

California Environmental Protection Agency Department of Toxic Substances Control

HAZARDOUS WASTE FACILITY PERMIT

Owner: United States Department of Energy
1301 Clay Street, Suite 700N
Oakland, California 94612

Operator: University of California/Lawrence
Livermore National Laboratory and
United States Department of Energy
P.O. Box 808, L-871
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EPA ID Number:	CA 2890090002
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Pursuant to Section 25200 of the California Health and Safety Code, this Hazardous Waste Facility Permit is hereby issued jointly to the University of California/Lawrence Livermore National Laboratory and the United States Department of Energy for the operation of the Explosive Waste Treatment Facility at Lawrence Livermore National Laboratory - Site 300.

The issuance of this permit is subject to the conditions set forth in Attachment A which consists of 15 pages (and any other exhibits).



James M. Pappas
James M. Pappas, Chief
Northern California Permitting Branch

Issuance Date: October 9, 1997

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ATTACHMENT A

HAZARDOUS WASTE FACILITY PERMIT

Lawrence Livermore National Laboratory - Site 300
Explosives Waste Treatment Facility
Corral Hollow Road
Tracy, California 94551

EPA ID. No. CA 2890090002

I. DESCRIPTION OF FACILITY

A. Ownership, Operations, and Location

The University of California/Lawrence Livermore National Laboratory (LLNL) and the United States Department of Energy (DOE), hereinafter referred to as "Permittee", have applied to the California Environmental Protection Agency, Department of Toxic Substances Control for a permit to allow LLNL and DOE to construct and operate the Explosives Waste Treatment Facility (EWTF) at the LLNL Experimental Test Site (commonly known as Site 300) near Tracy, California. The EWTF, to be located at Building 845 (or B845), will replace the existing Building 829 High Explosives Open Burn Treatment Facility (B829) and will consist of two open burning (OB) units and one open detonation (OD) unit. One of the two OB units will consist of a metal burn pan with a remote-controlled cover while the other will consist of a burn cage. A burn-supply storage building, a fuel tank, an earthen berm, and a magazine (used to store blasting caps, igniters, and other initiators) will also be installed in the OB Area. The OD unit will consist of a gravel firing pad and B845. B829 is currently operating under an enforcement action until a new treatment facility is constructed. After treatment in either the OB unit or OD unit, the treatment residues consisting mostly of ash, will be placed in approved containers and stored in one of two storage units at the EWTF. Storage unit S-1 will have a permitted storage capacity of 275 gallons (5 55-gallon drums equivalent) and storage unit S-2 will have a permitted storage capacity of 110 gallons (2 55-gallon drums equivalent). S-1 will be located in an area near the burn-supply storage building and S-2 will be located near B845. No reactive explosives wastes will be allowed to be stored in these units.

Site 300 is owned by the United States Department of Energy and jointly operated by the Regents of the University of California (UC) and the Department of Energy. Site 300 covers approximately 11 square miles of land along Corral Hollow Road, about 8 miles southwest of Tracy, and about 12 miles east of LLNL's Livermore site in Livermore. Site 300 is a field test facility for theoretical and developmental work and has been used since 1953 for testing nonnuclear, high-explosives compounds and for conducting particle-beam research.

During research and development, processing, testing, and detonation of high-explosives materials, hazardous waste is generated. The hazardous wastes include bulk explosives that may have been chemically altered during testing or storage, pieces or powders resulting from experiments, scraps of explosives resulting from machining operations, laboratory equipment and packaging that is visibly contaminated with explosives, and other residuals of explosives wastes. These explosives wastes from Site 300 or the Livermore site are sent either directly to the EWTF for treatment or sent to the permitted Explosives Waste Storage Facility for storage prior to treatment onsite at the EWTF or shipment offsite to an authorized treatment or disposal facility.

The OD unit will treat no more than 350 pounds of explosive wastes at any one time. The OB units will be limited to no more 150 pounds of explosive wastes in the burn pan and no more than 260 pounds of explosive and explosives-contaminated wastes (50 pound Net Explosive Weight) in the burn cage at any one time.

