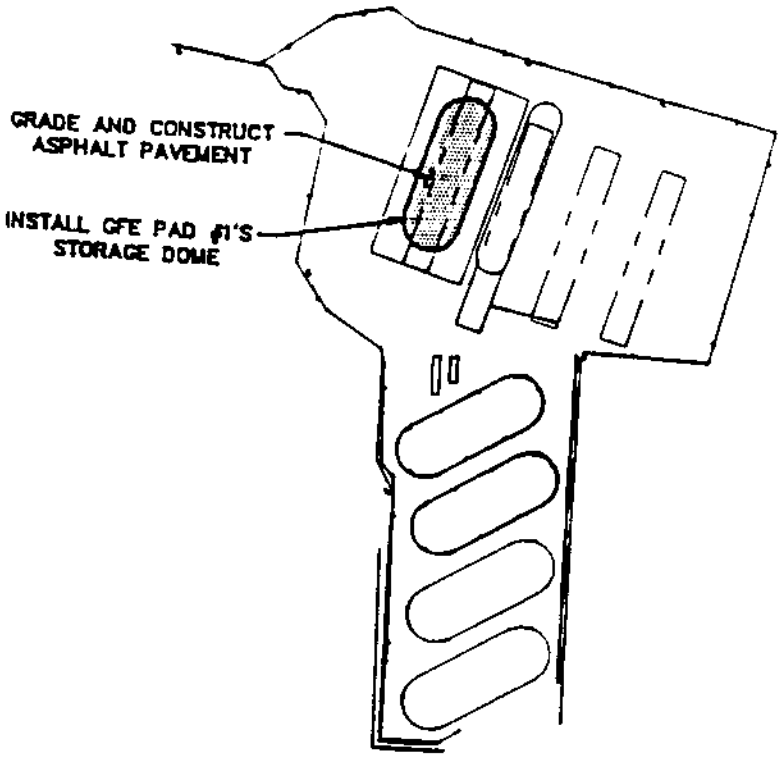


Figure 5. Construction Phase III-S

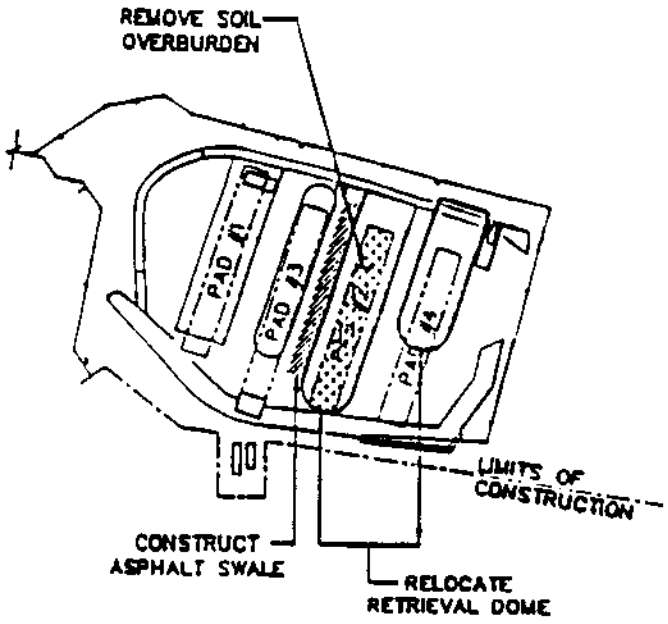


Figure 6. Construction Phase III-R

Construction Phase IV-S should begin during the first six months of waste retrieval on Pad 2. Once Pad 2's waste retrieval operations are completed, Construction Phase IV-R will begin. This final construction phase is necessary to disassemble and decontaminate the retrieval dome, and to salvage all other retrieval equipment to the Laboratory. Figures 7 and 8 depict the major activities for Phases IV-S and IV-R.

