



Environmental Protection & Compliance Division National Nuclear Security Administration

Los Alamos National Laboratory
P.O. Box 1663, M969
Los Alamos, NM 87545

Los Alamos Field Office
3747 West Jemez Road, A316
Los Alamos, NM 87544
505-665-7314/Fax 505-667-5948

Symbol: EPC-DO: 24-019

LA-UR: 24-20348

Locates Action No.: N/A

Date: FEB 06 2024

Mr. Shea Schleman
Compliance Reporting Manager
New Mexico Environment Department, Air Quality Bureau
525 Camino de los Marquez, Suite 1
Santa Fe, NM 87505-1816

Subject: Semi-Annual Monitoring Report for Los Alamos National Laboratory, AI No. 856, Title V Operating Permits P100-R2M4 and P100-R2M5 for July 1 – December 31, 2023

Dear Mr. Schleman:

Enclosed is Los Alamos National Laboratory's (LANL) Semi-Annual Monitoring Report for the second half of 2023 for Operating Permits P100-R2M4 and P100-R2M5. This Semi-Annual Monitoring Report covers the July 1 – December 31, 2023 (2023H2) reporting period.

This submission is required by permit condition A109.A. of Title V Operating Permits P100-R2M4 and P100-R2M5, and is submitted within 45 days following December 31, 2023, the end of the six-month reporting period.

There were two deviations from permit conditions during this reporting period.

1. Permit Condition A604.B Operational Limitations – Asphalt Production - Operations on seven days in October and November commenced prior to one half hour after sunrise in the morning. Start times ranged from 2 minutes prior to allowable start time up to 57 minutes prior to the allowable start time. Corrective actions were completed on December 15, 2023 and include additional training for all operators and a sunrise and sunset data table posted in the operational control room at the asphalt plant.
2. Permit Condition A607.G Asphalt Plant Fugitive Dust - A Method 22 test was not conducted for all screens, conveyor drop points, and hoppers for the month of August. The plant was in operation in the beginning of August before it was identified that CO and NOx emissions were

high in the initial results from the stack test. The plant shut down normal operations to test the burner to determine why the burner was not operating efficiently. Plant operations were conducted periodically through the month in order to test the burner, however the completion of the Method 22 test was likely overlooked due to the unusual operations that month. Corrective actions were completed by training additional facility personnel in Method 22 tests and facility staff will conduct this test as early in the month as possible in order to ensure the test is completed each month in the event of unforeseen shutdowns, operational changes or limited hours that would prevent the ability to perform the Method 22 test.

If you have any questions or comments regarding this submittal or would like to discuss the submittal in greater detail, please contact Robert Gallegos at (505) 901-3824 or Marjorie Stockton at (505) 695-4508.

Sincerely,

JESSICA
MOSELEY (Affiliate)

Digitally signed by JESSICA
MOSELEY (Affiliate)
Date: 2024.01.26 13:24:47
-07'00'

Jessica Moseley
Acting Division Leader
Environmental Protection and Compliance
Triad National Security, LLC
Los Alamos National Laboratory

Sincerely,

THEODORE
WYKA

Digitally signed by
THEODORE WYKA
Date: 2024.02.06
17:09:08 -07'00'

Theodore A. Wyka
Manager, Los Alamos Field Office
National Nuclear Security Administration
U.S. Department of Energy
Los Alamos Field Office

Attachment(s): Attachment 1 Semi-Annual Monitoring Report for Los Alamos National Laboratory, AI No. 856, Title V Operating Permits P100-R2M4 and P100-R2M5 for July 1 – December 31, 2023

Copy: Theodore A. Wyka, NA-LA, theodore.wyka@nnsa.doe.gov
Karen E. Armijo, NA-LA, karen.armijo@nnsa.doe.gov
Robert A. Gallegos, NA-LA, robert.gallegos@nnsa.doe.gov
Silas DeRoma, NA-LA, silas.deroma@nnsa.doe.gov
Stephen N. P. Jochem, NA-LA, stephen.jochem@nnsa.doe.gov
S. Elizabeth Gilbertson, EM-LA, sarah.gilbertson@em.doe.gov
Michael A. Mikolanis, EM-LA, michael.mikolanis@em.doe.gov
Brian G. Harcek, EM-LA, brian.harcek@em.doe.gov
Hai Shen, EM-LA, hai.shen@em.doe.gov
John H. Evans, EM-LA, john.h.evans@em.doe.gov
Kelly J. Beierschmitt, Triad, DDOPS, beierschmitt@lanl.gov
James P. Johnson, Triad, DDOPS, jjp@lanl.gov
Steven A. Coleman, Triad, ALDESHQ, scoleman@lanl.gov
Jennifer E. Payne, Triad, ALDESHQ, jpayne@lanl.gov
Jeannette T. Hyatt, Triad, EWP, jhyatt@lanl.gov
Steven L. Story, Triad, EPC-DO, story@lanl.gov
Sarah S. Holcomb, Triad, EPC-CP, sholcomb@lanl.gov
Marjorie B. Stockton, Triad, EPC-CP, mstockton@lanl.gov
Vincent A. Carretti, Triad, EPC-CP, vcarretti@lanl.gov

Maxine M. McReynolds, Triad, GC-ESH, mcreynolds@lanl.gov
Christopher C. Stoneback, Triad, GC-ESH, stoneback@lanl.gov
Taylor A. Valdez, Triad, PCIP-DO, tvaldez@lanl.gov
William Z. Alexander, N3B, william.alexander@em-la.doe.gov
Robert E. Edwards III, N3B, robert.edwards@em-la.doe.gov
Dana C. Lindsay, N3B, dana.lindsay@em-la.doe.gov
Erik S. Loechell, N3B, erik.loechell@em-la.doe.gov
Christian T. Maupin, N3B, christian.maupin@em-la.doe.gov
Bradley A. Smith, N3B, bradley.smith@em-la.doe.gov
Jeffrey L. Stevens, N3B, jeffrey.stevens@em-la.doe.gov
Triad, EPC-CP Title V Permit File
Triad, EPC-CP Title V Monitoring Report File
Triad, EPC-CP Correspondence File
lasomailbox@nnsa.doe.gov
aldeshqcorrespondence@lanl.gov
epccorrespondence@lanl.gov
eshq-dcrm@lanl.gov
gc-esh@lanl.gov
interface@lanl.gov

ATTACHMENT 1

Semi-Annual Monitoring Report for Los Alamos National Laboratory, AI No. 856, Title V Operating Permits P100-R2M4 and P100-R2M5 for July 1 – December 31, 2023

EPC-DO: 24-019

LA-UR-24-20348

Date: FEB 06 2024



Reporting Submittal Form

| GENERAL FACILITY AND REPORT INFORMATION | | | | | |
|--|--|---------------------------|--|--|--|
| Owner Name: U.S. Department of Energy National Nuclear Security | | | Facility Name: Los Alamos National Laboratory | | |
| AI Number: 856 | Activity Number: 000856-02072024-01 | | Title V Permit Number: P100-R2M5 | NSR Permit Number: 2195-R98 | |
| Report Type: Title V Semi-Annual Monitoring Report - - | | | | Permit Condition: | |
| Monitoring Start: 07/01/2023 | Monitoring End: 12/31/2023 | Report Due: 02/14/2024 | Report Certified: | Status: Prepared | |
| Preparer Name: Vincent Carretti | | | Title: Environmental Scientist | | |
| Office Phone: 505-665-1658 | Office Ext: | Cell Phone: | E-mail: vcarretti@lanl.gov | | |
| Certifier Name Theodore Wyka | | | Title: Manager | Responsible Official for Title V? Yes | |
| Office Phone: 505-665-5040 | Office Ext: | Cell Phone: | E-mail: theodore.wyka@nnsa.doe.gov | | |

| DEVIATION SUMMARY | |
|-------------------|--|
| No. | Permit Condition or Rule Citation |
| 1 | Permit Condition 607.G Asphalt Plant Fugitive Dust |
| 2 | Permit Condition A604.B Operational Limitations – Asphalt Production |

| DEVIATION INCIDENTS WITHOUT EERS | | | | |
|----------------------------------|---------------------|---------------------|-----------|--|
| Requirement | Deviation Start | Deviation End | Unit # | Detail |
| 607.G | 08/01/2023 12:00 AM | 08/31/2023 12:00 AM | TA-60-BDM | Cause: A Method 22 test was not conducted for all screens, conveyor drop points, and hoppers for the month of August. Description of Deviation: The plant was in operation in the beginning of August before it was identified that CO and NOx emissions were high in the initial results from the stack test. The plant shut down normal operations to test the burner to determine why the burner was not operating efficiently. Plant operations were conducted periodically through the month in order to test the burner, however the completion of the Method 22 test was likely overlooked due to the unusual operations that month. Corrective Action Taken: Additional facility personnel have been trained in Method 22 tests and facility staff will conduct this test as early in the month as possible in order to ensure the test is completed each month in the event of unforeseen shutdowns, operational changes or limited hours that would prevent the ability to perform the Method 22 test. |
| A604.B | 10/10/2023 12:00 AM | 11/07/2023 12:00 AM | TA-60-BDM | Cause: Operations on seven days in October and November commenced prior to one half hour after sunrise in the morning. These operations happened on October 10, 11, 26, and 31 and November 1, 2 and 7. Description of Deviation: The start time for operations is recorded in the daily log maintained at the asphalt plant. Operation start time was compared to the National Oceanic and |

| Requirement | Deviation Start | Deviation End | Unit # | Detail |
|-------------|-----------------|---------------|--------|--|
| A604.B | | | | Atmospheric Agency (NOAA) sunrise and sunset table for Los Alamos and it was determined that operations started prior to the allowable time on seven different occurrences. Start times ranged from 2 minutes prior to allowable start time up to 57 minutes prior to the allowable start time. Corrective Actions Taken: Corrective actions have been completed and include, additional training for all operators and a sunrise and sunset data table posted in the operational control room at the asphalt plant. Operators can quickly check the sunrise time and calculated allowable start time to ensure operational start up does not occur before the allowable 1/2 hour after sunrise time period, as well as the 1/2 hour before sunset time period for operational shut down in the evening. Corrective actions were completed on December 15, 2023. |

ATTACHMENTS

| Upload Date | Document Title | File Name |
|-------------|--------------------------------------|--|
| 02/13/2024 | 000856-02072024-01_RR | 000856-02072024-01_RR.zip |
| 02/12/2024 | 000856-02072024-01_RR | 000856-02072024-01_RR.zip |
| 02/07/2024 | 2023H2 Semi-Annual Monitoring Report | EPC-DO-24-019 2023H2 Semi-Annual Monitoring Report.pdf |

CERTIFICATION OF TRUTH, ACCURACY AND COMPLETENESS

I certify under penalty of law that I have had the opportunity to review, in human-readable format, the content of the electronic document to which I hereby certify and attest, and I further certify under penalty of law that, based on the information and belief formed after reasonable inquiry, the statements and information contained in this submission are true, accurate, and complete. I understand that making any false statement, representation, or certification of this submission may result in criminal penalties.

Certifier Name

Theodore Wyka

Date

02/13/2024

Title V Semi-Annual Monitoring for Permits P100-R2M4 & P100-R2M5

Title (TV) Permit Administration Amendment

On October 2, 2023, NMED AQB issued an Administrative Amendment to Operating Permit P100-R2M4. The Administrative Amendment P100-R2M5 revised the following:

A607 Asphalt Production - Other

C. Asphalt Plant Baghouse – Opacity

| |
|--|
| Requirement: Visible emissions from the rotary dryer/baghouse exhaust stack shall not equal or exceed an opacity of 20% or greater averaged over a (6) minute period. |
|--|

| |
|--|
| Monitoring: During periods of drum dryer operation, the permittee shall perform six (6) minute opacity readings on the rotary dryer/baghouse stack. Opacity readings shall be performed at least once per day during any day the drum dryer operates. The observations shall be conducted according to 40 CFR 60, Appendix A, Method 9. |
|--|

| |
|---|
| Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109. |
|---|

| |
|---|
| Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. |
|---|

E. Asphalt Plant Production Rate (Unit TA-60-BDM)

| |
|--|
| Requirement: To comply with the emission limits in Table 602.A (of Section A602), the asphalt plant shall limit asphalt production to less than or equal to 45,000 tons per year. |
|--|

| |
|---|
| Monitoring: The permittee shall monitor the total daily production rate. |
|---|

| |
|--|
| Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109. |
|--|

| |
|---|
| Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. |
|---|

For this Administrative Amendment, P100-R2M5, the facility can use one Semi-Annual Form which will cover both TV Permits P100-R2M4 and P100-R2M5.

Please note that this is a one-time authorization. Submittal forms for future Administrative Revisions will be evaluated on a case-by-case basis.

All future reports and notifications are required to be submitted to the Air Quality Bureau Compliance Reporting (AQBCR) application located at:

<https://www.env.nm.gov/air-quality/compliance-and-enforcement/>

Title V Semi - Annual Monitoring Report for Permit **P100-R2M5**

Part 1 – Monitoring Activity Reporting Requirements

A Semi-Annual Report of monitoring activities is due within 45 days following the end of every 6-month reporting period. The six month reporting periods start on January 1st and July 1st of each year.

