



Lawrence Livermore National Laboratory

April 11, 2024

Ms. Geraldina Grunbaum
Senior Air Quality Specialist
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
ggrunbaum@baaqmd.gov

Subject: *Site 300 Experimental Test Site Prescribed Burning Smoke Management Plan, Lawrence Livermore National Laboratory*

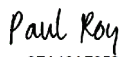
Dear Ms. Grunbaum:

Lawrence Livermore National Laboratory (LLNL) has submitted the 2024 Prescribed Burning Smoke Management Plan (SMP) for LLNL Site 300 Experimental Test Site to Bay Area Air Quality Management District (BAAQMD) through the State's Prescribed Fire Information Reporting System (PFIRS). Enclosed with this letter is a copy of the electronic submittal.

Pursuant to Section 5-113 of BAAQMD Regulation 5 *Open Burning* (November 20, 2019), any public agency conducting a prescribed burn for the purpose of wildfire prevention is exempt from the operation fees requirements of Section 5-411 of this rule. A public agency seeking to rely on this exemption shall request that it be applicable upon submittal of the smoke management plan. As described in LLNL's 2024 SMP, one of the objectives of conducting a prescribed burn at LLN Site 300 is wildfire prevention, and therefore, LLNL respectfully requests that the prescribed burning operation fees be waived.

If you have any questions regarding this submittal or require additional information, please contact Wai-Man So of my staff at (925) 424-4411.

Sincerely,

DocuSigned by:
 4/11/2024
6EA10AF95384431...
Paul Roy, Group Leader
Waste and Air Quality Office
Environmental Functional Area



Ms. Geraldina Grunbaum, BAAQMD
LLNL Site 300 Experimental Test Site Prescribed Burning Smoke Management Plan

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Enclosure: PFIRS Submittal – 2024 Prescribed Burning Smoke Management Plan for LLNL
Site 300 Experimental Test Site

Distribution w/enclosure (PDF):

Amaden, Christopher (NNSA/LFO)
Balaban, Nicholas (NNSA/LFO)
Baylosis, Maggie
DeLeyos, Bing
Dibley, Valerie
Diregolo, Brian (ACFD)
Fechser, Matt
Fratanduono, Meg
Heard, Marcus (NNSA/LFO)
Johnston, Dana
Lindsay, Royce
Mishra, Vijay (NNSA/LFO)
Nakasaki, Steve
Naranjo, Alberto
Roy, Paul
Ruiz, Alex
Rutherglen, Cory (ACFD)
Ryza, Michelle
Saabye, Alexandra
Sharry, John
So, Wai-Man
Vaughan, Quentin
Wilson, Scott
Wise, Tammy (NNSA/LFO)
Woodrow, Lisa
Woollett, Jim

Site 300 Prescribed Burn File
UCM: Site 300, Prescribed Burn

ENCLOSURE 1

Prescribed Fire Information Reporting System (PFIRS) Submittal –
2024 Prescribed Burning Smoke Management Plan (SMP) for
LLNL Site 300 Experimental Test Site

LLNL S300 2024 - BAAQMD

General Information

| | |
|------------------------------------|---|
| Primary Responsible Person | Wai-Man So |
| Email | so5@llnl.gov |
| Landowner(s) Name(s)* | US Government-Department of Energy |
| Landowner Mailing Address* | 7000 East Ave., Livermore CA 94550 |
| Field Contact Name* | Brian Diregolo |
| Field Contact 24-hour Phone/Pager* | 9257248040 |

Project Description

| | |
|---|--|
| Description of Objectives* | Use prescribed burns to reduce the threat of unwanted fires, manage and enhance plant biodiversity and wildlife habitats, to assure minimal impacts on the environment and cultural resources, and to minimize the occurrence of unnaturally intense fires by reducing the amount of vegetation that can fuel larger, more catastrophic fires. LLNL evaluated the following burning alternatives and concluded that mowing/disking is too steep for the terrain, which is unsafe, and grazing and sterilization will cause adverse impacts to native plants onsite. |
| Projected Burn Schedule* | From May 2024 through August 2024 |
| Ignition start and end times* | 9 AM to 3:30 PM |
| Expected Duration of Project (hours or days)* | Ignition: 4 Hours Combustion: 1 Hour Burndown: 1 Hour |