B. Compliance with California Environmental Quality Act (CEQA)

The California Environmental Protection Agency, Department of Toxic Substances Control has issued a proposed Negative Declaration for this project in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) The proposed Negative Declaration states that, based on the initial study conducted, DTSC finds that the project will not have significant adverse effect on the environment. If this permit is approved, DTSC will complete and file a Notice of Determination, certifying that the Negative Declaration is in compliance with the provisions of CEQA.

II. GENERAL CONDITIONS

A. Effect of Permit

1. The issuance of this permit by the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC) does not release the Permittee from any liability or duty imposed by federal or state statutes and regulations or local ordinances, except the obligation to obtain this permit. In particular, unless otherwise specifically provided in this permit, the Permittee shall comply with the provisions of the Health and Safety Code (HSC), Division 20, Chapter 6.5 and the California Code of Regulations (Cal. Code Regs.), Title 22, Division 4.5.
2. Issuance of this permit by DTSC does not prevent DTSC from adopting or amending regulations, issuing administrative orders, or obtaining judicial orders which impose requirements which are in addition to or more stringent than those in existence at the time this permit was issued, and does not prevent the enforcement of these requirements against the Permittee. The Permittee shall comply with any such additional or more stringent requirements in addition to the requirements and conditions specified in the permit. Where appropriate, this permit is also subject to HSC Sections 25159.6 and 25159.7 relating to the incorporation of federal regulations in the absence of equivalent State regulations.
3. This permit does not convey any property rights of any sort or any exclusive privilege.
4. Unless explicitly defined elsewhere in this permit, terminology used in this permit is defined in Health and Safety Code, Division 20, Chapter 6.5 and the California Code of Regulations, Title 22, Division 4.5.

B. Requirement to Submit Information

All information, reports, submittals, or notices required by this permit shall be submitted to the Northern California Permitting Branch Chief in DTSC's Berkeley office.

C. Consent to Entry by DTSC Representatives

The Permittee, by accepting this permit, consents to entry by any authorized representative of DTSC or of the local health officer at any reasonable hour of the day in order to carry out the purposes of the Hazardous Waste Control Law, HSC, Section 25100 *et seq.*, including, but not limited to the activities listed in HSC, Section 25185 and Title 22, Cal. Code Regs., Section 66270.30(i).

D. Specific Conditions

1. The Permittee shall comply with the general facility standards contained in Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 2.
2. The Permittee shall comply with preparedness and prevention requirements contained in Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 3.
3. The Permittee shall comply with the contingency plan and emergency procedure requirements contained in Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 4.
4. The Permittee shall comply with the manifest system, recordkeeping and reporting requirements contained in Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 5, and Section 66270.30(l).
5. The Permittee shall comply with the closure and, if applicable, post-closure requirements contained in Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 7.

E. Land Disposal Restrictions

1. The Permittee shall comply with applicable provisions of the land disposal restrictions as found in Title 22, Cal. Code of Regs., Division 4.5, Chapter 18.
2. The Permittee shall retain at Site 300 or LLNL's Livermore site, until closure of the facility, a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation related to the management of all wastes (for on-site or off-site treatment, storage or disposal) subject to land disposal restrictions. Any documentation retained at the Livermore site shall be produced within four (4) hours when requested by DTSC.
3. The Permittee shall retain on-site, a current waste analysis plan describing how and when wastes or treatment residues will be tested to comply with the land disposal restriction regulations.

F. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination or a notification of anticipated noncompliance or planned changes (except as provided in Title 22, Cal. Code Regs., Section 66270.42(a)), does not stay any permit condition. Except as provided in Title 22, Cal. Code Regs., Section 66270.42(a), a new facility permit condition or a modification of an existing facility permit condition shall become effective on the date specified in DTSC's written notice of approval of the permit modification, pursuant to Title 22, Cal. Code Regs., Sections 66270.42 and/or 66271.14.