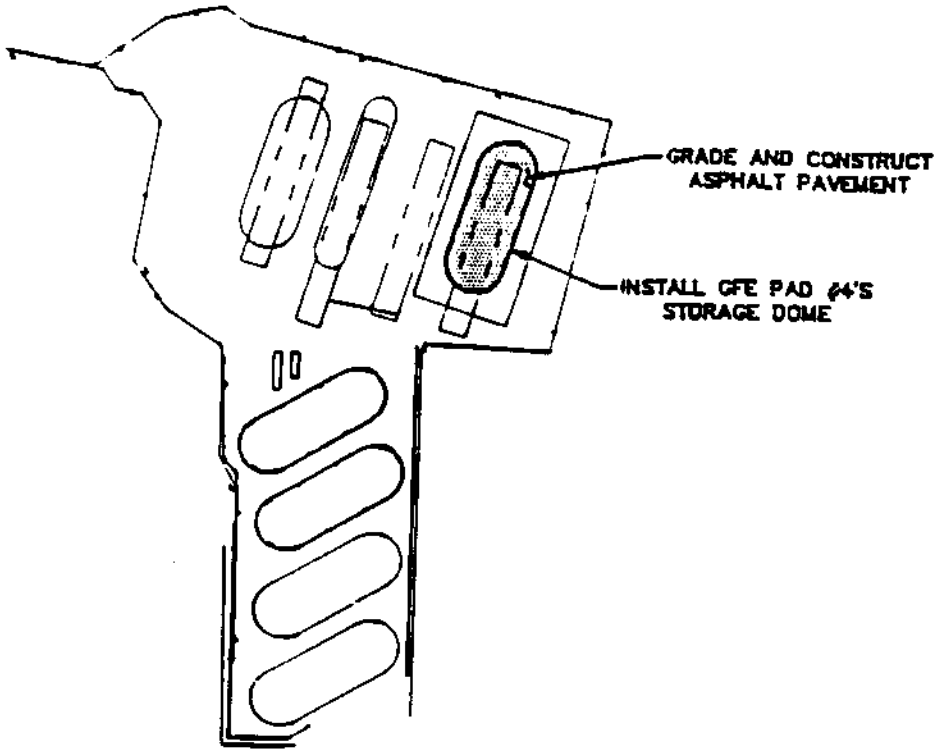


Figure 7. Construction Phase IV-S

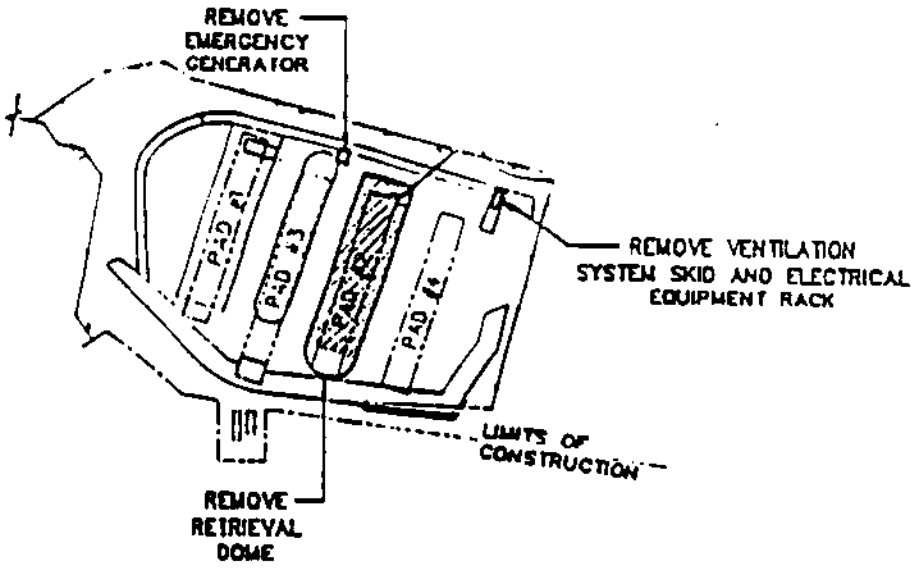


Figure 8. Construction Phase IV-R

B. Detailed Description

1. Storage Domes

As Figure 1 shows, Construction Phases I-S includes considerable site work. The surface of LLW Pits 1 and 3 (just south of the TRU pads where the retrieval operation will be executed) is not level enough to permit construction of the four new storage domes without grading. Because the site is over old waste disposal pits, grading must be accomplished primarily by fill and compact methods. The soil surface will be surveyed to determine whether radioactive contamination exists from previous disposal operations. If radiation above background levels is detected, the areas of contamination will be handled appropriately. Clean fill will be obtained from the spoils pile of crushed tuff created by excavation of LLW disposal pits. After compaction and grading, the asphalt pad will be laid.

A primary reason for the large amount of site work is to ensure that stormwater discharge requirements under the Laboratory's National Pollution Discharge Elimination System (NPDES) general permit are met and best management practices for stormwater runoff control are utilized.

During the latter part of Construction Phases I-S and I-R, Storage Domes A and B will be erected at the south end of the completed asphalt pad. Each of the planned storage domes is a tension support structure with fabric walls and aluminum supports. Asphalt curbs will then be installed around the inside perimeter of each of the domes. Power, communication systems, and fire protection (hydrants) services will be extended to the domes. Finally, prior to waste transfer into the new domes, ambient air monitoring will be conducted inside the dome to establish "background" conditions.

Construction Phase II-S includes erecting Storage Domes C and D on the asphalt pad. Asphalt curbs will also be constructed around the inside perimeter of these domes. As necessary, utilities will again be extended to the domes.

During Construction Phase III-S, some additional site work and erection of Pad 1's Storage Dome's will occur. Additional asphalt will be added to both east and west sides of the present Pad 1. This site work will allow Pad 1's Storage Dome to fit on the Pad 1. As with the previous domes, an asphalt curb will be present around the inside perimeter of the dome.