Review Burn Blocks

| Project 15 (Plot 16W) | | | | | | |
|-------------------------------------|------------------|---|---|-----------------------|--------------|---------------|
| Acreage and Fuels Information | | | | | | |
| Name | Acres | Unit Type | Fuel Condition | | | |
| Project 15 (Plot 16W) | 132 | Broadcast | This plot is characterized as ungrazed perennial (native) grassland, with natural standing. The average height of the grass is 12-16 inches. | | | |
| Location Information | | | | | | |
| Legal Description | Latitude* | Longitude* | Mean Elevation (ft)* | County | | |
| Plot 16W | 37.663503 | -121.571637 | 1391 | Alameda | | |
| Fuel and PM10 Emissions Information | | | | | | |
| Vegetation | % Consumption | Acres | Fuel Loading | Total Tonnage | PM10 per Ton | PM10 per Type |
| Grass/Forb | 100 | 132 | 1 | 132 | 0.007 | 0.92 |
| Totals | -- | 132 | -- | 132 | -- | 0.92 |
| Ignition Prescription | | | | | | |
| Wind Speed (mph) | Wind Direction | Mixing Height (ft) | Temperature (F) | Relative Humidity (%) | | |
| 0-20 | 0-360 | min. 500 feet above ground level | 50-100 | 15-75 | | |
| Smoke Sensitive Receptors | | | | | | |
| No SSAs have been entered. | | | | | | |

Project 14 (Plot 11)

| Acreage and Fuels Information | | | | | | |
|-------------------------------------|------------------|---|---|-----------------------|--------------|---------------|
| Name | Acres | Unit Type | Fuel Condition | | | |
| Project 14 (Plot 11) | 7 | Broadcast | This plot is characterized as ungrazed perennial (native) grassland, with natural standing. The average height of the grass is 12-16 inches. | | | |
| Location Information | | | | | | |
| Legal Description | Latitude* | Longitude* | Mean Elevation (ft)* | County | | |
| Plot 11 | 37.640086 | -121.580062 | 750 | Alameda | | |
| Fuel and PM10 Emissions Information | | | | | | |
| Vegetation | % Consumption | Acres | Fuel Loading | Total Tonnage | PM10 per Ton | PM10 per Type |
| Grass/Forb | 100 | 7 | 1 | 7 | 0.007 | 0.05 |
| Totals | -- | 7 | -- | 7 | -- | 0.05 |
| Ignition Prescription | | | | | | |
| Wind Speed (mph) | Wind Direction | Mixing Height (ft) | Temperature (F) | Relative Humidity (%) | | |
| 0-20 | 0-360 | min. 500 feet above ground level | 50-100 | 15-75 | | |
| Smoke Sensitive Receptors | | | | | | |
| No SSAs have been entered. | | | | | | |

Smoke Management Components

Specifications for monitoring and verification of meteorological conditions and smoke behavior before and during the burn:

All burns will be conducted with personnel and equipment as set forth in the Alameda County Policy (Site 300 Prescribed Burn). A minimum of ten chief officers, captains, and firefighters will be present at all burns. The incident Commander will manage the project in a manner that will minimize impact to sensitive areas and the public. The project size, firing tactics, and burn duration will be adjusted to meet these goals. LLNL will submit ignition authorization request the day prior to each burn via the PFIRS. LLNL will obtain a spot weather forecast from the National Weather Service the day before any burn.

Specifications for disseminating project information to the public:

In advance of burn activities, the Office of Government and External Affairs at LLNL notifies neighbors and nearby residents of Site 300 of the intent to perform the burn projects. This notification is conducted by mail, local libraries, web using current contact information, and social media platforms such as LinkedIn, Twitter, etc. LLNL points of contact are provided along with the LLNL representative so individual questions or concerns can be addressed.

What contingency actions will be taken during the burn to reduce exposure if smoke intrusions impact any sensitive receptor areas?

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | Halt ignition, except as needed to maintain control of fire |
| | Allow fire to burn to contingency control lines |
| <input checked="" type="checkbox"/> | Suppress fire |
| | Begin immediate mop up |
| | Begin mop up within hours of problem identification |
| | Complete mop up within hours of initiation |
| | Discontinue mop up if favorable conditions return |
| <input checked="" type="checkbox"/> | Other (explain) Reduce the size of the burn plot by developing new control lines. Initiate mop-up operations once fire is controlled. Focus suppression and mop-up operations on area of greater smoke production. |