G. Need to Halt or Reduce Activity

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

H. Severability

The provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

I. Permit Expiration

In accordance with Title 22, Cal. Code Regs., Section 66270.51, this permit and all conditions therein will remain in effect beyond the permit expiration or termination date, until the effective date of a new permit, if the Permittee has submitted a timely and complete application (both Part A and Part B) for a new permit and, through no fault of the Permittee, DTSC has not issued a new permit. In accordance with Title 22, Cal. Code Regs., Section 66270.10(h), a timely and complete application for a new permit shall be submitted at least one hundred and eighty (180) calendar days before this permit expires, unless permission for a later date is granted in writing by DTSC.

J. 24-Hour Reporting

The Permittee shall report to DTSC any incidents of noncompliance with the conditions of this permit and any of the provisions of Title 22, Cal. Code Regs., Division 4.5 or HSC, Division 20, Chapter 6.5, which may endanger health or the environment, pursuant to the reporting requirements in Title 22, Cal. Code Regs., Section 66270.30(1)(6).

K. Certification of Construction

The Permittee shall give notice to DTSC as soon as possible, and, in any event, at least thirty (30) calendar days in advance of, any planned physical alterations or additions to the permitted facility. In addition, prior to commencement of the treatment, storage, or transfer of hazardous wastes at a new facility or modified portion of an existing facility, the Permittee shall comply with the requirements contained in Title 22, Cal. Code Regs., Section 66270.30(1)(2).

L. Operation at Night

No wastes handling operation shall be initiated after 6:00 p.m. Pacific Standard Time..

M. Part B of the Hazardous Waste Facility Permit Application (Operation Plan)

1. By the issuance of the permit, the Part B Permit Application consisting of the "Operation Plan for Site 300 Explosive Waste Treatment Facility, Lawrence Livermore National Laboratory, September 1995" and the "Environmental & Exposure Assessment for Site 300 Explosive Waste Treatment Facility, September 1996" are hereby approved. The Part B Permit Application and any subsequent revisions thereto, subject to the permit modification requirements contained in Title 22, Cal. Code Regs., Sections 66270.41 and 66270.42, are by this reference made part of this permit.
2. The Permittee shall operate and maintain the EWTF in accordance with the Part B Permit Application.
3. In the event of any conflict between this permit and the Part B Permit Application, the most stringent provisions shall control.
4. The Part B Permit Application and this document shall be maintained at the EWTF and place of business at all times until closure is completed.

N. General Responsibilities of Operator

1. Compliance

The Permittee shall comply with all conditions of this permit in accordance with Title 22, Cal. Code Regs., Section 66270.30. The Permittee shall comply with all laws, regulations, permits, zoning conditions, and all other requirements established by federal, state, and local agencies.

2. Transfer of the Permit

This permit may be transferred to a new Permittee only if it is modified or revoked and reissued pursuant to Title 22, Cal. Code Regs., Section 66270.40. The Permittee shall notify the Northern California Permitting Branch Chief, in writing, of a proposed change in ownership of this facility no later than ninety (90) calendar days prior to the proposed date of transfer. A copy of the notification, required under Title 22, Cal. Code Regs., Section 66264.12(c), informing the new Permittee of the requirements of this permit and Title 22, Cal. Code Regs., Division 4.5, Chapters 14 and 20, shall be submitted to DTSC prior to the transfer.

3. Operation and Maintenance

- a. The Permittee shall at all times maintain and operate the EWTF to minimize the possibility of a fire, explosion, or any unplanned release of hazardous waste or hazardous waste constituents to air, soil, or surface water, which could threaten human health or the environment.
- b. The Permittee shall maintain all equipment, pipes, and lines used at the facility to handle, transfer, pump, or store hazardous wastes in a manner that prevents the leaking and spilling of hazardous wastes.
- c. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control in accordance with Title 22, Cal. Code Regs., Section 66270.30(e).