A responsible official (as defined in 20.2.70.7.AE NMAC) shall certify the accuracy, truth and completeness of every report and compliance certification submitted to the Department as required by this permit. These certifications shall be part of each document. (20.2.70.300.E NMAC)

Compliance Certification Reports, Semi-Annual monitoring reports, compliance schedule progress reports, and any other compliance status information required by this permit shall be certified by the responsible official and submitted to:

Air Quality Bureau Compliance Reporting (AQBCR) application located at:

<https://www.env.nm.gov/air-quality/compliance-and-enforcement/>

New Mexico Environment Department
Air Quality Bureau
525 Camino De Los Marquez, Suite 1
Santa Fe, NM 87505-1816

B108 General Monitoring Requirements

(20.2.70. 302.A and C NMAC)

- A. These requirements do not supersede or relax requirements of federal regulations.
- B. The following monitoring and/or testing requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.
- C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Department's Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring.
- D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke monitoring period exemptions at B108.D(2), hours of operation shall be monitored and recorded.
 - (1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.
 - (2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.
 - (3) If invoking the monitoring period exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during the five year term of this permit.
- E. The permittee is not required to report a deviation for any monitoring or testing in a Specific Condition if the deviation was authorized in this General Condition B108.
- F. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable

load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.

- G. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.
- H. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance. All monitoring periods, unless stated otherwise in the specific permit condition or federal requirement, shall commence at the beginning of the 12 month reporting period as defined at condition A109.B.

B109 General Recordkeeping Requirements

(20.2.70.302.D NMAC)

- A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any applicable requirements that become effective during the term of this permit. The minimum information to be included in these records is (20.2.70.302.D.1 NMAC):
 - (1) equipment identification (include make, model and serial number for all tested equipment and emission controls);
 - (2) date(s) and time(s) of sampling or measurements;
 - (3) date(s) analyses were performed;
 - (4) the company or entity that performed the analyses;
 - (5) analytical or test methods used;
 - (6) results of analyses or tests; and
 - (7) operating conditions existing at the time of sampling or measurement.
- B. The permittee shall keep records of all monitoring data, equipment calibration, maintenance, and inspections, Data Acquisition and Handling System (DAHS) if used, reports, and other supporting information required by this permit for at least five (5) years from the time the data was gathered or the reports written. Each record shall clearly identify the emissions unit and/or monitoring equipment, and the date the data was gathered. (20.2.70.302.D.2 NMAC)
- C. If the permittee has applied and received approval for an alternative operating scenario, then the permittee shall maintain a log at the facility, which documents, contemporaneously with any change from one operating scenario to another, the scenario under which the facility is operating. (20.2.70.302.A.3 NMAC)
- D. The permittee shall keep a record describing off permit changes made at this source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. (20.2.70.302.I.2 NMAC)
- E. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for

malfunction emissions and routine and predictable emissions during startup, shutdown, and scheduled maintenance (SSM):

- (1) The owner or operator of a source subject to a permit, shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC - Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. (20.2.7.14.A NMAC) The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.
- (2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer's, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.
- (3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a description of the event. **Malfunction means** any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit.
- (4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)

B110 General Reporting Requirements

(20.2.70.302.E NMAC)

- A. Reports of required monitoring activities for this facility shall be submitted to the Department on the schedule in section A109. Monitoring and recordkeeping requirements that are not required by a NSPS or MACT shall be maintained on-site or (for unmanned sites) at the nearest company office, and

summarized in the semi-annual reports, unless alternative reporting requirements are specified in the equipment specific requirements section of this permit.

- B. Reports shall clearly identify the subject equipment showing the emission unit ID number according to this operating permit. In addition, all instances of deviations from permit requirements, including those that occur during emergencies, shall be clearly identified in the reports required by section A109. (20.2.70.302.E.1 NMAC)
- C. The permittee shall submit reports of all deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. These reports shall be submitted as follows:
 - (1) Deviations resulting in excess emissions as defined in 20.2.7.7 NMAC (including those classified as emergencies as defined in section B114.A) shall be reported in accordance with the timelines specified by 20.2.7.110 NMAC and in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC)
 - (2) All other deviations shall be reported in the semi-annual reports required in section A109. (20.2.70.302.E.2 NMAC).
- D. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.
- E. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.
- F. At such time as new units are installed as authorized by the applicable NSR Permit, the permittee shall fulfill the notification requirements in the NSR permit.
- G. Periodic Emissions Test Reporting: The permittee shall report semi-annually a summary of the test results.
- H. The permittee shall submit an emissions inventory for this facility annually. The emissions inventory shall be submitted by the later of April 1 or within 90 days after the Department makes such request. (20.2.73 NMAC and 20.2.70.302.A.1 NMAC)
- I. Emissions trading within a facility (20.2.70.302.H.2 NMAC)
 - (1) For each such change, the permittee shall provide written notification to the department and the administrator at least seven (7) days in advance of the proposed changes. Such notification shall state when the change will occur and shall describe the changes in emissions that will result and how these increases and decreases in emissions will comply with the terms and conditions of the permit.
 - (2) The permittee and department shall attach each such notice to their copy of the relevant permit.

FACILITY SPECIFIC REQUIREMENTS:

A109 Facility: Reporting

B. A Semi-Annual Report of actual emissions from all permitted sources unless otherwise specified in this permit is due within 90 days following the end of every 6-month reporting period as defined at Condition A109.A. Emission estimates of pollutants NO_x, CO, SO₂, VOC, TSP, PM₁₀, and PM_{2.5} shall not include fugitive emissions. Emission estimates of HAPs shall include fugitive emissions. Emission estimates shall not include Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources shall be estimated. The reports shall include a comparison of actual emissions that occurred during the reporting period with the facility-wide allowable emission limits at Table 106.B.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** September 27, 2023 **Tracking Number:** 000856-09262023-01

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: The Semi-Annual Emissions Report for January 1 - June 30, 2023, was submitted on September 27, 2023 within 90 days from the end of the reporting period as defined at Condition A109.A. The Semi-Annual Emissions Report for July 1 - December 31, 2023 is not due until 90 days following December 31, 2023, which is after the submission of this report.

EQUIPMENT SPECIFIC REQUIREMENTS:

| | |
|---|---|
| A605 Fuel Requirements – Asphalt Production | |
| A. Asphalt Plant Combustion Sources | |
| Requirement: Combustion sources located at the asphalt plant shall combust only those fuels allowed under condition III.A.3 of the NSR Permit GCP-3-2195G. | |
| Monitoring: N/A | |
| Recordkeeping: The permittee shall meet the recordkeeping requirements of GCP-3 and maintain records in accordance with Section B109. | |
| Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. | |
| Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below. | |
| <input type="checkbox"/> Yes | Date report submitted: _____ Tracking Number: _____ |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. |
| Comments: Requirement: Pipeline quality natural gas is used at the asphalt plant and is allowed under condition III.A.3 of the NSR permit GCP-3-2195GR1. | |
| Recordkeeping: Records are maintained in accordance with Section B109. | |
| Reporting: A109.A: This Semi-Annual Monitoring Report is submitted within 45 days allowed after the reporting period. | |
| A109.B: The January 1 - June 30, 2023 Semi-Annual Emissions Report was submitted on September 27, 2023 (Activity No.: 000856-09262023-01) within the 90 days allowed. The July 1 - December 31, 2023 Semi-Annual Emissions Report for Operating Permits P100-R2M4 and P100-R2M5 is due 90 days following December 31, 2023, which is after the submission of this report. | |
| A109.C: The 2023 Annual Compliance Certification Report for Operating Permits P100-R2M4 and P100-R2M5 (January 1 –December 31, 2023) will be submitted to NMED AQB and the U.S. Environmental Protection Agency (EPA) by January 30, 2024, within 30 days of December 31, 2023, the end of the 12-month reporting period. | |
| All reporting requirements are completed and submitted in accordance with Section B110. | |

A607 Asphalt Production – Other

A. Asphalt Plant Baghouse – Differential Pressure

Requirement: The baghouse shall be equipped with a device to continually measure the pressure drop across the baghouse.

Monitoring: The permittee shall monitor the differential pressure (inches of water) across the filters by the use of a differential pressure gauge. Pressure gauge readings and the time period the rotary dryer drum operates shall be recorded by a datalogger each time the rotary dryer drum is operating. The pressure data shall confirm whether the filter(s) are operating within the unit’s specifications.

Recordkeeping: The permittee shall manually record the baghouse pressure drop readings at least once each day the rotary drum dryer operates and maintain records of all baghouse differential pressure readings in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The baghouse is equipped with a magnehelic gauge connected to a data-logger to continually monitor the differential pressure across the baghouse.

Monitoring: The differential pressure data is used to confirm proper operation of the baghouse. The differential pressure is measured during rotary dryer drum operation as described below:

1. The differential pressure readings are taken every two minutes and the pressure drop data are recorded to the computer in the asphalt plant control room.
2. The asphalt plant operator manually records the differential pressure readings at each start-up and shutdown daily.

Recordkeeping: Recordkeeping conditions are met using a datalogger and the operator’s differential pressure entries at the start and end of each operation daily. The daily pressure drop records for plant operation are located in ATTACHMENT A607.A. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

B. Asphalt Plant Baghouse - Stack Height (Unit TA-60-BDM)

Requirement: The rotary dryer/baghouse exhaust stack shall be no less than 10 meters in height.

Monitoring: N/A

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The height of the asphalt plant stack has been measured and is no less than 10 meters. The stack is a permanent structure attached to the baghouse fan outlet and its height does not change.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

C. Asphalt Plant Baghouse – Opacity

Requirement: Visible emissions from the rotary dryer/baghouse exhaust stack shall not equal or exceed an opacity of 20% or greater averaged over a (6) minute period.

Monitoring: During periods of drum dryer operation, the permittee shall perform six (6) minute opacity readings on the rotary dryer/baghouse stack. Opacity readings shall be performed at least once per day during any day the drum dryer operates. The observations shall be conducted according to 40 CFR 60, Appendix A, Method 9.

Recordkeeping: The permittee shall maintain records of all opacity observations and in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Comments: Requirement/Monitoring: LANL has certified visible emissions (opacity) readers on-site who perform monthly six (6) minute opacity readings using the procedures in 40 CFR Part 60, Appendix A, Reference Method 9 to determine compliance with the opacity limitation when the Asphalt Plant is operational. No visible emissions exhibited an opacity of 20% or greater. Method 9 opacity reports for this reporting period are provided in ATTACHMENT A607.C.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

D. Asphalt Plant Baghouse – Fines Cleanout

Requirement: The permittee shall sequester or remove particulates collected by the control equipment to prevent wind-blown particulate emissions. Recycled baghouse fines shall be recycled into the drum mixer via a closed-loop system.

Monitoring: N/A

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Baghouse fines (particulates) are removed from the baghouse and cyclone by a screw conveyor. The removed fines are recycled into the asphalt production process via a closed loop system. Visible emissions from this system were not observed during this reporting period.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

E. Asphalt Plant Production Rate (Unit TA-60-BDM)

Requirement: To comply with the emission limits in Table 602.A (of Section A602), the asphalt plant shall limit asphalt production to less than or equal to 45,000 tons per year.

Monitoring: The permittee shall monitor the total daily production rate.

Recordkeeping: The permittee shall calculate a weekly rolling, 12-month total production rate and maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The asphalt plant production rate did not exceed 45,000 tons per year during this reporting period.

Monitoring: Asphalt production is monitored and recorded on a daily basis. The weekly rolling 12-month total is calculated and compared to the production limit set in this permit condition. Asphalt production amount is recorded daily in an operation log. The asphalt production rate for this reporting period did not exceed 45,000 tons per year. The daily operation logs and rolling totals are provided in ATTACHMENT A607.E.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

F. Asphalt Plant Operations – General

Requirement: The permittee shall:

- 1) Install, operate, and maintain equipment in accordance with standard operating procedures, and
- 2) equip and operate the asphalt processing equipment such as screens, conveyor belts, and conveyor transfer points with dust control systems to control particulate matter emissions, and
- 3) operate the Plant in accordance with NSR Permit GCP-3-2195G, Section III, A, B, C, D, E, F, and H.
- 4) Ensure that no visible emissions from the facility are observed crossing the perimeter of the restricted area for no more than 5 minutes during any 2 consecutive hours during facility operations.

Monitoring: The permittee shall perform all monitoring required under NSR Permit GCP-3-2195G.

Recordkeeping: The permittee shall maintain records of all standard operating procedures, records of all maintenance and/or replacement of dust control systems, and all records required under NSR Permit GCP-3-2195G, Section IV.B, and including records of actual hours of operation, records of all required monitoring, daily and weekly total asphalt production and the weekly rolling 12 month total production, number of haul truck trips daily including materials delivery and product, frequency of haul road sweeping, and copies of the applicant’s proposed maintenance requirements and records demonstrating conformance with said requirements. The permittee shall maintain records of all compliance test results for total suspended particulates (TSP), particulate matter (PM10), nitrogen oxides, carbon monoxide, and records of all opacity/visible emissions observations performed.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | | |
|-------------------------------------|------------|---|-------------------------|
| <input type="checkbox"/> | Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> | No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement:

- 1) No new equipment was installed during this monitoring period. The asphalt plant, Unit TA-60-ADM, started operation on June 15, 2023. This equipment will be incorporated into the Title V Permit within one year of start-up. Operational and maintenance requirements are contained in internal plant procedures that are followed by plant operation staff.
- 2) During start-up operations in June it was identified that dust collection and control systems were not in place at all transfer points. Corrective actions were completed on July 17, 2023 to include the installation of water spray to control dust.
- 3) The asphalt plant is operated in accordance with NSR Permit GCP-3-2195GR1, Section III A,B,C,D,E,F, and H.
- 4) EPA Reference Method 9 was used at the plant to determine the extent of visible emissions. Fugitive dust emissions from the plant did not cross the property boundary or exceed the five (5) minute visible emissions limit during any two consecutive hours of operation. EPA Method 9 reports are in ATTACHMENT A607.C and EPA Method 22 reports are in ATTACHMENT A607.G.

Monitoring: The Asphalt Plant started operation on June 15, 2023, so no preventative maintenance was required during this reporting period. See ATTACHMENT A607.F.