Project Maps and Documents

A map must be attached to this Smoke Management Plan that identifies nearby smoke sensitive areas, burn unit perimeters, available interior control lines (if suitable for this project), and areas subject to smoke inversions due to the burn project. Also, the map must indicate estimated path of unacceptable smoke transport. (map opens in new tab)

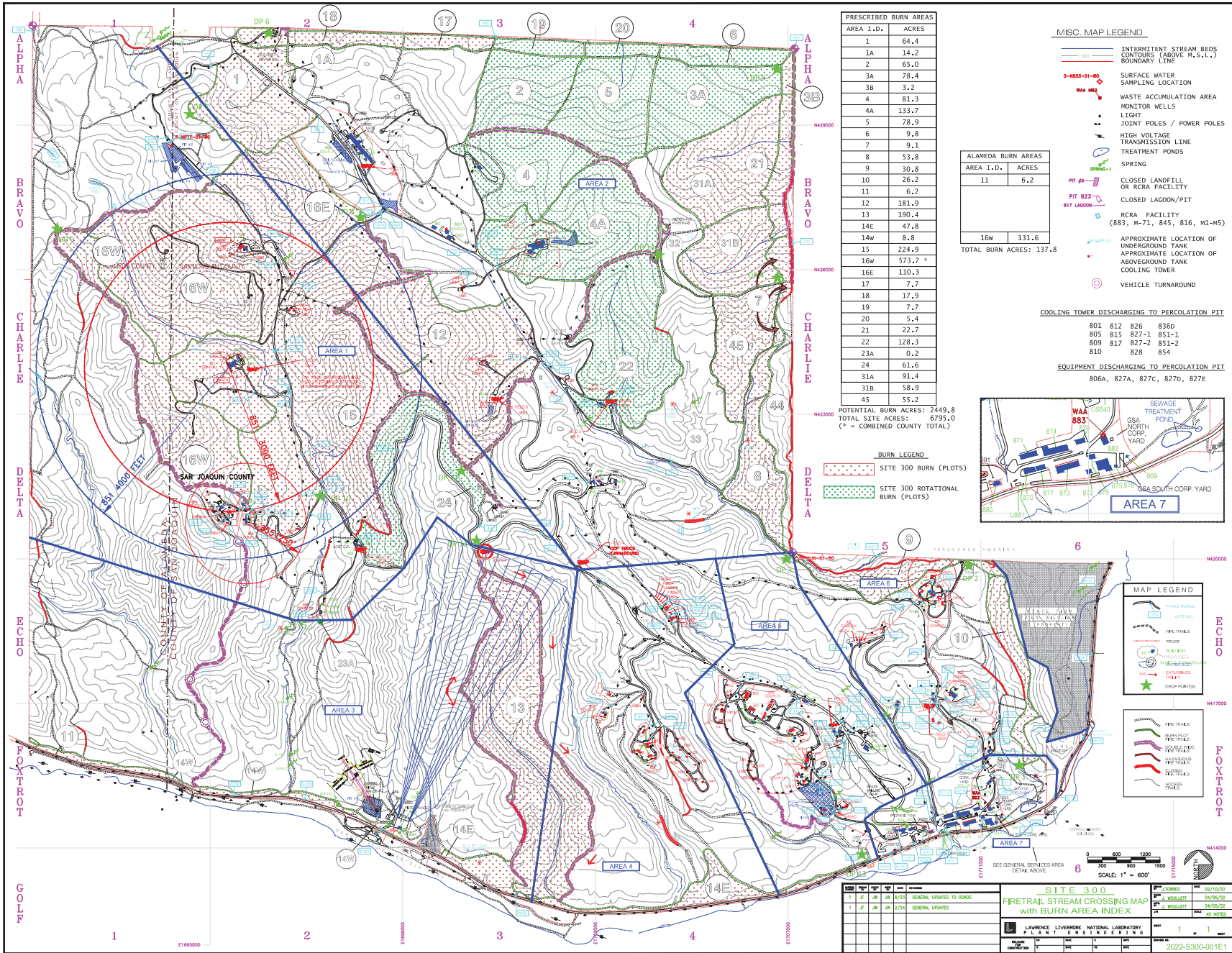
View units on Google Maps:

[Google Map](#)



Smoke Management Plan History

| | |
|------------------|---|
| Submitted by: | Wai-Man So |
| Date Submitted: | Thu Apr 11, 2024 @ 11:14 AM |
| Approval letter: | No approval letter has been attached. |