Similar to Construction Phase III-S, Construction Phase IV-S includes additional site work before Pad 4's New Storage Dome can be constructed. Similar to Pad 1, asphalt will have to be added to both east and west sides of Pad 4. The Laboratory fully expects Pad 1's and Pad 4's asphalt pad to be in excellent condition. If the asphalt is not in excellent condition, that is if 30% or more of the asphalt pad is degraded, the entire asphalt pad will be replaced. In any case, any damaged portions of asphalt will be repaired.

2. Retrieval Dome

Construction Phase I-R also has a substantial amount of site work, most of which is focused around Pad 1. The site work includes a water line installation, asphalt access

paving along south edge of the site, extension of electrical power, construction of asphalt swales (for stormwater runoff control), removal of the majority of the tuff cover over Pad 1 and erection of the Retrieval Dome over Pad 1. All tuff cover will not be removed because it is necessary to leave minimal cover of soil on top of the stack to provide weather protection and a fillet of tuff around the perimeter to support and stabilize the stack of waste containers. As appropriate, the tuff will be screened for radionuclide constituent contamination. Clean tuff removed from the pad will either be taken to the current LLW disposal pit for use as backfill or used as fill for Construction Phase I-S. Contaminated soil will be handled as appropriate.

Once site preparation for the Retrieval Dome is complete and the retrieval dome is erected, equipment and structural accessories necessary to ensure the Retrieval Dome is functional will be installed. The HEPA-filtered exhaust system and associated ductwork will be installed and attached to the skid-mounted exhaust blower and filter bank. An emergency power system (EPS) will be placed to the north of Pad 1. Though the EPS should not be necessary because work will stop if power is lost, it will provide power during power outages, or other emergencies. Two partitioning curtains will be hung from the dome frame to segregate the work area from the remainder of the enclosure and each curtain will be moved along the pad as waste is being removed. Personnel doors for emergency egress will be present along both sides of the work area. Electrical power will be extended into the Retrieval Dome to power continuous air monitors (CAMs), local and general ventilation systems, and the drum venting system. Support trailers will be located near Pads 1, 2 and 4.