Recordkeeping: Recordkeeping conditions are met using the following methods: Standard operating procedures are

in place and available on site; maintenance and calibrations are performed annually. The asphalt plant just began operation so no calibration nor maintenance took place during this reporting period. The plant's operations logs contain the start time, stop time, daily and monthly hours of operation; asphalt production amounts; day when paved road was swept or watered; and the number of truck trips when the Asphalt Plant is operational. The rolling 12-month totals for production are calculated on the emissions calculation spreadsheet. Records located at the facility include fuel delivery tickets for fuel oil and asphalt oil, frequency of road sweeping, calibration procedures, and a procedure that outlines required maintenance. Compliance test results, Method 9, and Method 22 records are available on site.

The initial compliance stack test was conducted during the week of July 17 and concluded on July 20, 2023. The initial stack test showed high emissions of carbon monoxide. Although no limits were exceeded, LANL halted operations of the asphalt plant in order to tune the burner. The stack test for combustion emissions was conducted again on October 16, 2023 and the stack test report with results show significantly reduced carbon monoxide and nitrogen oxide emissions. In addition to tuning the burner for operation at altitude, it was also determined that the natural gas regulator that limits natural gas feed to the burner was malfunctioning and allowing significantly more gas to be fed to the burner. The natural gas regulator was replaced, and internal portable gas analyzer testing was conducted to ensure proper operation of the unit before the second stack test was conducted. This test along with the original stack test conducted in July show that emissions for all pollutants are significantly below permitted emission limits.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A607 Asphalt Production – Other

G. Asphalt Plant Fugitive Dust

Requirement: Fugitive dust emissions from asphalt processing equipment, including the system used to recycle fabric filter fines, shall exhibit no more than five (5) minutes of visible emissions during any two consecutive hours. This condition does not apply to fugitive dust emissions from other support operations such as storage piles, front end loaders, or materials handling around the asphalt process equipment.

Monitoring: The permittee shall perform a Method 22 test at least once per month on all screens, conveyor drop points, and hoppers during the months the asphalt plant operates. The duration of the test shall be a minimum of ten (10) minutes. If visible emissions are observed for more than two (2) minutes, the Method 22 test shall continue for two (2) hours or until scheduled operation of the plant ends.

Recordkeeping: The permittee shall maintain records of all equipment standard operating procedures, records of all maintenance and/or replacement of dust control systems, results of all visible emissions observations, and all records required under NSR Permit GCP-3-2195G.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The asphalt plant did not emit fugitive dust that exceeded five (5) minutes of visible emissions during any two (2) consecutive hours.

Monitoring: EPA Method 22 tests are typically performed once per month when the plant operates. The EPA Method 22 readings for this monitoring period are provided in ATTACHMENT A607.G. LANL has certified visible emission (opacity) readers on-site who perform monthly ten (10) minute readings using 40 CFR Part 60, Appendix A, Reference Method 22 to determine compliance with the opacity limitation when the Asphalt Plant is operational. No visible emissions exhibited an opacity of 20% or greater during this reporting period.

Recordkeeping: The standard operating procedure, maintenance and repair records, and visible emissions observations are maintained at the plant site. All other records required under the NSR permit are also available on site.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A707 Other – Beryllium Activities

A. Operational Requirements – Beryllium Activities

| Source | Operating Requirements | Process Limits | Control Equipment Requirements |
|--------|------------------------|----------------|--------------------------------|
|--------|------------------------|----------------|--------------------------------|

| | | | |
|---|--|--|---|
| Sigma Facility TA-3-66 | Beryllium operations will consist of registered metallographic operations, electroplating /chemical milling, and relocated machining, and arc melting/casting sources. | None | Metallographic operations and electroplating /chemical milling operations shall be conducted in aqueous solution or lubricant bath. Emissions from machining and arc melting/casting operations shall be exhausted through a HEPA filtration system prior to entering the atmosphere. |
| Beryllium Technology Facility TA-3-141 | The continuous emission monitor will be maintained in accordance with the Laboratory's quality program. | Beryllium processed by the facility will not exceed 10,000 pounds per calendar year. Beryllium processed by the facility will not exceed 1000 pounds per day. | All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere. Powder operations, other than closed glovebox operations, and machining operations, other than the processes used in metallographic preparation shall be exhausted through a cartridge filtration system then through the HEPA filtration system. Metallographic preparation activities shall be conducted in lubricating baths or equivalent. (NSR permit 634-M2) |
| Target Fabrication Facility TA-35-213 | Beryllium operations will consist of only beryllium machining and associated cleanup activities. | None | All processes shall be exhausted through a HEPA filtration system prior to entering the atmosphere. |
| Plutonium Facility TA-55-PF4 | Regulated beryllium activities will be ducted through the pollution control equipment and out the north or south stack of PF-4. (NSR Permit 1081-M1-R3, Specific Condition 1.b., partial, revised) The electric furnace shall be enclosed in a glove box, have a | 44 pounds of beryllium (20 kg) in any 24 hour period; 1100 pounds/year (500 kg/year) using a rolling total. (NSR Permit 1081-M1-R3, Specific Condition 1.c.) | Weld cutting, weld dressing, metallography, and electric furnace operations shall be controlled with 4 HEPA filters with a control efficiency of 99.95% each. (NSR Permit 1081-M1-R1, Condition 3, partial, revised) The non-accessible filters shall be replaced when the pressure drop across the filter either falls to levels indicating filter breakthrough or increases to levels indicative of |

| | | | |
|--|--|--|---|
| | <p>maximum operating temperature of 1600 degrees centigrade, and an inside volume space less than 1.1 cubic feet. (NSR Permit 1081-M1-R6, Specific Condition 1.d., partial, revised)</p> | | <p>excessive loading. (NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> |
|--|--|--|---|

B. Emissions Monitoring Requirements – Beryllium Activities

| Source | Monitoring Requirements |
|--|--|
| Sigma Facility TA-3-66 | A log shall be maintained during operations, which shows the number of metallographic specimens used in the metallographic operation and the weight or volume of Be samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. |
| Beryllium Technology Facility TA-3-141 | <p>Facility exhaust stack will be equipped with a continuous emission monitor used to measure beryllium emissions.</p> <p>Cartridge and HEPA filters shall be equipped with differential pressure gauges that measure the differential pressure across the cartridge and HEPA filters while the exhaust fans are in operation. (NSR permit 634-M2)</p> |
| Target Fabrication Facility TA-35-213 | Records of the stack emission test results (see Condition 2 of NSR Permit No. 632) and other data needed to determine total emissions shall be retained at the source and made available for inspection by the Department. |
| Plutonium Facility TA-55-PF4 | <p>The HEPA filtration systems shall be equipped with a differential pressure gauge that measures the differential pressure (inches of water) across the HEPA filters while the exhaust fans are in operation.</p> <p>(NSR Permit 1081-M1-R3, Condition 11)</p> <p>Control efficiency shall be verified by daily HEPA filter pressure drop tests and annual HEPA filter challenge tests of accessible filters.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> <p>The furnace temperature shall be continuously monitored and the flow rate from the glove box containing the furnace shall be measured once during each metal melt operation.</p> <p>(NSR Permit 1081-M1-R6, Condition 11, revised)</p> |

C. Recordkeeping Requirements – Beryllium Activities

| Source | Recordkeeping Requirements |
|--|--|
| Sigma Facility TA-3-66 | Recordkeeping for this source is specified in Condition A707.B. |
| Beryllium Technology Facility TA-3-141 | <p>Generate and maintain beryllium inventory records to demonstrate compliance with the 10,000 pounds of beryllium per calendar year and the 1000 pounds of beryllium per day processing limit.</p> <p>Record pressure drop across the cartridge and HEPA filters once per day that the exhaust fans are in operation and the facility is occupied.</p> <p>Record control equipment maintenance and repair activities. (NSR permit 634-M2)</p> |
| Target Fabrication Facility TA-35-213 | Recordkeeping for this source is specified in Condition A707.B. |
| Plutonium Facility TA-55-PF4 | <p>Stack emission test results and facility operating parameters including a daily record of the pressure drop measured across each appropriate HEPA plenum filtration stage, when the exhaust fans are operating.</p> <p>(NSR Permit 1081-M1-R3, Condition 9, partial, revised)</p> <p>A copy of the annual HEPA test, a log of the daily pressure drop readings and a control equipment maintenance log shall be kept. This documentation shall be provided upon request.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> <p>A log of the filter replacement shall be kept and shall be made available to the Department personnel upon request.</p> <p>(NSR Permit 1081-M1-R1, Condition 3, partial, revised)</p> <p>The permittee shall keep records of the number and weight of classified parts processed during a 24-hour period and year using a rolling total. Records shall be made available to properly cleared Department personnel upon request.</p> <p>(NSR Permit 1081-M1-R3, Condition 9, partial, revised)</p> <p>The permittee shall for each use of the furnace record the following operating parameters: metal type, theoretical melting point of the metal, metal melt duration once melting is commenced, maximum furnace temperature and glove box flow rate.</p> <p>(NSR Permit 1081-M1-R6, Condition 9, partial, revised)</p> <p>A record of the furnace's internal volume shall be maintained at the facility.</p> <p>(NSR Permit 1081-M1-R6, Condition 9, partial, revised)</p> |

D. Reporting Requirements – Beryllium Activities

| Source | Reporting Requirements |
|--|---|
| Sigma Facility TA-3-66 | The permittee shall submit reports described in Section A109 and in accordance with Section B110. |
| Beryllium Technology Facility TA-3-141 | <p>Anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date.</p> <p>Actual date of initial startup of each new or modified source within fifteen (15) days after the startup date.</p> <p>Provide the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.</p> <p>Notify the Department within 60 days after each calendar quarter of the facility's compliance status with the permitted emission rate from the continuous monitoring system.</p> <p>Provide any data generated by activities described in the Quality Assurance Project Plan (QAPP) that will assist the Air Quality Bureau's Enforcement Section in determining the reliability of the methodology used for demonstrating compliance with the permitted emission rate within 45 days of such a request.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> |
| Target Fabrication Facility TA-35-213 | The permittee shall submit reports described in Section A109 and in accordance with Section B110. |
| Plutonium Facility TA-55-PF4 | <p>Stack emission test results and facility operating parameters will be made available to Department personnel upon request.</p> <p>Reports may be required to be submitted to the Department if inspections of the source indicate noncompliance with this permit or as a means of determining compliance.</p> <p>The permittee shall submit reports described in Section A109 and in accordance with Section B110.</p> |

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** August 2, 2023; November 6, 2023 **Tracking Number:** Activity No.: 000856-08022023-01; Activity No.: 000856-11062023-01

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: A707.A Operational Requirements - Beryllium Activities:

TA-3-66 Electroplating/chemical milling operations are conducted in aqueous solution or lubricant bath. Emissions from machining and arc melt/casting operations are exhausted through a HEPA filtration system prior to entering the atmosphere.

TA-3-141 The continuous emission monitor is maintained in accordance with LANL's quality program. Beryllium processing records are available on-site for inspection. No process limits were exceeded during this reporting period. All processes are exhausted through a HEPA filtration system prior to entering the atmosphere. Powder operations,

other than closed glovebox operations, and machining operations, other than the processes used in metallographic preparation, are exhausted through a cartridge filtration system and then through the HEPA filtration system. Metallographic preparations are conducted in lubricating baths or equivalent.

TA-35-213 All processes are exhausted through a HEPA filtration system prior to entering the atmosphere. Beryllium operations consist of only beryllium machining and associated cleanup activities. NSR Permit 632-M1 was issued on April 26, 2023 allowing for a second lathe and coating operation. This equipment is still in the process of being installed and has not yet started operation, and will be incorporated into the Title V Permit within one year of start-up.

TA-55-PF4 All beryllium activities are ducted through the facility's pollution control equipment and out the north or south stack of PF-4. Weld cutting, weld dressing, and metallography operations are controlled using four (4) HEPA filters with a control efficiency of 99.95% each. The non-accessible filter is replaced when the pressure differential across the filter indicates breakthrough or excessive loading.

No process limits were exceeded during this reporting period.

The electric furnace did not operate during this reporting period.

A707.B - Emissions Monitoring Requirements - Beryllium Activities:

TA-3-66 Log books are maintained for the weight or volume of samples processed in the electroplating/chemical milling, machining, and arc melting/casting operations. The log books are kept on-site and are available for inspection. Data from the log books are included in ATTACHMENT A707.B.a.

TA-3-141 The facility exhaust stack has a built-in sampling system used to continuously sample beryllium emissions. Cartridge and HEPA filters are equipped with differential pressure gauges that measure differential pressure when exhaust fans are operating and the facility is occupied.

TA-35-213 A copy of stack emission test results as well as other data needed to determine total emissions are retained at the source and are available for inspection. Log books documenting beryllium processing are on-site and are available for inspection. Data from the beryllium processing logs are included in ATTACHMENT A707.B.b.

TA-55-PF4 The HEPA filtration system contains a differential pressure gauge that measures differential pressure across the HEPA filters while the exhaust fans are in operation. The control efficiency is verified by daily HEPA filter pressure drop tests. Annual HEPA filter challenge tests are performed to verify filter control efficiency. The HEPA filter challenge tests are scheduled for the first half of 2024. See ATTACHMENT A707.C.b.

The electric furnace did not operate during this reporting period.

A707.C Recordkeeping Requirements - Beryllium Activities:

TA-3-66 Recordkeeping for this source is specified in Condition A707.B.

TA-3-141 Inventory records are maintained to demonstrate compliance with beryllium process limits. Records of

pressure drop across the cartridge and HEPA filters are performed daily when the exhaust fans are in operation and the facility is occupied. Control equipment maintenance and repair activities are recorded. HEPA filter differential pressure readings are included in ATTACHMENT A707.C.a.