4. Submittal of Requested Information

The Permittee shall furnish to DTSC, within the time specified by DTSC in its request, any relevant information which DTSC may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to DTSC, upon request, within the time requested, copies of records required to be kept by this permit.

5. Hazardous Waste List

The Permittee shall maintain a current list of hazardous wastes that are treated at the EWTF. The Permittee shall, as necessary, update the hazardous waste list presented in the approved Part B Permit Application, in accordance with the permit modification requirements contained in Title 22, Cal. Code Regs., Section 66270.42 (a), (b) or (c). Any additions to the list must be approved by DTSC, in accordance with the requirements of Title 22, Cal. Code Regs., Sections 66270.41 and/or 66270.42, prior to their inclusion.

6. Anticipated Noncompliance

The Permittee shall give advance notice to DTSC of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements, in accordance with Title 22, Cal. Code Regs., Section 66270.30(1)(2).

7. Noncompliance

In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize or correct releases to the environment, and shall carry out all measures as are reasonable to prevent and correct adverse impacts on human health or the environment. The Permittee shall report to DTSC and to the California Office of Emergency Services (800) 852-7550 any circumstances that may endanger public health or the environment immediately upon becoming aware of the incident.

8. Incomplete and/or Incorrect Information

Where the Permittee becomes aware that any relevant fact was not included in a permit application, or incorrect information was submitted in a permit application or in any report to DTSC, the Permittee shall promptly correct the error or omission by submitting the correct information to DTSC.

O. Signatory Requirement

1. The Permittee shall comply with the signatory requirements in Title 22, Cal. Code Regs., Section 66270.11, for all applications, reports or information submitted to DTSC.
2. The Permittee shall provide documentation of an agreement for operation of the facility between the property owner and the facility owner, if different, from the property owner.

P. Waste Minimization Certification

The Permittee shall certify annually, by March 1st for the previous year ending December 31, that:

1. Site 300 has a program in place to reduce the volume and toxicity of all hazardous wastes which are generated by the Site 300 operations to the degree determined by the Permittee to be economically practicable.
2. The method of storage, treatment, or disposal is the only practicable method or combination of methods currently available to the facility which minimizes the present and future threat to human health, safety, and the environment.

The Permittee shall make this certification, in accordance with Title 22, Cal. Code Regs., Section 66270.11. The Permittee shall submit the certification to the Northern California Permitting Branch Chief by April 1st of each year and shall record and maintain on-site such certification in the facility Operating Record.

Alternatively, the Permittee may satisfy the above permit condition (II.P) by notifying the Northern California Permitting Branch Chief by March 1st of each year, that the Permittee will make the required waste minimization certification in the annual report to DTSC as required in Section 66264.75, Title 22, Cal. Code Regs.

Q. Waste Minimization Conditions

1. The Permittee shall comply with the Hazardous Waste Source Reduction and Management Review Act requirements that are specified in the HSC, Sections 25244.19, 25244.20 and 25244.21, and any subsequent applicable statutes or regulations promulgated thereunder.
2. The Permittee shall submit a copy of all reviews, plans, plan summaries, reports and report summaries required by Section II.Q.1 above, to the Northern California Permitting Branch Chief on or before January 2, 1998, and by January 2nd every four years thereafter.

The Northern California Permitting Branch Chief may require the Permittee to submit a more detailed status report explaining any deviation from, or changes to, the approved waste minimization plan.

III. SPECIAL CONDITIONS

A. Prohibition of Disposal

Hazardous wastes shall not be disposed of at the EWTF.

B. Permitted and Prohibited Waste Identification

1. Permitted Wastes

- a. This permit authorizes the Permittee to treat the wastes listed in Table 1 of this permit, as specified in Table 1 of this permit, subject to the conditions of this permit and the requirements of Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 16.

2. Wastes Prohibited

- a. Any hazardous wastes not listed in Section III.B.1 or Section II.N.5 of this permit shall not be handled at the EWTF.
- b. The Permittee shall not accept any explosives wastes generated outside the boundaries of Site 300 for treatment at the EWTF with the exception of explosives waste from LLNL's Livermore site (EPA ID No. 2890012584).