Once the waste from Pad 1 is retrieved, Construction Phase II-R begins. This phase includes prepatory site work at Pad 4, relocation of the ventilation system from Pad 1 to Pad 4, construction of an asphalt swale for stormwater runoff, and the relocation of the existing Retrieval Dome from Pad 1 to Pad 4.

After retrieval operations at Pad 4 are complete, Construction Phase III-R will take place. Similar to Construction Phase II-R, this phase includes prepatory site work around Pad 2 including construction of an asphalt swale for stormwater runoff, and relocation of the Retrieval Dome from Pad 4 to Pad 2. The ventilation system will not be relocated during this phase, instead the ductwork will be extended from its existing location (near Pad 4) to the Retrieval Dome on Pad 2. Also, because the waste pile on Pad 2 is significantly longer than Pad 1 or Pad 4, new dome sections (approx. 60 feet) will be added onto the existing Retrieval Dome.

Finally, after retrieval operations are finished on Pad 2, Construction Phase IV-R will ensure that all equipment is either salvaged or disposed as appropriate.

3. Soil Removal

After the Retrieval Dome is erected, the remaining tuff over the working face of the stack will be removed by a vacuum truck, supplemented by hand loading tuff into wheelbarrows as needed. The truck will be operated outside the dome by extending a duct under the enclosure fabric. A worker will guide the duct across the top of the stack to pick up the small clumps of tuff. Larger clumps will be hand loaded into a wheel barrow. The fillet of tuff across the front of the stack, and that which extends along the

sides near the working face, will be removed by hand and the vacuum truck. When the fillet has been dropped below the top row of waste packages, the crates will be otherwise supported until the working face has been brought into a stable, stepped configuration. As the working face of the stack retreats, the soil removal operation will be repeated several times.

When all of the tuff has been removed from the working face, an air sample will be drawn from within the plywood and plastic cover. Along with the continued monitoring throughout entire project, this sample will help Health Physics (HPT) and Industrial Hygienist (IHT) Technicians determine the extent of respiratory protection required during the removal of the plywood and plastic sheeting. After tuff removal, the plastic and plywood cover material will be disposed as appropriate.

4. Waste Package Retrieval

After the tuff has been removed from the working face and unnecessary dirt removal equipment removed from the working area, waste package retrieval can begin. Retrieval equipment will include forklifts, CAMs, a HEPA-filtered vacuum cleaner, and HEPA-filtered ventilation system. A forklift with a custom boom/hoist/cage attachment will be used to retrieve steel drums.

The waste package configuration within the stack can vary, but the most common arrangement consists of crates stacked along the sides and ends of individual storage cells, with drums stacked in the center. Crates are seldom stacked more than two high (with the largest crates on the bottom), and drums are commonly stacked four high. Waste package data, including an identification number, radioisotopic data, LANL waste content code, waste generator, weight, and the date the package was sealed are readily available from the TRU waste database. The database information will be available at the work site so that workers will know the nature of the waste in each package before it is handled.

a. Crates

Because FRP crate construction was not standardized when the waste was packaged, crate handling during waste retrieval cannot be standardized. The exact retrieval method used will be determined on a case-by-case basis. One method for crate retrieval may be to remove all waste packages around the individual crate, attach a long section of horizontally suspended I-beam (strongback) with fabric slings (which are spread to prevent crushing the top of the container), and lift the crate by strong back with a small crane or a forklift. An alternate method for FRP crate removal may involve using a large capacity forklift. If the bottom of the crate is significantly degraded, a metal sheet will be slid under the crate and the slings will pick the crate up from this new metal base. All such damaged crates will be repaired or overpacked before they leave the work area by placing the damaged container on a new plywood base and constructing a plywood crate around the old one.