TA-35-213 Recordkeeping for this source is specified in Condition A707.B.

TA-55-PF4 A copy of the stack emission test results are retained at the source and available for inspection. HEPA filter challenge tests are performed annually. Daily differential pressure readings are provided in ATTACHMENT A707.C.c. Filter replacement and control equipment maintenance and repair records are kept and available on site for inspection. Process records are available that contain the number and weight of classified parts processed during a 24-hour period and annual rolling total.

The electric furnace did not operate during this reporting period.

A707.D Reporting Requirements - Beryllium Activities:

For all beryllium sources, reports are submitted in accordance with permit conditions A109 and in accordance with B110. For more information, see Section A605 in this report.

There were no new or modified emission sources during the reporting period.

TA-3-141 Quarterly beryllium reports, containing continuous monitoring system data from the Beryllium Technology Facility, are also submitted to NMED. Reports during this reporting period were submitted within 60 days following each calendar quarter. The reports were submitted on August 2, 2023 for 2023Q2 (Activity No.: 000856-08022023-01) and November 6, 2023 for 2023Q3 (Activity No.: 000856-11062023-01).

A805 Fuel Sulfur Requirements – External Combustion

A. All Boilers and Heaters (except Units RLUOB-BHW-1 through -4)

Requirement: All boilers and heaters, except Units RLUOB-BHW-1 through -4 and the Power Plant addressed in Section A1300 shall combust only natural gas containing no more than 2 grains of total sulfur per 100 dry standard cubic feet.

Monitoring: None.

Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel gas analysis, specifying the allowable limit or less. If fuel gas analysis is used, the analysis shall not be older than one year.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: A natural gas transportation contract is in place, and states that gas provided to LANL will be pipeline quality and contain no more than three quarters (3/4) grains of total sulfur per one hundred (100)

dry standard cubic feet.

Recordkeeping: A copy of LANL's natural gas transportation contract is maintained on-site.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A805 Fuel Sulfur Requirements – External Combustion

B. Units RLUOB-BHW-1 through -4

Requirement: Units RLUOB-BHW-1 through -4 shall combust either natural gas containing no more than 2.0 grains of total sulfur per 100 dry standard cubic feet or No. 2 fuel oil containing no more than 0.5 wt% total sulfur. (NSR Permit 2195N-R2, Specific Condition 1.c.)

Monitoring: None.

Recordkeeping: The permittee shall demonstrate compliance with the natural gas limit and/or fuel oil limit on total sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the allowable limit or less. If a fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195N-R2, Specific Condition 3.c., revised) Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: A natural gas transportation contract is in place, and states that gas provided to LANL will be pipeline quality and contain no more than three quarters (3/4) grains of total sulfur per one hundred (100) dry standard cubic feet.

Fuel oil is not currently used as the fuel system for RLUOB BHW-1 through 3. If fuel oil is burned in the future, the boilers will use only Ultra Low Sulfur Diesel (ULSD) containing no more than 0.5 wt% total sulfur. Sulfur content will be documented in fuel manifests and bill of ladings.

Recordkeeping: A copy of the natural gas transportation contract is maintained on-site. Copies of the fuel manifests and bill of ladings for fuel oil are maintained in electronic files. No fuel oil was purchased for the RLUOB boilers during this reporting period.

Reporting: Emissions and monitoring reports are submitted on a six-month basis, and compliance certification is submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A806 20.2.61 NMAC Opacity – External Combustion

A. All Boilers and Heaters (except Units RLUOB-BHW-1 through -4)

Requirement: Exhaust emissions from these external combustion sources shall not exceed 20% opacity averaged over a 10-minute period.

Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.

Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.

Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: LANL has certified visible emission readers on-site who perform observations using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. No visible emissions were observed during steady state operations during this reporting period.

Monitoring: Use of natural gas for combustion meets the requirement of Condition A805.A.

Recordkeeping: A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed. Opacity readings were not required during this reporting period. See ATTACHMENT A806.A.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification is submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A806 20.2.61 NMAC Opacity – External Combustion

B. Units RLUOB-BHW-1 through -4: Natural Gas-Fired

Requirement: Exhaust emissions from these external combustion sources shall not exceed 20% opacity averaged over a 10-minute period.

Monitoring: Use of natural gas fuel meeting the requirement at Condition A805.A constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.

Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings.

Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: LANL has certified visible emission readers on-site who perform observations using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. No visible emissions were observed during steady state operations during this reporting period.

Monitoring: The natural gas used by these units meets the requirement of Condition A805.A.

Recordkeeping: A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed. No opacity readings were required during this reporting period. See ATTACHMENT A806.A.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A806 20.2.61 NMAC Opacity – External Combustion

C. Units RLUOB-BHW-1 through -4: Fuel Oil-Fired

Requirement: Exhaust emissions from these external combustion sources shall not exceed 20% opacity averaged over a 10-minute period.

Monitoring: The permittee shall perform a least one (1) opacity observation each day that fuel oil is used to fire any of Units RLUOB-BHW-1 through -4. Opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. (NSR Permit 2195N-R2, Specific Condition 3.d., revised)

Recordkeeping: The permittee shall record dates of any opacity measurements and the corresponding opacity readings. (NSR Permit 2195N-R2, Specific Condition 4.b., revised)

Reporting: The permittee shall report dates of any opacity measurements and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: LANL has certified visible emission readers on-site who perform observations using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limits.

Monitoring: No fuel oil was used in these units during this reporting period. No opacity measurements were taken during this reporting period.

Recordkeeping: The opacity form includes the date of measurement and opacity observed. No fuel oil was burned during this reporting period, and therefore, no opacity readings were taken and no records were generated. See ATTACHMENT A806.C. for details.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A807 Other – External Combustion

A. Natural Gas Fuel Usage (Sources listed in Table 800.A except RLUOB-BHW-1 through -4)

Requirement: The combined natural gas fuel usage shall be limited to 870 MMscf/y. This limitation shall apply to all boilers and heaters listed in Table 800.A except Units RLUOB-BHW-1 through -4, but including all other boilers and heaters at the Facility that qualify as Title V Insignificant Activities.

Monitoring: The permittee shall monitor the monthly total volumetric flow of natural gas to Units TA-55-6-BHW-1 and TA-55-6-BHW-2 through use of a totalizing flow meter.

Recordkeeping: The permittee shall:

- 1) Calculate the monthly rolling 12-month total natural gas fuel usage for the emission units listed in Table 800.A except Units RLUOB-BHW-1 through -4.
- 2) Calculate the actual emissions rate for the emission units listed in Table 800.A except Units RLUOB-BHW-1 through -4. The calculation shall be based on the actual fuel usage of Units equipped with individual flow meters and the Facility-Wide metered or estimated natural gas usage.
- 3) Calculate the semiannual and annual total emissions rate (tons/year) for this source category and compare them to the emission limits in Table 802.A. The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|--|---|-------------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: For units listed under this permit condition, a 12-month rolling total of natural gas used is calculated and recorded each month. The rolling total is compared to the fuel use limit each month. Natural gas usage limits were not exceeded during this reporting period. Natural gas usage and rolling totals are provided in ATTACHMENT A807.A.

Monitoring: Units TA-55-6-BHW-1 and TA-55-6-BHW-2 have volumetric flow meters in place to monitor monthly natural gas use. Fuel use information for the TA-55 units listed in this condition is included in ATTACHMENT A807.A.

Recordkeeping:

- 1) Monthly rolling 12-month total natural gas fuel use is calculated for the permitted units listed in Table 800.A.
- 2) The actual emission rate is calculated for the units listed in Table 800.A. This calculation uses actual fuel use data from individual unit flow meters and facility wide metered natural gas.
- 3) The emissions rate is calculated every six months and annually for this source category, and compared to the permit limits. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A807 Other – External Combustion

B. Natural Gas and Fuel Oil Usage (Units RLUOB-BHW-1 through -4)

Requirement: The permittee shall comply with the emission limits in Table 802.B for each fuel type.

Monitoring: The permittee shall:

- 1) Monitor the monthly total volumetric flow of natural gas to Units RLUOB-BHW-1 through -4 using a totalizing flow meter. (NSR Permit 2195N-R2, Specific Condition 3.a., partial, revised)
- 2) Monitor the daily fuel oil consumption during which any of the 4 RLUOB boilers are fired with this fuel type. (NSR Permit 2195N-R2, Specific Condition 3.a, partial, revised)
- 3) Monitor the hours of operation for each boiler when fired on fuel oil and during non-emergency maintenance and readiness testing.

Recordkeeping: The permittee shall:

- 1) Calculate and record the annual fuel oil usage for Units RLUOB-BHW-1 through -4 as a daily rolling 365-day total.
- 2) Calculate and record the semiannual and calendar year total emissions rate (tons/year) for each fuel type and for the combination of both fuels compare to the emission limits in Table 802.B.
- 3) Record the annual hours of operation of each boiler when fired on fuel oil during non-emergency maintenance and readiness testing and compare to the limitation at Condition A804.B.
- 4) The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | | |
|-------------------------------------|------------|---|-------------------------|
| <input type="checkbox"/> | Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> | No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: The initial compliance test was used to demonstrate compliance with the emission limits for natural gas use. Vendor data are also used to determine compliance with emission limits for fuel oil and natural gas. All concentrations and emission rates were below permitted limits in Table 802.B.

Monitoring:

- 1) A totalizing flow meter is in place and measures natural gas used by the RLUOB boilers. The natural gas fuel use data is provided in ATTACHMENT A807.A.
- 2) Daily fuel oil consumption is monitored by facility personnel using meter readings from each boiler. No fuel oil was burned during this reporting period. See ATTACHMENT A807.B for details.
- 3) The hours of operation of each boiler are recorded by facility personnel each time a boiler is run on fuel oil. The purpose of running the boilers is also recorded.

Recordkeeping:

- 1) Annual fuel oil usage is calculated and recorded on a daily rolling 365-day total. No fuel oil was burned during this reporting period.
- 2) The emissions rate is calculated on a six-month and annual basis for each fuel type and for both fuels combined. Emissions are compared to permit limits and data are provided to NMED in accordance with permit condition A109.
- 3) Annual hours of operation for each boiler are recorded when fired on fuel oil during non-emergency use.

The total hours are compared to the hour limit in permit condition A804.B. No fuel oil was used during this reporting period and no records were generated.

4) Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A807 Other – External Combustion

C. 40 CFR 60, Subpart Dc (Units TA-55-6-BHW-1, TA-55-6-BHW-2, RLUOB-BHW-1 through -3)

Requirement: The units are subject to 40 CFR 60, Subpart Dc and the permittee shall comply with the following applicable requirements:

1. When combusting oil in the affected boilers, meet the 0.5 weight percent fuel sulfur standard in 40 CFR 60.42c(d). This standard applies at all times per §60.42c(i). The permittee shall demonstrate compliance per the requirements of §60.42c(h).

Monitoring: The permittee shall comply with the fuel supplier certification requirements in 40 CFR 60.46c(e). The permittee shall monitor fuel usage to meet the recordkeeping requirements of 40 CFR 60.48c(g).

Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.48c(c), (f) and (g) 40 CFR 60.7(b) and (f) and maintain the records according to §60.48c(i) except when records are required to be maintained for a longer time period in accordance with Section B109.

Reporting: The permittee shall comply with the initial notification requirements of 40 CFR 60.48c(a) and 40 CFR 60.7(a)(1), (a)(4) and (g) and the periodic reporting requirements of 40 CFR 60.48c(b), (d), (e)(11) and (f). Reports shall be submitted according to §60.48c(j). The reporting period may be modified to coincide with the Semi-Annual reporting period in Section A109. The permittee shall report in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Units TA-55-6-BHW-1, TA-55-6-BHW-2, RLUOB-BHW-1, RLUOB-BHW-2, and RLUOB-BHW-3 meet the requirements of 40 CFR Part 60, Subparts A and Dc. Notification requirements were met through source startup notifications and initial permit applications.

Monitoring: Natural gas sulfur requirements are tracked and addressed in the natural gas transportation contract. The amount of fuel oil combusted is monitored and recorded on a monthly basis. Fuel oil is not currently used as the fuel system for RLUOB BHW-1 through 3, and units TA-55-6-BHW-1 & TA-55-6-BHW-2 only burn natural gas. If fuel oil is burned in the future, the boilers will use only Ultra Low Sulfur Diesel (ULSD) containing no more than 0.5 wt% total sulfur. Sulfur content will be documented in fuel manifests and bill of ladings. No fuel oil was purchased or used during this reporting period.

Recordkeeping: Fuel sulfur content information and fuel use records are maintained on site for at least five (5) years as required by the operating permit.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A807 Other – External Combustion

D. 40 CFR 60, Subpart Dc (New Unit RLUOB-BHW-4)

Requirement: This unit is subject to 40 CFR 60, Subpart Dc and the permittee shall comply with the following applicable requirements:

1. When combusting oil in the affected boilers, meet the 0.5 weight percent fuel sulfur standard in 40 CFR 60.42c(d), and (g). This standard applies at all times per §60.42c(i). The permittee shall demonstrate compliance per the requirements of §60.42c(h).
2. For new boiler RLUOB-BHW-4, the permittee shall demonstrate initial compliance with the SO₂ standard through a certification from the fuel supplier per 40 CFR 60.44c(h).

Monitoring: The permittee shall comply with the fuel supplier certification requirements in 40 CFR 60.46c(e). The permittee shall monitor fuel usage to meet the recordkeeping requirements of 40 CFR 60.48c(g).

Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.48c(c), (f) and (g) and 40 CFR 60.7(b) and (f) and maintain the records according to §60.48c(i) except when records are required to be maintained for a longer time period in accordance with Section B109.