C. Permitted Activities at the EWTF

1. Treatment at the EWTF

- a. The Permittee shall not exceed the following treatment capacity of each treatment unit as specified below:
 - (1) Open Detonation Unit: 350 pounds (Gross Weight) per treatment event.
 - (2) Open Burn Pan: 150 pounds (Gross Weight) per treatment event.
 - (3) Open Burn Cage: 260 pounds (Gross Weight), 50 pounds (Net Explosive Weight) per treatment event.
- b. The Permittee shall not treat or otherwise handle any biological, radioactive or mixed wastes at the EWTF.
- c. The Permittee shall not perform more than one open detonation event per day.

- d. The Permittee shall not perform more than one open burn event in either the Burn Pan or Burn Cage per day.
- e. No sooner than two (2) hours prior to any open detonation event, the Permittee shall calculate the predicted offsite noise level. Results of all modelling results shall be kept in the facility's operating record.
- f. The Permittee shall perform open burn and open detonation events in accordance with the regulations and requirements of the San Joaquin Valley Unified Air Pollution Control District and California Air Resources Board.
- g. The Permittee shall only perform open burn events on days approved for burning operations by the San Joaquin Valley Unified Air Pollution Control District.
- h. The Permittee is allowed to perform up to a maximum of one hundred (100) open detonation and one hundred (100) open burn events per calendar year.

2. Storage at the EWTF

- a. The Permittee is allowed to store residues (ash) resulting from treatment operations at the EWTF subject to the conditions of this permit and the requirements of Title 22, Cal. Code Regs., Division 4.5, Chapter 14, Article 9.
- b. Treatment residues shall be stored in containers only in the storage units designated as "S-1" and "S-2".
- c. The Permittee may store up to a maximum of 275-gallons (5 55-gallon drums equivalent) of treatment residues in "S-1" and up to a maximum of 110-gallons (2 55-gallon drums equivalent) of treatment residues in "S-2".
- d. The Permittee is authorized to store treatment residues in the permitted storage units up to a maximum of one calendar year from date of acceptance.
- e. The Permittee shall not store any reactive explosives wastes at the EWTF.

D. Labeling Requirements

The Permittee shall comply with the labeling requirements of Title 22, Cal. Code Regs., Section 66262.34.

E. Waste Analysis Plan

All sampling and analytical procedures shall be consistent with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, Standard Methods for Wastewater Analysis. Any modifications to these methods shall be submitted to DTSC with an explanation of the modification made and the need for the modifications.

F. Authority to Construct

1. No later than sixty (60) calendar days prior to the beginning of the construction of EWTF, the Permittee shall submit to DTSC a schedule detailing the dates and length of time required for construction.
2. No later than thirty (30) calendar days prior to the beginning of any construction activity at the EWTF, the Permittee shall submit to DTSC the preconstruction survey for any threatened or endangered species or habitats specified in the August 1992 Final Environmental Impact Statement and Environmental Impact Report for the Continued Operation of Lawrence Livermore National Laboratory and Sandia National Laboratories, Livermore, CA (1992 EIS/EIR).
3. Upon the completion of permit condition III.F.2, the Permittee may construct the EWTF, as specified in Section IV of the Operation Plan for the Site 300 Explosives Waste Treatment Facility, Lawrence Livermore National Laboratory, September 1995.
4. No later than sixty (60) calendar days after the completion of the EWTF, the Permittee shall submit to DTSC an engineer's certification stating that the EWTF has been constructed in accordance with the approved Part B application.
5. The Permittee shall notify DTSC of any significant deviations from the plans provided in the Part B application at least fourteen (14) calendar days prior to construction.
6. No later than one hundred and twenty (120) calendar days after completion of the EWTF, the Permittee shall submit to DTSC as-built drawings of the EWTF.
7. The Permittee shall notify DTSC, in writing, at least fourteen (14) calendar days prior to commencement of treatment of explosives wastes at the EWTF to allow DTSC the opportunity to inspect the EWTF. If DTSC declines to inspect or fails to respond to the Permittee's written notification, the Permittee may commence with the treatment of explosive wastes at the EWTF after the 14 day notification period.