Recent interviews (October, 1993) with technicians, who worked on the TRU Pads in the late 1980's, revealed that some crates may contain liquids. The interviews

revealed two sources for this potential liquid. Rain water is one potential source. The rainwater may be present because the crates were left outside for significant periods before they were covered with a plastic tarp and overburden. The second source for the potential liquids is associated with capped process piping; process piping which was used in conjunction with the gloveboxes. Though all piping was drained (as thoroughly as possible) and capped before placement into the crates, it is difficult for the Laboratory to ensure there are no residual liquids remaining within the capped pipes. Therefore, crates must be handled on a case by case basis, but all crates will be checked for rainwater and drained of rainwater as necessary. After each crate is inspected to ensure crate integrity, the crate will be sent directly to the appropriate storage dome. Again, because it may be nearly impossible to ensure any particular crate has absolutely no liquids within it, all crates will be stored on additional containment areas when placed in the appropriate storage dome.

b. Drums

Steel drums will usually be retrieved by the forklift with a custom boom/hoist/cage attachment. This device allows the forklift boom to extend across the stepped face of the stack to reach a drum in the top layer and lift it into a protected, supported position while it is lowered to the floor. The device utilizes the normal hydraulic power and control system on a forklift, supplemented by a small hydraulic hoist. Remote controls will allow the forklift operator and a technician next to the drum being retrieved to operate the hoist.

Drum retrieval will begin with an inspection of the drum on the stack. The forklift operator will then place the extended boom point over the drum, and a worker on the stack will attach a drum lifting device to the drum. The forklift operator will lift the drum and move the cage to a position where the drum is encircled by a cage to prevent it from falling. The operator will then move the forklift back from the stack, and place the drum on the floor well out of the path of the operation. Another worker will then uncouple the drum-lifting device, clean the dust and dirt from the drum using a HEPA-filtered vacuum cleaner, and survey thoroughly for contamination.

During this time, local ventilation will be drawing air from the foot of the stack and from the floor level where the drums are being placed. This local ventilation will supplement the room (work area) ventilation. The number of drums removed at one time will vary, but will average about 24 per day.

Damaged or severely corroded drums will be overpacked as early in the retrieval process as practical. The precise handling technique will vary according to the drum location, the extent of contamination (if any), and the physical characteristics of the drum contents. Drum overpacks will be assigned the same identification number as the drum they contain and labeled before they are transferred to the storage dome.

When corrosion is less severe and before the drum is moved, the drum wall thickness will be determined by an ultrasonic thickness gauge . The decision whether to overpack will be made on the basis of the remaining drum wall thickness. Although severely corroded drums will not require venting, overpacked drums will have lids that

have a HEPA filter vent in place before overpacking operations begin with an absorbent between the 55 gallon drum and the overpack.

Drums that potentially contain liquids may be examined by real time radiography (RTR) after they are vented. If liquids do appear in the RTR examination, these drums will be overpacked with an absorbent between the 55 gallon drum and the overpack. If the RTR is not available or is not fuctioning correctly, drums that contain a waste matrix with a likelihood to contain free liquids will be overpacked with an absorbent between the 55 gallon drum and the overpack. Any drum either identified by the RTR as a container with free liquids or identified as a drum which contains a waste matrix with a probability to have free liquids will be stored within an area with additional containment inside the appropriate storage dome.

5. Drum-Venting System

The next step in the process (within the Retrieval Dome work area) is to vent the drums, as necessary, to ensure they do not contain an explosive mixture of gases in the headspace. Drums will be placed, one at a time, into the skid mounted Drum Venting System (DVS) where the drum lid will be punctured and a gas sample drawn. The explosivity of the gas mixture will be determined, and a HEPA-filtered vent will be installed. If a drum actually contains an explosive mixture, it will either be purged or simply allowed to aspirate until a safe mixture is attained. 55 gallon vented drums will be taken to the Drum Preparation Facility for cleaning.

6. Transportation

The next step in the process is to remove retrieved waste packages from the Retrieval Dome and transport them either to the Drum Preparation Facility or directly into storage. Transport vehicles will be loaded in the Retrieval Dome's work area. The equipment used to manipulate packages will usually be a forklift, rigged with either forks or a boom. Crates and newly overpacked drums will be taken directly to storage, while all other drums will be taken to the Drum Preparation Facility. The vehicles used to transport waste packages within TA 54 will be either stake bed trucks or trailers that have been selected to achieve the minimum lifting and handling requirements. Closed transport vehicles will not be necessary because adequate surge capacity at each point in the retrieval and storage process will ensure that the waste is not moved during inclement weather.