Reporting: The permittee shall comply with the initial notification requirements of 40 CFR 60.48c(a) and 40 CFR 60.7(a)(1), (a)(3) and (g) and the periodic reporting requirements of 40 CFR 60.48c(b), (d), (e)(11) and (f). Reports shall be submitted according to §60.48c(j). The reporting period may be modified to coincide with the Semi-Annual reporting period in Section A109.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|--|--|------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: LANL purchases only fuel oil with ultra low sulfur content; fuel oil was not used during this reporting period. See ATTACHMENT 807.C.& D. for details.

RLUOB-BHW-4 has not been installed. When installed, the requirement, monitoring, recordkeeping, and reporting will be conducted in accordance with the requirements listed in the current permit.

A807 Other – External Combustion

E. Initial Compliance Testing (Units RLUOB-BHW-4)

Requirement: Initial compliance tests are required for boiler, Unit RLUOB-BHW-4. The tests shall be conducted for NOx and CO while burning natural gas fuel only. This condition applies only if boiler Unit RLUOB-BHW-4 is not an identical make and model to boiler units RLUOB-BHW-1 through -3. (NSR Permit 2195N-R2, Specific Condition 6.a., revised)

Monitoring: The permittee shall conduct EPA Method tests for CO and NOx within six (6) months of any new boiler start up. Method 19 may be used for determining stack flow rates. This requirement supersedes Condition B111.A(2). Initial compliance testing shall be conducted in accordance with Section B111.

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110 and Section B111.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Unit RLUOB-BHW-4 has not been installed. When installed, the requirement, monitoring, recordkeeping, and reporting will be conducted in accordance with the requirements listed in the current permit. See ATTACHMENT A807.E. for details.

A807 Other – External Combustion

F. Operational Inspection (Sources listed in Table 800.A)

Requirement: Compliance with the allowable emission limits in Table 802.A shall be demonstrated by performing periodic inspections to ensure proper operations.

Monitoring: The permittee shall conduct annual operational inspections to determine that the boilers are operating properly. The operational inspections shall include operational checks for indications of insufficient excess air, or too much excess combustion air. These operational checks shall include observation of common physical indications of improper combustion, including indications specified by the boiler manufacturer, and indications based on operational experience with these units.

Recordkeeping: The permittee shall maintain records of operational inspections, describing the results of all operational inspections noting chronologically any adjustments needed to bring the boilers into compliance. The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall report in accordance with Section B110.

Within ninety (90) days of permit issuance, the permittee shall submit for Department approval a procedure which the permittee will use to carry out the operational inspections. The permittee may at any time submit revisions for Department approval.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement/Monitoring: LANL conducts annual operational inspections and preventive maintenance on the permitted boilers listed in the current permit to ensure proper operations.

Recordkeeping: The records of operational inspections and preventive maintenance are maintained in the compliance folders and e-files stored on air quality servers. Copies of annual inspections for 2023 are included in ATTACHMENT A807.F.a.

Reporting: LANL submitted two procedures that are used to carry out the operational inspections: "Preventive Maintenance Instruction (PMI) 403-A.006: Hot Water Boiler Yearly Fireside/Waterside Inspection and Maintenance" for boilers at TA-53 and TA-55 and "Maintenance Procedure UIDO-PROC-76-28-010-R0: TA-09/16 Steam Plants – Annual Boiler Waterside/Fireside Checklist" for boilers located at TA-16. The procedures were submitted to NMED AQB on May 14, 2015 (SBR20150006) within 90 days after permit P100-R2 issuance. Revisions were last made to PMI 403-A.006 on October 24, 2018, and to Maintenance Procedure UIDO-PROC-76-28-010-R0 on March 13, 2023. No revisions were made to these procedures during this reporting period. See ATTACHMENT A807.F.b.

A907 Other – Chemical Usage

A. Emission calculations (Unit LANL-FW-CHEM)

Requirement: The permittee shall comply with the facility-wide VOC and HAP emission limits at Table 106.B.

Monitoring: The permittee shall monitor facility-wide chemical purchasing and site location using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a semi-annual basis, and categorized as VOC, HAP, or a combination of these categories.

Recordkeeping: The permittee shall record the quantity of total VOC emitted and the quantity of each individual and total HAPs on a semi-annual basis. These records shall be maintained in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** September 27, 2023 **Tracking Number:** 000856-09262023-01

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Facility-wide emissions did not exceed the VOC or HAP emission limits in Table 106.B.

Monitoring/Recordkeeping: Facility-wide chemical purchases are monitored using ChemDB, an electronic chemical tracking system. The chemical purchase information is used to calculate emissions. Chemical emission information is submitted to NMED every six months in accordance with permit condition A109.B. The semi-annual emissions report for January 1 - June 30, 2023 was submitted to NMED on September 27, 2023 (Activity No.: 000856-09262023-01), within 90 days of the end of the reporting period. Records of chemical purchases for this monitoring period are provided in ATTACHMENT A907.A.

Reporting: Facility-wide VOC and HAPs emissions are calculated, recorded, and reported on a six-month basis in accordance with permit conditions A109.B, B109, and B110. The semi-annual emissions report includes individual HAPs emitted in a quantity greater than 0.5 tons per year.

A907 Other – Chemical Usage

B. Emission calculations (Unit RLUOB-CHEM)

Requirement: The permittee shall comply with the source-specific VOC emission limit at Table 902.A and the facility-wide VOC and HAP emission limits at Table 106.B. (NSR Permit 2195N-R2, Specific Condition 2.a., revised)

Monitoring: The permittee shall monitor chemical purchasing for the RLUOB-CHEM facility using an electronic chemical tracking system. The quantity of chemicals that are vented to the atmosphere shall be estimated on a monthly basis, and categorized as VOC, HAP, TAP, or a combination of these categories. (NSR Permit 2195N-R2, Specific Condition 4.c., revised)

Recordkeeping: The permittee shall record the quantity of total VOC and TAP, each individual HAP, and the total HAPs emitted on a monthly rolling, 12-month total basis. These records shall be maintained in accordance with Section B109. (NSR Permit 2195N-R2, Specific Condition 4.c., revised)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110. With respect to individual HAPs, reports shall include any HAP emitted in a quantity greater than 0.5 tons per year.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Source specific VOC and facility-wide VOC and HAP emissions are in compliance with emission limits set in Tables 902.A and 106.B in NSR Permit 2195N-R2.

Monitoring: Chemical purchasing for the RLUOB-CHEM facility are monitored using ChemDB, an electronic chemical tracking system. Records of chemical purchases for the reporting period are provided in ATTACHMENT A907.B.a. The quantities of chemicals that are vented to the atmosphere are estimated on a monthly basis and are categorized as VOC, HAP, TAP, or a combination of these categories. The quantities of chemicals for this reporting period are provided in ATTACHMENT A907.B.b.

Recordkeeping: The quantity of total VOC and TAP, individual HAP, and the total HAPs emitted are recorded on a monthly rolling, 12-month total basis. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. The semi-annual emission report includes individual HAPs emitted in a quantity greater than 0.5 tons per year. For more information, see comments in Section A605 of this report.

A1007 Other – Degreasers

A. Operational Requirements (Degreasers)

Requirement: The permittee shall comply with the applicable requirements according to 40 CFR 63, Subpart T, including, but not limited to:

- 1) Ensure the degreaser is closed with a tight fitting cover whenever not in use, and
- 2) Maintain a freeboard ratio of 0.75 or greater, and
- 3) Collect and store all waste solvent and wipe rags in closed containers, and
- 4) Perform flushing within the freeboard area only, and
- 5) Allow cleaned parts to drip for 15 seconds or until dripping stops, and
- 6) Do not exceed the fill line on the solvent level, and
- 7) Wipe up spills immediately, and
- 8) Do not create observable splashing with agitation device, and
- 9) Ensure that the degreaser is not exposed to drafts greater than 40 meters/min, and
- 10) Do not clean sponges, fabric, wood, or paper.

Monitoring: The permittee shall monitor and record the amount of solvent added to the degreaser.

Recordkeeping: The permittee shall:

- 1) Calculate the actual emissions rate (pounds/month) of VOC and HAPs based on the quantity of solvent lost to evaporation on a monthly basis.
- 2) Calculate the semi-annual emissions rate (tons/year) for this source category and add to the facility-wide emission rates in Table 106.B.
- 3) Maintain records of the degreaser solvent content and quantity added and work practice checklists.
- 4) The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|---|---|-------------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: An exemption notice was submitted on April 9, 2018 and was approved by NMED on May 8, 2018 for a non-halogenated solvent to be used in the degreaser. LANL intends to keep the flexibility to use the halogenated solvent in the future and therefore is continuing to comply with all permit requirements, regardless of which solvent is being used.

Requirement:

- 1) The degreaser is kept closed with a tight fitting cover when it is not being used.
- 2) A freeboard ratio of 0.75 or greater is maintained.
- 3) All waste solvent and solvent contaminated wipe rags are collected and stored in closed containers.
- 4) Flushing operations are performed only within the freeboard area.

- 5) Cleaned parts are allowed to drip for 15 seconds or until dripping stops.
- 6) The fill line has not been exceeded.
- 7) Spills are wiped up immediately.
- 8) Administrative controls are in place to prevent observable splashing with an agitation device.
- 9) The degreaser is located in a glove box with a set ventilation flow rate. Exhaust flows do not exceed 40 meters/min.
- 10) Sponges, fabric, wood, or paper are not cleaned in the degreaser.

Monitoring and Recordkeeping: A Degreaser Recordkeeping database is used to track the amount of degreaser solvent added, removed, and lost. This system is used to calculate emissions. The "Degreaser Solvent Usage" report for this period is provided in ATTACHMENT A1007.A.a.

- 1) The actual emission rate (pounds/month) of VOC and HAPs is automatically calculated by the database when data is entered on a monthly basis.
- 2) The semi-annual emissions (tons/year) are also calculated by the database. These emissions are included in the facility-wide totals.
- 3) Checklists for work practice standards have been completed for this reporting period. Records of solvent content and quantity added are maintained on site. A copy of the work practice checklists are provided in ATTACHMENT A1007.A.b.
- 4) Records for this source category are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1104 Operational Limitations – Internal Combustion

A. Hours of Operation and Emission Limits for Unit TA-33-G-1P

Requirements:

- 1) Unit TA-33-G-1P is limited to eight (8) hours of daily operation at full capacity. Operation shall occur between the hours of 7:00 AM and 5:00 PM. (NSR Permit 2195F-R4, Condition A1104.A)
- 2) Unit TA-33-G-1P is limited to the emissions limits stated in Table 1102.A. (NSR Permit 2195F-R4, Condition A1104.A)

Monitoring: The permittee shall monitor the time(s) of operation each day, and the daily and monthly rolling 12-month total hours of operation for Unit TA-33-G-1P using a non-resettable hour meter. Hours that do not represent hours the unit is operated at the TA-33 site may be monitored separately for subsequent subtraction from the daily and monthly rolling 12-month totals

Recordkeeping: The permittee shall maintain the following records and in accordance with Section B109:

- 1) The permittee shall keep records of the time(s) of operation each day, and the daily, monthly, and the monthly rolling 12-month total hours of operation of the genset listed above, as indicated on the non-resettable hour meter. The permittee may record and subtract hours of operation that do not represent operating hours at the TA-33 site.
- 2) The permittee shall calculate the annual emissions of all criteria and hazardous air pollutants from Unit TA-33-G-1P. The permittee may subtract emissions that are not the result of operations at TA-33.

Reporting: The permittee shall submit reports in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | | |
|-------------------------------------|------------|---|-------------------------|
| <input type="checkbox"/> | Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> | No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: Unit TA-33-G-1P operated for a total of 0.4 hours during this reporting period. Emissions are lower than the limits stated in Table 1102.A. in NSR permit 2195F-R4.

Monitoring: The times of operations are monitored and the generator is equipped with a non-resettable hour meter. The purpose of equipment use at TA-33 and elsewhere are identified in the log sheet provided in ATTACHMENT A1104.A.

Recordkeeping: A log book is located in the trailer that contains the unit. The log book includes hours of operation recorded daily when the equipment operates. The monthly rolling 12-month total hours of operation are calculated in a spreadsheet. Operations at areas outside TA-33 are recorded.

The annual emissions of criteria and HAPs are calculated based on the hours of operation.

Reporting: Reports are submitted as required by permit conditions in accordance with Section B110.

A1104 Operational Limitations – Internal Combustion

B. Hours of Operation and Emission Limits for Units TA-33-G-2 through -4

Requirements:

- 1) Units TA-33-G-2 through -4 are authorized to operate 500 hours per generator per calendar year. (NSR Permit 2195P, Specific Condition 1.b.)
- 2) Units TA-33-G-2 through -4 shall each be certified to be in compliance with applicable non-road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 1.c.)

Monitoring: The permittee shall monitor the total hours of operation for each genset, Units TA-33-G-2 through -4, using a non-resettable hour meter.

Recordkeeping: The permittee shall:

- 1) Record the total hours operation of the gensets listed above, as indicated on the non-resettable hour meter. (NSR Permit 2195P, Specific Condition 4.a., revised)
- 2) Calculate and record the semi-annual emissions of criteria and hazardous air pollutants from each genset, Units TA-33-G-2 through -4.
- 3) Maintain a copy of the engine certification to the applicable non road emission standards in 40 CFR 89. (NSR Permit 2195P, Specific Condition 4.c.)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|---|---|-------------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement/Monitoring: The operating hour readings are collected twice a year to verify the hour limit is not approached. The hour limits for these units were not exceeded during this reporting period. Hours of generator operation are provided in ATTACHMENT A1104.B.

The hour meters on these units are non-resettable.