IV. COMPLIANCE SCHEDULE

A. Reporting

The Permittee shall comply with the compliance schedule requirements of Title 22, Cal. Code Regs., Section 66270.30(1)(5).

B. Summary of Compliance Schedule

The following compliance time schedule items shall be met:

<u>Task</u>	<u>Due Date</u>
1. Submit to DTSC a construction schedule showing dates and length of time required for constructing the EWTF as required by permit condition III.F.1.	No later than sixty (60) calendar days prior to start of construction of the EWTF
2. Submit to DTSC the preconstruction survey for threatened or endangered species or habitats specified in the 1992 EIS/EIR as required by permit condition III.F.2.	No later than thirty (30) days prior to the beginning of construction activity at the EWTF.
3. Submit to DTSC an engineer's certification stating that the EWTF was built in accordance with the Approved Part B application, as required by permit condition III.F.3.	No later than sixty (60) calendar days after completion of EWTF.
4. Submit to DTSC as-built drawings of the EWTF as required by permit condition III.F.6.	No later than one hundred and twenty (120) calendar days after completion of construction of EWTF.

V. CORRECTIVE ACTION

On June 29, 1992, the United States Department of Energy (DOE), Lawrence Livermore National Laboratory signed a Federal Facility Agreement under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120 with the United States Environmental Protection Agency, the California Department of Toxic Substances Control, and the California Regional Water Quality Control Board. Section VII of this agreement, "Statutory Compliance/RCRA-CERCLA Integration," states that the parties intend to integrate DOE's CERCLA response obligations and RCRA corrective action obligations which relate to the releases of hazardous substances, hazardous wastes, pollutants, or contaminants. The parties intend that remedial action selected, implemented, and completed under this Agreement shall be deemed by the parties to be protective of human health and the environment such that remediation of releases covered by this Agreement shall obviate the need for further corrective action under RCRA with respect to those releases. The parties agree that with respect to releases of hazardous waste covered by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to CERCLA. Therefore, based on the terms of the Federal Facility Agreement, corrective action at Site 300 is currently being addressed by DTSC's Northern California Site Mitigation Branch.

TABLE 1
WASTE STREAMS PERMITTED FOR
TREATMENT AT THE EXPLOSIVE WASTE TREATMENT FACILITY

Waste Form Number	Waste Stream Name	Waste Stream Description	U.S. EPA Waste Codes	Treatment Method
1	Explosives Requiring Detonation	Waste explosives in such a configuration that LLNL requires they be treated by open detonation.	D003, P081, P112, U117	Open Detonation
2A	Waste Explosives: Explosive Material and Formulations	Waste explosives powder, pastes, liquids, and pieces derived from either pure materials or formulated products.	D003, P081, P112, U117, U234	Open Burning in Burn Pan
2B	Waste Explosives: Small Explosives Assemblies or Devices	Waste explosives which are cased in a small assembly or device, such as a detonator.	D003, P081, P112, U117, U234	Open Burning in Burn Pan
3A	Wastes From Explosives Collections System: Clarifier Wastes	Explosives contaminated sludge mixed with other debris.	K044, K045, K046, K047, D003	Open Burning in Burn Cage
3B	Wastes From Explosives Collections System: Weir System Waste	Explosives contaminated sludge mixed with other debris.	K044, K045, K046, K047, D003	Open Burning in Burn Cage
4	Reactive Debris	Debris contaminated with energetic materials.	D003, F002, F003, F005	Open Burning in Burn Cage

From Tables III-1 and III-2, Operation Plan for Site 300 Explosives Waste Treatment Facility, Lawrence Livermore National Laboratory, September 1995.