7. Drum Preparation

Drums received at the Drum Preparation Facility will be unloaded by forklift to the ground where they will be transferred onto multi-wheeled dollies to be cleaned, inspected, surveyed for contamination and surface radiation levels, and supplied with appropriate barcode and other identification labels. Cleaned drums will then be sent to storage.

8. Storage Operations

Within the storage domes, the waste packages will be handled by common commercial equipment such as forklifts with drum lifting attachments, strongbacks, and slings. The forklifts will normally be propane fueled, although diesel fueled equipment already on site will be used for assistance and backup as necessary. Other equipment in the storage enclosures will include an assortment of survey instruments, CAMs, eye wash stations and fire extinguishers.

Crates will be arranged in rows, one high and one wide, with at least 28 inches between rows to allow for inspection. 55-gallon drums of similar waste will be banded together in groups of four on wooden pallets which are then stacked three high in rows at least 28 inches apart. Overpacked drums will receive similar treatment except that they will be placed on larger pallets and stacked only two high. Any container, from the TRU Pads, that has been confirmed to contain liquid will be segregated within the operating storage dome to an area of additional containment. Whenever waste packages are moved, the waste package identification numbers, their origin and destination, and package changes (overpack volume and/or dimensions) will be documented and used to update the TRU waste database.

COMPLIANCE SCHEDULE: Attachment "C" (10/25/93)

Complete[1]	LANL[2]	Submit Preliminary Construction Design Criteria for storage domes 1,4,A,B,C, and D (hereinafter referred to as Area G TRU Storage Units).
Complete	NMED	Issue initial comments for design document submitted 07/01/93.
Complete	LANL	Submit Part B application, including Title II (Definitive Design) documentation, for Area G TRU Storage Units.
Complete	NMED	Conclude Administrative Completeness Review of the permit application.[3] Issue a Notice of Deficiency, if necessary.
11/05/93	LANL	Submit a request to the Secretary or Designee for permit modification.
11/15/93	LANL	Submit a complete response to NMED's Notice of Deficiency, if issued, for the Administrative Completeness Review.
12/13/93	LANL	Hold a public meeting regarding the permit modification request.
12/17/93	NMED	Conclude initial Technical Completeness Review of the permit application. Issue a Notice of Deficiency, if necessary.
01/21/94	LANL	Submit a complete response to NMED's Notice of Deficiency, if issued, for initial Technical Completeness Review.
02/04/94	NMED	Conclude final Technical Completeness Review of the permit application.
02/07/94	NMED	Either approve the modification request, with or without changes, and modify the permit accordingly; deny the modification request; require that the modification request follow procedures for Class III modifications; or notify LANL that the Secretary or Designee will decide on the request within the next thirty days.[4]
02/18/94	LANL	Submit additional information as requested by NMED on 02/07/94.
03/08/94	NMED	Secretary or Designee issues final decision on permit modification.

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09/30/98	LANL	Complete Pad #1 Retrieval.
09/30/2000	LANL	Complete Pad #4 Retrieval.
[Effective Date Of Consent Order]/2003[5]	LANL	Complete pad retrieval and have all wastes from Area G hazardous waste storage Pad #'s 1,2 and 4 placed into Area G TRU Storage Units.

Notes

1. The first milestones predate the agreement and have been accomplished.

2. For the purposes of this Compliance Schedule, "LANL" means the respondents, the Regents of the University of California and the Department of Energy.

3. For the purposes of this Compliance Schedule, "Permit Application" means only those portions related to the Area G TRU Storage Units.

4. In the event that a determination is made that it is necessary to follow Class III procedures, the schedule shall be extended according to regulation to account for the additional time required to comply.

5. See Consent Agreement Attachment "A" (Secretary's Final Order).