Recordkeeping:

- 1) Equipment operating hours are recorded.
- 2) The emissions of regulated pollutants from Units TA-33-G-2, TA-33-G-3 and TA-33-G-4 are calculated and recorded on a six-month basis.
- 3) Certificates of compliance with applicable non-road emission standards are maintained on-site.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification is submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1105 Fuel Sulfur Requirements – Internal Combustion

A. Fuel Sulfur Requirement for Unit TA-33-G-1P

Requirement: Unit TA-33-G-1P while in use at TA-33 shall combust only diesel fuel containing no more than 500 ppmw total sulfur.

Monitoring: None.

Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Only Ultra Low Sulfur Diesel (ULSD) is used at the facility and it contains no more than 15 ppm sulfur. Sulfur content is documented in fuel manifests and bill of ladings.

Recordkeeping: Only ULSD fuel containing no more than 15 ppm sulfur is used in this unit. Copies of the fuel manifests and bill of ladings are maintained in electronic files.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification is submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1106 20.2.61 NMAC Opacity – Internal Combustion

A. CI-RICE - TA-33-G-1P, TA-33-G-2, TA-33-G-3, TA-33-G-4, RLUOB-GEN-1, RLUOB-GEN-2, RLUOB-GEN-3, TA-48-GEN-1, TA-55-GEN-1 TA-55-GEN-2 and TA-55-GEN-3

Requirement: Visible emissions from the stacks of the above listed sources shall not equal or exceed an opacity of 20 percent.

Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year as qualified by the Section B108.D monitoring provisions. This requirement excludes Insignificant and Trivial Activities.

Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.

Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: No visible emissions were observed to exceed 20% opacity during this reporting period.

Monitoring: Opacity measurements were not required for generators in this reporting period. Section B108.D(2) of the permit allows for reduced frequency of opacity monitoring if the unit operates 25% (547.5 hours in a quarter) or less of a monitoring period (calendar quarter). After two successive periods without monitoring, monitoring is required during the next period, unless the unit has operated less than 10% (219 hours in a quarter) of the monitoring period. If the unit runs less than 10%, that period is not considered as one of the two successive periods. No applicable CI-RICE units operated more than 25% for two successive monitoring periods during this reporting period, therefore no monitoring was required. See ATTACHMENT A1106.A.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1107 Other – Internal Combustion

A. 40 CFR 60, Subpart IIII (Emergency Generators Units RLUOB-GEN-1 through -3)

Requirement: The units are subject to 40 CFR 60, Subpart IIII and the permittee shall comply with the applicable emissions standards and fuel requirements in §60.4205(a), §60.4206 and §60.4207(b) and Table 1102.B. In addition the permittee shall follow the compliance requirements stated in §60.4211(a, b, and f) and the general provisions of 40 CFR 60 Subpart A as required in §60.4218.

Monitoring: None

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 60, Subpart A as required in §60.4218 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The manufacturer's emissions certifications as required by §60.4205(a) are available on site.

Diesel sulfur requirements of 15 ppm are met by fuel manifests and bill of ladings documenting ULSD purchases. §60.4211 (a) (b) and (f) - Manufacturer's certifications for nonroad engines are on-site; non-emergency maintenance checks and readiness testing of such units is limited to 100 hours per year per §60.4211(f)(3).

Recordkeeping: Hours of non-emergency and emergency operation are recorded at the facility during generator operation. The units subject to this condition operated less than 100 hours to date on non-emergency maintenance and readiness checks in accordance with condition §60.4211(f)(3).

Reporting: Hours of operations are reported in accordance with Section B110. See ATTACHMENT A1107.A. for operating records.

A1107 Other – Internal Combustion

B. 40 CFR 60, Subpart IIII (Emergency Generators Unit TA-48-GEN-1, TA-55-GEN-1 TA-55-GEN-2 and TA-55-GEN-3)

Requirement: The units are subject to 40 CFR 60, Subpart IIII and the permittee shall comply with the applicable emissions standards and fuel requirements in §60.4205(b), §60.4202(a)(2), §60.4206 and §60.4207(b) and Table 1102.B. In addition, the permittee shall follow the compliance requirements stated in §60.4211(a, c and f) and the general provisions of 40 CFR 60 Subpart A as required in §60.4218.

Monitoring: None

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall comply with all applicable reporting requirements of 40 CFR 60, Subpart A as required in §60.4218 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The manufacturer's emissions certifications as required by §60.4205(b) are available on site.

Diesel sulfur requirements of 15 ppm are met by fuel manifests and bill of ladings documenting ULSD purchases. §60.4211 (a) (c) and (f) - Manufacturer's certifications for non-road engine are on-site to demonstrate compliance with standards; non-emergency maintenance checks and readiness testing of such units are limited to 100 hours per year per §60.4211(f)(3).

Recordkeeping: Hours of non-emergency and emergency operation are recorded at the facility during generator operation. The units subject to this condition operated less than 100 hours to date on non-emergency maintenance and readiness checks.

Reporting: Hours of operations are reported in accordance with Section B110. See ATTACHMENT A1107.B.

A1204 Operational Limitations – Data Disintegrator

A. Operational Throughput Limitation (Unit Data Disintegrator)

Requirement: The Unit Data Disintegrator is limited processing no more than 25,000 boxes or 565 tons per year media. To avoid Compliance Assurance Monitoring (CAM) requirements under 40 CFR 64, the Data Disintegrator shall limit uncontrolled potential PM emissions by limiting media processing no more than 25,000 boxes or 565 tons per year.

Monitoring: The permittee shall perform the monitoring required in Condition A1207.A.

Recordkeeping: The permittee shall perform the recordkeeping required in Condition A1207.A.

Reporting: The permittee shall perform the reporting required in Condition A1207.A.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: A log is kept to ensure that no more than 25,000 boxes or 565 tons per year of media are processed.

Monitoring, recordkeeping and reporting are discussed in Condition A1207.A.

A1207 Other – Data Disintegrator

A. Emission calculations (Data Disintegrator)

Requirement: The permittee shall calculate Data Disintegrator emissions based on the records of the number of boxes of media that are destroyed.

Monitoring: The permittee shall monitor the quantity of media destroyed on a monthly basis. The total weight shall be based on a previously determined average box weight. This average weight determination shall be maintained as part of the records for this facility.

Recordkeeping: The permittee shall calculate the actual emissions rate (tons per reporting period) for the emission units listed in Table 1200.A on a semi-annual basis. The emission rate in tons per year shall be calculated by summing the emissions from the previous reporting period with the current period. Records shall be maintained in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: A log is kept to record the number of boxes of media destroyed monthly and is used to calculate emissions on a six-month basis.

Monitoring: The number of boxes destroyed is provided in ATTACHMENT A1207.A. The average box weight has been determined and is maintained as part of the facility records.

Recordkeeping: The actual emissions rate is calculated for the emission unit on a six-month basis and is included in the semi-annual emissions report. These records are maintained on-site. The emission rate in tons per year is calculated by summing the emissions from the previous reporting period with the current period. The emissions are compared to the allowable emissions for the unit. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1207 Other – Data Disintegrator

B. Cyclone/Cloth Tube Filters (Data Disintegrator)

Requirement: The permittee shall perform regular maintenance and repair on the cyclone and cloth tube filter(s) per manufacturer’s recommendations. (NSR Permit 2195H, Specific Condition 1.d.)

Monitoring: N/A

Recordkeeping: The permittee shall maintain adequate records on site to demonstrate compliance with manufacturer’s recommended repair and maintenance schedules for the cyclone and the cloth tube filter(s). (NSR Permit 2195H, Specific Condition 4.a.) Records shall be maintained in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|--|--|------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: Preventive maintenance and repair are performed on the data disintegrator cyclone and cloth tube filter(s) following manufacturer's recommendations. Preventative maintenance was performed in October 2023.

Recordkeeping: Records of maintenance performed on the cyclone and cloth tube filter(s) are provided in ATTACHMENT A1207.B. Manufacturer recommended repair and maintenance information are available on site. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1207 Other – Data Disintegrator

C. Compliance Testing (Data Disintegrator)

Requirement: If upon notification by the Department, compliance testing is required, it shall be conducted in accordance with EPA Reference Methods 1 through 4, Method 5 for TSP, and conducted in accordance with 450 CFR 60, Appendix A. For combined TSP and PM10, testing shall be in accordance with 40 CFR 51, Appendix M, Method 201. Alternative test method(s) may be used if the Department approves the change. (NSR Permit 2195H, Specific Condition 6.b., revised)

Monitoring: N/A

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: No compliance test was required or performed during this reporting period.

Recordkeeping: Records are maintained in accordance with Section B110. No tests were conducted and no records were generated during this reporting period.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification submitted on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1305 Fuel Sulfur Requirements – TA-3 Power Plant

A. Boilers (Units TA-3-22-1 through -3)

Requirement: External combustion sources at the TA-3 Power Plant shall combust only natural gas containing no more than 2 gr/100 scf total sulfur or No. 2 fuel oil containing no more than 0.05 wt% total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.A)

Monitoring: N/A

Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous or liquid fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. Alternatively, compliance may be demonstrated by keeping a receipt or invoice from a commercial fuel supplier with each fuel delivery, which shall include the delivery date, the fuel type delivered, and amount of fuel delivered, and the maximum sulfur content of the fuel.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The natural gas transportation contract states that gas provided to LANL will be pipeline quality with total sulfur content of no more than three quarters (3/4) grains of total sulfur per one hundred (100) standard cubic feet. Fuel oil for this source is located in a tank on-site and only Ultra Low Sulfur Diesel (ULSD) is delivered to the facility. ULSD contains less than 0.0015 wt% total sulfur.

Recordkeeping: A copy of the natural gas transportation contract is maintained on-site. Copies of the fuel manifests and bill of lading for fuel oil are maintained in electronic files. No fuel oil was purchased for the TA-3 power plant during this reporting period.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1305 Fuel Sulfur Requirements – TA-3 Power Plant

B. Combustion Turbine (Unit TA-3-22-CT-1)

Requirement: The combustion turbine at the TA-3 Power Plant shall combust only natural gas containing no greater than 2 gr/100 scf total sulfur. (NSR Permit 2195B-M2, Specific Condition A110.B)

Monitoring: N/A

Recordkeeping: The permittee shall demonstrate compliance with the limit on total fuel sulfur content by maintaining records of a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel, or fuel analysis, specifying the fuel grade and certification or allowable sulfur limit. If fuel analysis is used, the analysis shall not be older than one year. (NSR Permit 2195B-M2, Specific Condition A110.B and 40 CFR 60.334(h))

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: This requirement is met as the natural gas transportation contract states that gas provided to LANL will be pipeline quality with total sulfur content of no more than three quarters (3/4) grains of total sulfur per one hundred (100) dry standard cubic feet.

Recordkeeping: LANL's natural gas transportation contract is kept on-site.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1306 20.2.61 NMAC Opacity – TA-3 Power Plant

A. Sources Combusting Natural Gas

Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.A)

Monitoring: Use of natural gas fuel meeting the requirement at Condition A1305.A or B constitutes compliance with 20.2.61 NMAC unless opacity exceeds 20% averaged over a 10-minute period. When any visible emissions are observed during steady state operation and are determined to be not due to condensed water vapor only, opacity shall be measured over a 10-minute period, in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC.

Recordkeeping: The permittee shall record dates of any opacity measures and the corresponding opacity readings.

Reporting: The permittee shall report dates of any opacity measures and the corresponding opacity readings. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: LANL has certified opacity readers on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation.

Monitoring: Natural gas fuel meets the requirement specified in Condition A1305.A and B. Use of natural gas fuel constitutes compliance with the 20% opacity limit. No visible emissions were observed during steady state operation during this reporting period. See ATTACHMENT A1306.A. for details.

Recordkeeping: A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed. No opacity readings were required during this reporting period.

Reporting: A standard form is used for all opacity measurements. The form includes the date and time of the Method 9 observation and opacity observed. Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1306 20.2.61 NMAC Opacity – TA-3 Power Plant

B. Boilers Combusting No. 2 Fuel Oil

Requirement: All combustion units shall not exceed 20% opacity. (NSR Permit 2195B-M2, Specific Condition A111.B)

Monitoring: During steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall be conducted on a quarterly basis per calendar year whenever the boiler(s) are operational during the monitoring period. This requirement is subject to the monitoring provisions of Condition B108.D.

Recordkeeping: The permittee shall maintain records of all Method 9 observations, and in accordance with Section B109.

Reporting: The permittee shall report date, time, and results of all Method 9 observations. The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: Certified opacity readers are located on-site who perform opacity readings using 40 CFR 60, Appendix A, Method 9 to determine compliance with the opacity limitation. Fuel oil was not used during this reporting period.

Monitoring: Opacity is read at least once per quarter when boilers are combusting fuel oil and when required by monitoring provisions in condition B108.D. Opacity readings are measured over a 10-minute period and in accordance with 40 CFR 60, Appendix A, Method 9. A standard form is used for all opacity measurements. The form includes the date of measurement and opacity observed. Fuel oil was not used during this reporting period and therefore Method 9 opacity measurements were not conducted. See ATTACHMENT A1306.B.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: A standard form is used for all opacity measurements. The form includes the date and time of the Method 9 observation and opacity observed. Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

A. Emission calculations (TA-3 Power Plant)

Requirement: The permittee shall comply with the hourly and annual emission limits at Table1302.A. and Conditions A1302.B, C, and D for the combustion turbine and boilers. The boiler annual emission limit shall be expressed as the combined emissions from all 3 boilers. (NSR Permit 2195B-M2, Specific Condition A801.A)

Monitoring: The permittee shall perform the following calculations on a monthly basis:

- 1) Calculate the average hourly emissions rates (pph) for each emissions unit based on the monthly total fuel consumption and monthly actual hours of operation.
- 2) Calculate the actual annual emissions rates (tpy) for all emissions units based on the monthly rolling 12-month total fuel consumption and the monthly rolling 12-month total hours of operation.
- 3) All NOx emission rates for the boilers shall also be calculated in terms of lb/MMBtu heat input.