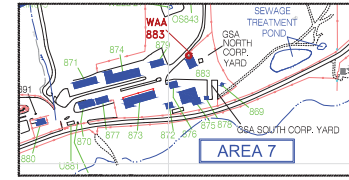


| PRESCRIBED BURN AREAS | |
|------------------------------|---------|
| AREA I.D. | ACRES |
| 1 | 64.4 |
| 1A | 14.2 |
| 2 | 65.0 |
| 3A | 78.4 |
| 3B | 3.2 |
| 4 | 81.3 |
| 4A | 133.7 |
| 5 | 78.9 |
| 6 | 9.8 |
| 7 | 9.1 |
| 8 | 53.8 |
| 9 | 30.8 |
| 10 | 26.2 |
| 11 | 6.2 |
| 12 | 181.9 |
| 13 | 190.4 |
| 14E | 47.8 |
| 14W | 8.8 |
| 15 | 224.9 |
| 16W | 573.7 * |
| 16E | 110.3 |
| 17 | 7.7 |
| 18 | 17.9 |
| 19 | 7.7 |
| 20 | 5.4 |
| 21 | 22.7 |
| 22 | 128.3 |
| 23A | 0.2 |
| 24 | 61.6 |
| 31A | 91.4 |
| 31B | 58.9 |
| 45 | 55.2 |
| POTENTIAL BURN ACRES: 2449.8 | |
| TOTAL SITE ACRES: 6795.0 | |
| (* = COMBINED COUNTY TOTAL) | |

- MISC. MAP LEGEND**
- INTERMITTENT STREAM BEDS
 - CONTOURS (ABOVE M.S.L.)
 - BOUNDARY LINE
 - 3-MESS-DI-00 SURFACE WATER SAMPLING LOCATION
 - WAA 882 WASTE ACCUMULATION AREA
 - MONITOR WELLS
 - LIGHT
 - JOINT POLES / POWER POLES
 - HIGH VOLTAGE TRANSMISSION LINE
 - TREATMENT PONDS
 - SPRING
 - PIT #8 CLOSED LANDFILL OR RCRA FACILITY
 - PIT #23 CLOSED LAGOON/PIT
 - RCRA FACILITY (883, M-71, 845, 816, M1-M5)
 - APPROXIMATE LOCATION OF UNDERGROUND TANK
 - APPROXIMATE LOCATION OF ABOVEGROUND TANK
 - COOLING TOWER
 - VEHICLE TURNAROUND

| ALAMEDA BURN AREAS | |
|-------------------------|-------|
| AREA I.D. | ACRES |
| 11 | 6.2 |
| 16W | 131.6 |
| TOTAL BURN ACRES: 137.8 | |

- COOLING TOWER DISCHARGING TO PERCOLATION PIT**
- 801 812 826 836D
 - 805 815 827-1 851-1
 - 809 817 827-2 851-2
 - 810 828 854
- EQUIPMENT DISCHARGING TO PERCOLATION PIT**
- 806A, 827A, 827C, 827D, 827E



- BURN LEGEND**
- SITE 300 BURN (PLOTS)
 - SITE 300 ROTATIONAL BURN (PLOTS)

- MAP LEGEND**
- INTERMITTENT STREAM BEDS
 - FIRE TRAILS
 - PERCOLATION PIT
 - WASTE ACCUMULATION AREA
 - MONITOR WELLS
 - LIGHT
 - JOINT POLES / POWER POLES
 - HIGH VOLTAGE TRANSMISSION LINE
 - TREATMENT PONDS
 - SPRING
 - PIT #8 CLOSED LANDFILL OR RCRA FACILITY
 - PIT #23 CLOSED LAGOON/PIT
 - RCRA FACILITY
 - APPROXIMATE LOCATION OF UNDERGROUND TANK
 - APPROXIMATE LOCATION OF ABOVEGROUND TANK
 - COOLING TOWER
 - VEHICLE TURNAROUND

| NO. | DATE | BY | DESCRIPTION | SCALE |
|-----|----------|----|--------------------------|-----------|
| 1 | 02/15/22 | JL | GENERAL UPDATES TO ROADS | 1" = 600' |
| 1 | 04/05/22 | JL | GENERAL UPDATES | 1" = 600' |

SITE 300 FIRETRAIL STREAM CROSSING MAP WITH BURN AREA INDEX

LAWRENCE LIVINGSIDE NATIONAL LABORATORY PLANNING ENGINEERING

PROJECT NO. 2022-S300-001E1

DATE OF LAST UPDATE: 03/08/23