(NSR Permit 2195B-M2, Specific Condition A801.A)

Recordkeeping: The permittee shall maintain records in accordance with Section B109.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: All emissions calculations required by this section are performed for the emission units listed. The emission units did not exceed the hourly or annual emission limits.

Monitoring: Emissions spreadsheets are in place that calculate all required emissions and are used for monitoring and reporting purposes. See ATTACHMENT A1307.A for details.

- 1) The average hourly emission rates are included in the spreadsheet.
- 2) The actual annual emission rates are included in the spreadsheet.
- 3) The emission rates are based on the emission factor for NOx (lb/MMscf), which is 58 lb/MMscf, this emission factor is an average of source tests conducted on all 3 boilers in September 2002 burning natural gas after flue gas recirculation (FGR) installed. This factor is converted to lbs/MMBtu by dividing by the high heat value of natural gas (the number of Btu in a scf). As the HHV of natural gas ranges in value, the following emission range was calculated using the low and high values at LANL between 2011 and 12/31/2023, the lowest was 939.97 Btu/scf and the highest was 1079.3 Btu/scf, therefore the NOx emission rate will range from 0.0537 to 0.0617 lbs/MMBtu. These NOx emission rates are well below the 0.3 lb/MMBtu heat input limit in A1302.B.

Recordkeeping: Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a semi-annual basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

B. Fuel Usage (Boilers, Units TA-3-22-1 through -3)

Requirement: Combined boiler operation shall not consume more than 1000 MMscf of natural gas and no more than 500,000 gallons of No. 2 fuel oil in any 12-month period. Volumetric natural gas fuel flow shall be measured using gas flowmeters installed on the natural gas fuel inlet to each respective unit (3 separate gas flowmeters). Fuel oil usage shall be measured using a single inventory meter located at a storage tank that is dedicated for use by the TA-3 power plant boilers. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)

Monitoring: The liquid fuel flow rate shall be continuously monitored whenever liquid fuel is combusted. The natural gas fuel flow rate for each boiler shall be continuously monitored whenever natural gas is combusted. The hours of operation of each boiler shall be continuously monitored. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)

Recordkeeping: The permittee shall record the monthly total of liquid fuel (gallons) for all boilers combined and gaseous fuel (scf) for each boiler on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling 12-month total basis. The permittee shall record the hours of operation of each boiler on a monthly basis, to include a monthly total. The record shall include the monthly rolling 12-month total hours of operation for all 3 boilers combined. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.A, revised)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|---|---|-------------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: The combined boiler natural gas use did not exceed 1,000 MMscf or 500,000 gallons of No. 2 fuel oil in any 12-month period. Volumetric flow is measured using the liquid or gas fuel flowmeters installed on the natural gas fuel inlet to each respective unit and on the combined fuel oil inlet to the boilers. All fuel use data are tracked monthly in a spreadsheet used for emission calculations.

Monitoring: Natural gas fuel meters are in place on each boiler. Fuel oil is measured using control panel readings. Both natural gas and fuel oil are continuously monitored when being combusted. A monthly and 12-month rolling total of natural gas and fuel oil use are recorded and reviewed monthly to verify usage does not exceed allowable limits. See ATTACHMENT 1307.B for monthly and 12-month rolling totals for each fuel.

Recordkeeping: Total monthly liquid fuel for all boilers and gaseous fuel for each boiler were recorded on a monthly basis. The annual fuel usage was calculated and recorded on a monthly rolling 12-month total basis. Total hours of operation of each boiler are recorded monthly and included in a monthly rolling 12-month total hours for all boilers combined. Hours of operation of each boiler are continuously monitored. This data is collected monthly from the power plant operations staff. Monthly and 12 month rolling hours are provided in ATTACHMENT A.1307.B. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section

A605 of this report.

A1307 Other – TA-3 Power Plant

C. Fuel Usage (Combustion Turbine, Unit TA-2-22-CT-1)

Requirement: The combustion turbine shall not consume more than 1400 MMscf of natural gas in any 12-month period. Volumetric flow shall be measured using a gas fuel flowmeter installed on the fuel inlet of the combustion turbine. (NSR Permit 2195B-M2, Specific Condition A802.A)

Monitoring: The natural gas fuel flow rate for the combustion turbine shall be continuously monitored whenever natural gas is combusted. (NSR Permit 2195B-M2, Specific Condition A802.A)

Recordkeeping: The permittee shall record the daily total of gaseous fuel (scf) for the turbine on a monthly basis, to include a monthly total. Annual fuel usage shall be calculated and recorded on a monthly rolling 12-month total basis. The permittee shall record the daily hours of operation of the combustion turbine on a monthly basis, to include a monthly total. The record shall include the monthly total hours and monthly rolling 12-month total hours of operation. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.A)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: A 12-month rolling total for natural gas use is maintained to verify usage does not exceed 1400 MMscf. The daily and monthly total fuel use is collected and recorded in a spreadsheet used for calculating emissions. See ATTACHMENT A1307.C.

Monitoring: The natural gas flowmeter is installed on the turbine inlet. The fuel flowmeter continuously measures natural gas being delivered to the combustion turbine.

Recordkeeping: Daily hours of operation are collected monthly and entered into the spreadsheet. A 12-month rolling total hours of operation is calculated using this information. Rolling total hours are provided in ATTACHMENT A1307.C. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

D. Load Requirement (Combustion Turbine, Unit TA-3-22-CT-1)

Requirement: The combustion turbine shall be operated at no less than 80% and no greater than 100% load as determined by the manufacturer’s supplied algorithm, except for minimal periods during startup and shutdown conditions. The permittee shall follow the manufacturer’s recommended startup/shutdown procedures in order to minimize the duration of these events. (NSR Permit 2195B-M2, Specific Condition A802.B)

Monitoring: The operating load of the combustion turbine shall be monitored once daily during normal operations of that unit. (NSR Permit 2195B-M2, Specific Condition A802.B)

Recordkeeping: The permittee shall record the daily monitored operating load for the combustion turbine. The permittee shall maintain a record of the manufacturer’s recommended startup/shutdown procedure and the manufacturer’s criteria for the determination of turbine load. The permittee shall maintain a record for each startup/shutdown or malfunction event for the combustion turbine. The record shall include the date, the start/end time and duration for each event, which is defined as the length of time the combustion turbine is operating at less than 80% or greater than 100% load. For any malfunction event, the record shall also include the nature of the malfunction and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.B)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The combustion turbine load was maintained between 80% and 100% during this reporting period.

Load range is calculated by the turbine operating system and is manually recorded during each operation. Startup/shutdown procedures are in place and are followed by the unit operators.

Monitoring: Load range is calculated by the turbine operating system and is manually recorded each hour during normal operation. The operating load is recorded at least once daily during normal operations. This data is collected in the daily operating log. Startup/shutdown procedures are in place and are followed by the unit operators. Each time the unit is started or shut down, the data is entered into a daily operating log, which is maintained on-site. The record includes the date, start/end times, and duration. See ATTACHMENT A.1307.D.

Recordkeeping: The operating load is recorded at least once daily during normal operations. This data is collected in the daily operating log. Startup/shutdown procedures are in place and are followed by the unit operators. Each time the unit is started or shut down, the data is entered into a daily operating log, which is maintained on-site. The record includes the date, start/end times, and duration. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

E. Control Device Operation (Boilers, Units TA-3-22-1 through -3)

Requirement: Each boiler (Units TA-3-22-1 through -3) shall only be operated with a properly operating flue gas recirculation fan (Units F-1 through -3, respectively). Any malfunction of the flue gas recirculation system during boiler operation may be subject to the excess emissions requirements of 20.2.7 NMAC. (NSR Permit 2195B-M2, Specific Condition A803.B)

Monitoring: The flue gas recirculating fans shall be inspected for proper operation and maintenance once during each calendar month that the unit was operating. (NSR Permit 2195B-M2, Specific Condition A803.B)

Recordkeeping: The permittee shall record all inspections of the flue gas recirculating fans and any event during which a fan malfunctions. The record shall include the date, time, name of operator conducting the inspection, and any discrepancies noted. For malfunction events, the record shall also include the nature and duration of the malfunction, and any corrective action taken. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A803.B)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: When a boiler is operating, the associated Flue Gas Recirculation (FGR) fan is operating. A fan speed indicator is located on the control panel in the operator control room. This fan speed is monitored and recorded during boiler operation. No malfunctions of the FGR systems have occurred during this reporting period.

Monitoring: The FGR fans are inspected for proper operation and maintenance each month the unit is operating. Preventive maintenance forms are provided in ATTACHMENT A1307.E.

Recordkeeping: Records of inspection and maintenance of the FGR fans are completed monthly. No malfunctions occurred during this reporting period. All inspection records contain the required data found in this section. Records are maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

F. Control Device Operation (Combustion Turbine, Unit TA-3-22-CT-1)

Requirement: The combustion turbine shall be equipped with Rolls-Royce Dry Low Emissions (DLE) control technology (pre-mix, lean-burn series staged combustion system) to control NOx emissions. (NSR Permit 2195B-M2, Specific Condition A802.C)

Monitoring: N/A

Recordkeeping: The permittee shall maintain a record of the DLE system associated with the combustion turbine. The permittee shall maintain records in accordance with Section B109. (NSR Permit 2195B-M2, Specific Condition A802.C)

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|---|---|-------------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: Requirement: The combustion turbine is equipped with the Dry Low Emissions (DLE) control technology. The DLE control was evaluated during unit start-up and determined to be working as designed. Manufacturer data are available on the DLE system.

Recordkeeping: Records of the DLE system associated with the combustion turbine were all maintained in accordance with Section B109.

Reporting: Emissions and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109 and B110. For more information, see comments in Section A605 of this report.

A1307 Other – TA-3 Power Plant

G. 40 CFR 60, Subparts A and GG (Combustion Turbine, Unit TA-3-22-CT-1)

Requirement: The combustion turbine is subject to 40 CFR 60, Subpart GG and the permittee shall comply with the applicable requirements of 40 CFR 60, Subpart A and Subpart GG. (NSR Permit 2195B-M2, Specific Condition A802.D)

Monitoring: The permittee shall comply with the monitoring and testing requirements of 40 CFR 60.334 and 60.335. (NSR Permit 2195B-M2, Specific Condition A802.D)

Recordkeeping: The permittee shall comply with the recordkeeping requirements of 40 CFR 60.334 and 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)

Reporting: The permittee shall comply with the reporting requirements of 40 CFR 60.7. (NSR Permit 2195B-M1-R2, Specific Condition A802.D)

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The combustion turbine is in compliance with 40 CFR Part 60 Subpart A and 40 CFR Part 60 Subpart GG.

Monitoring: The combustion turbine is in compliance with the monitoring and test requirements of 40 CFR 60.334 and 60.335.

Recordkeeping: The combustion turbine is in compliance with the monitoring, notification, and record keeping requirements of 40 CFR 60.334 and 40 CFR 60.7.

Reporting: The combustion turbine is in compliance with the reporting requirements of 40 CFR 60.7.

A1307 Other – TA-3 Power Plant

H. Periodic Emissions Tests (Combustion Turbine, Unit TA-3-22-CT-1)

Requirement: The permittee shall comply with the allowable emission limits at Table A1302.A, including the NOx ppmv limitation. (NSR Permit 2195B-M2, Specific Condition A802.E)

Monitoring: The permittee shall test using a portable analyzer or EPA Reference Methods subject to the requirements and limitations of Section B108, General Monitoring Requirements. For periodic testing of NOx and CO emissions tests shall be carried out as described below.

Test results that demonstrate compliance with the NOx and CO emission limits shall also be considered to demonstrate compliance with the VOC emission limits.

- (1) The test period shall be annually, based on a calendar year.
- (2) The tests shall continue based on the existing testing schedule.
- (3) All subsequent monitoring shall occur in each succeeding monitoring period. No two monitoring events shall occur closer together in time than 25% of a monitoring period.
- (4) The permittee shall follow the General Testing Procedures of Section B111.
- (5) Performance testing required by 40 CFR 60, Subpart GG or 40 CFR 60, Subpart KKKK may be used to satisfy these periodic testing requirements if they meet the requirements of this condition and are completed during the specified monitoring period.

Recordkeeping: The permittee shall maintain records in accordance with Section B109. The permittee shall also record the results of the periodic emissions tests, including the turbine's fuel flow rate and horsepower at the time of the test, and the type of fuel fired (natural gas, field gas, etc.).

If a combustion analyzer is used to measure excess air in the exhaust gas, records shall be kept of the make and model of the instrument and instrument calibration data. If an ORSAT apparatus or other gas absorption analyzer is used, the permittee shall record all calibration results.

The permittee shall also keep records of all raw data used to determine exhaust gas flow and of all calculations used to determine flow rates and mass emissions rates.

Reporting: The permittee shall report in accordance with Section B109, B110, and B111.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: Requirement: The facility is in compliance with the allowable emission limits in Table A1302.A, including the NOx ppmv limitation, as demonstrated in the monitoring and reporting sections below.

Monitoring: The test followed the requirements and limitations required in Section B108. A combustion analyzer is used for this periodic emissions test. Instrument and calibration data are included in the final test report. An ORSAT or other similar gas absorption analyzer is not used. Results from the test demonstrate compliance with NOx and CO emission limits and thus the VOC emission limits. No limits were exceeded. See ATTACHMENT A1307.H. for the

test report.

- 1) An emission stack test was conducted during this reporting period on 12/5/2023; the results from the test demonstrated that the actual emissions were less than the allowable emissions.
- 2) No additional stack testing was required during this monitoring period.
- 3) The tests are performed annually if required, or at a frequency as specified in General Condition B108.D based on the percentage of time the unit has operated.
- 4) The stack test was performed following the monitoring requirements required in Section B108 and general testing procedures found in Section B111. Records of periodic emissions test include all data required by this section.
- 5) Performance testing met the requirements of this condition and were completed during the specified monitoring period.

Recordkeeping: The test followed the requirements and limitations required in Section B109. Records are kept of the periodic emissions test results, including the turbine's fuel flow rate and horsepower, and the type of fuel fired. A combustion analyzer is used for this periodic emissions test. Instrument and calibration data are included in the final test report. An ORSAT or other similar gas absorption analyzer is not used. Raw data and calculations are included in the test report.

Reporting: Emission and monitoring reports are submitted on a six-month basis and compliance certification on an annual basis in accordance with permit conditions A109, B110, and B111. For more information, see comments in Section A605 of this report.

A1407 Other – Open Burning

A. Operational

Requirement: The permittee shall comply with the applicable requirements of 20.2.60 NMAC and 20.2.65 NMAC, including, but not limited to:

- 1) Prior to initiating a burn consisting of vegetative material, the permittee shall submit to the Department a sampling and analysis plan and upon approval conduct representative sampling of the intended burn material and analyze samples for radionuclides, target analyte list (TAL) inorganic elements, polychlorinated biphenyls (PCBs), and high explosives (HE); and
- 2) The permittee shall submit to the Department a background concentration report for the contaminants listed in Condition A1407.A, Requirement (1). The report shall indicate locations where background concentrations were taken and compare sample results with background concentrations of the constituents; and
- 3) The permittee shall not burn vegetative material which includes any contaminant above the relevant background concentration; and
- 4) Upon receiving Department approval, the permittee shall conduct public notification in a display ad in at least four newspapers: Los Alamos Monitor, Rio Grande Sun, Santa Fe New Mexican, and the Albuquerque Journal, no less than 21 days in advance of a planned burn.

Monitoring: The permittee shall monitor all open burning as required by Department regulation or burn approval.

Recordkeeping: The permittee shall maintain records of all sampling and analysis plans and any representative sampling conducted. Records shall be kept in accordance with Section B109.

Reporting: The permittee shall submit reports as outlined in the Condition 1407.A Requirements, as described in Section A109, and in accordance with Section B110.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

| | | |
|--|--|------------------|
| <input type="checkbox"/> Yes | Date report submitted: | Tracking Number: |
| <input checked="" type="checkbox"/> No | Provide comments and identify any supporting documentation as an attachment. | |

Comments: No open burning occurred during this reporting period. See ATTACHMENT A1407.A. for details.

P100-R2M1 - A1507 Evaporative Sprayers–Work Practice Standards

A. Operational Requirements (Evaporative Sprayers)

Requirement: Compliance with the allowable emission limits in Table 106.B shall be demonstrated by calculating the annual total HAPs emissions in tons per year. The emissions shall be calculated based on the most recent water analysis and hours of operation for the evaporative sprayers.

Monitoring: The permittee shall conduct an analysis of the basin water, including analytical results (water concentrations) for all HAPs and TAPs, at the Sanitary Effluent Reclamation Facility (SERF) every two years beginning no later than calendar year 2018. The permittee shall monitor the hours of operation for each sprayer.

Recordkeeping: The permittee shall record a monthly rolling, 12-month total of HAPs emissions based on the sum of emissions from all the evaporative sprayers. The emission factors for the HAPs shall be based on the values from the most recent water analysis.

Reporting: The permittee shall submit reports described in Section A109 and in accordance with Section B111. An electronic copy of the required water analysis including analytical results (water concentrations) for all HAPs, TAPs, and the total dissolved solids (TDS) shall be sent to AQB with the Semi-annual Monitoring Report specified in A109.A for any year in which the water sampling is conducted.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:**

Tracking Number:

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: The evaporative sprayers did not operate during this monitoring period.

Requirement: The facility is in compliance with the allowable emissions limits in Table 106.B by calculating the annual total HAP emissions in tons per year. The most recent water analysis results and hours of operation are used to calculate the emissions.

Monitoring: The facility conducts analysis of the basin water for HAPs and TAPs every two years effective 2018. Basin water sampling was conducted in December of 2022. The hours of operation are monitored and tabulated. See ATTACHMENT A1507.A.b. for details.

Recordkeeping: Records are kept on-site and include the monthly rolling and 12-month total of HAPs emissions based on the sum of emissions from all the evaporative sprayers. The emission factors are based on the values from the most recent water analysis.

Reporting: Reporting is done in accordance with the Title V requirements specified in Section A109.A and Section B111. Water analysis results will be included in the Semi-Annual Monitoring Report for any year in which the water sampling is conducted. Basin water sampling was conducted in December of 2022. See ATTACHMENT A1507.A.a. for details.

P100-R2M1 - A1507 Evaporative Sprayers–Work Practice Standards

B. Maintenance and Repair Requirements

Requirement: Compliance with the allowable emission limits in Table 106.A shall be demonstrated by properly maintaining and repairing the units.

Monitoring: Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule. Activities that involve maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur.

Recordkeeping: The permittee shall maintain records in accordance with Section B109, including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.

Reporting: The permittee shall maintain records in accordance with Section B109, including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: The evaporative sprayers did not operate during this monitoring period.

Requirement: Compliance with the allowable emissions limits is demonstrated by properly maintaining and repairing the units.

Monitoring: Equipment maintenance and repair are conducted in accordance with the manufacturer's recommended schedule and LANL procedures, and documented in Table 106.A. See ATTACHMENT A1507.B. for work practice standards and maintenance and repair records.

Recordkeeping: Records are maintained in accordance with Section B109. Maintenance and repair records are kept on-site, and include maintenance and repairs activities, and the maintenance schedule.

Reporting: Records are maintained in accordance with Section B109. Maintenance and repair records are kept onsite, and include maintenance and repairs activities, and the maintenance schedule.

P100-R2M4 - A1507 Evaporative Sprayers–HAPs Calculations, Maintenance, and Repair

A. HAPs Calculations (Evaporative Sprayers)

Requirement: Compliance with the facility-wide allowable emission limits in Table 106.B (P100-R2M1) shall be demonstrated by calculating the annual total HAPs emissions in tons per year. The emissions shall be calculated based on the most recent water analysis and hours of operation for the evaporative sprayers.

Monitoring: The permittee shall conduct an analysis of the basin water, including analytical results (water concentrations) for all HAPs and New Mexico TAPs, at the Sanitary Effluent Reclamation Facility (SERF)

every two years beginning no later than calendar year 2018. The permittee shall monitor the hours of operation for each sprayer.

Recordkeeping: The permittee shall record a monthly rolling, 12-month total of HAPs emissions based on the sum of calculated actual emissions from all the evaporative sprayers. The emission factors for the HAPs shall be based on the values from the most recent water analysis.

Reporting: The permittee shall submit reports according to Section A109 and in accordance with Section B111 (P100-R2M1). An electronic copy of the required water analysis including analytical results (water concentrations) for all HAPs, TAPs, and the total dissolved solids (TDS) shall be sent to AQB with the Semi-annual Monitoring Report specified in Condition A109.A (P100-R2M1) for any year in which the water sampling is conducted.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: The evaporative sprayers did not operate during this monitoring period.

Requirement: The facility demonstrates compliance with the allowable emissions limits in Table 106.B by calculating the annual total HAP emissions in tons per year. The most recent water analysis results and hours of operation are used to calculate the emissions.

Monitoring: The facility conducts analysis of the basin water for HAPs and TAPs every two years effective 2018. Basin water sampling was conducted in December of 2022. The hours of operation are monitored and tabulated.

Recordkeeping: Records are kept on-site and include the monthly rolling and 12-month total of HAPs emissions based on the sum of emissions from all the evaporative sprayers. The emission factors are based on the values from the most recent water analysis.

Reporting: Reporting is done in accordance with the Title V requirements specified in Section A109.A and Section B111. Water analysis results will be included in the Semi-Annual Monitoring Report for any year in which the water sampling is conducted. Basin water sampling was conducted in December of 2022.

P100-R2M4 - A1507 Evaporative Sprayers–HAPs Calculations, Maintenance, and Repair

B. Maintenance and Repair Requirements

Requirement: Compliance with the facility-wide allowable emission limits in Table 106.B (P100-R2M1) shall be demonstrated by properly maintaining and repairing the units.

Monitoring: Maintenance and repair shall meet the minimum manufacturer's or permittee's recommended maintenance schedule. Activities that involve maintenance, adjustment, replacement, or repair of functional components with the potential to affect the operation of an emission unit shall be documented as they occur.

Recordkeeping: The permittee shall maintain records in accordance with Section B109 (P100-R2M1), including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.

Reporting: The permittee shall maintain records in accordance with Section B109 (P100-R2M1), including records of maintenance and repairs activities and a copy of the manufacturer's or permittee's recommended maintenance schedule.

Has this reporting requirement been met during this reporting period with a separate report submittal? Answer Yes or No below.

Yes **Date report submitted:** _____ **Tracking Number:** _____

No **Provide comments and identify any supporting documentation as an attachment.**

Comments: The evaporative sprayers did not operate during this monitoring period.

Requirement: Compliance with the allowable emissions limits is demonstrated by properly maintaining and repairing the units.

Monitoring: Equipment maintenance and repair are conducted in accordance with the manufacturer's recommended schedule and LANL procedures, and documented in Table 106.A.

Recordkeeping: Records are maintained in accordance with Section B109. Maintenance and repair records are kept on-site, and include maintenance and repairs activities, and the maintenance schedule.

Reporting: Records are maintained in accordance with Section B109. Maintenance and repair records are kept onsite, and include maintenance and repairs activities, and the maintenance schedule.

| | |
|---|---|
| 2. Are there any deviations not yet reported? If No, no further information is required on the Deviation Summary Report. If Yes, answer question 3 below and enter the required information in the Deviation Summary Table. | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |
| 3. Did any of the deviations result in excess emissions? For deviations resulting in excess emissions a completed Excess Emission Form for each deviation must be attached to this report. | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |

Deviation Summary Table for deviations not yet reported.

| No. | Applicable Requirement (Include Rule Citation) | Emission Unit ID(s) | Cause of Deviation | Corrective Action Taken |
|-----|---|---|--|--|
| 1 | A604.B | TA-60-BDM (replaced with TA-60-ADM per GCP-3-2195GR1) | Operations on seven days in October and November commenced prior to one half hour after sunrise in the morning. These operations happened on October 10, 11, 26, and 31 and November 1, 2 and 7. The start time for operations is recorded in the daily log maintained at the asphalt plant. Operation start time was compared to the National Oceanic and Atmospheric Agency (NOAA) sunrise and sunset table for Los Alamos and it was determined that operations started prior to the allowable time on seven different occurrences. Start times ranged from 2 minutes prior to allowable start time up to 57 minutes prior to the allowable start time. | Corrective actions have been completed and include, additional training for all operators and a sunrise and sunset data table posted in the operational control room at the asphalt plant. Operators can quickly check the sunrise time and calculated allowable start time to ensure operational start up does not occur before the allowable 1/2 hour after sunrise time period, as well as the 1/2 hour before sunset time period for operational shut down in the evening. Corrective actions were completed on December 15, 2023. |
| 2 | A607.G | TA-60-BDM (replaced with TA-60-ADM per GCP-3-2195GR1) | A Method 22 test was not conducted for all screens, conveyor drop points, and hoppers for the month of August. The plant was in operation in the beginning of August before it was identified that CO and NOx emissions were high in the initial results from the stack test. The plant shut down normal operations to test the burner to determine why the burner was not operating efficiently. Plant operations were conducted periodically through the month in order to test the burner, however the completion of the Method 22 test was likely overlooked due to the unusual operations that month. | Additional facility personnel have been trained in Method 22 tests and facility staff will conduct this test as early in the month as possible in order to ensure the test is completed each month in the event of unforeseen shutdowns, operational changes or limited hours that would prevent the ability to perform the Method 22 test. |
| 3 | | | | |

| | | | | |
|---|--|--|--|--|
| 4 | | | | |
| 5 | | | | |

Deviation Summary Table (cont.)

| Deviation Started | | Deviation Ended | | | | | | Did you attach an excess emission form? |
|-------------------|------------|-----------------|-----------|----------|-----------|-------------------------------|---------------------|---|
| No. | Date | Time | Date | Time | Pollutant | Monitoring Method | Amount of Emissions | |
| 1 | 10/10/2023 | 7:35 AM | 11/7/2023 | 7:00 AM | PM | Sunrise and sunset data table | 0 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 2 | 8/1/2023 | 12:00 AM | 8/31/2023 | 11:59 PM | PM | Method 22 test | 0 | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |
| 3 | | | | | | | | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 4 | | | | | | | | <input type="checkbox"/> Yes <input type="checkbox"/> No |
| 5 | | | | | | | | <input type="checkbox"/> Yes <input type="checkbox"/> No |

AI 856 | Los Alamos National Laboratory

Operating Permit P100-R2M5

Monitoring Period July 1–December 31, 2023

| | |
|-------------------------|--|
| ATTACHMENT A607.A. | Asphalt Plant – Differential Pressure Records |
| ATTACHMENT A607.C. | Asphalt Plant – Method 9 Opacity Reports |
| ATTACHMENT A607.E. | Asphalt Plant – Daily Operation Log and 12-Month Rolling Production |
| ATTACHMENT A607.F. | Asphalt Plant – Maintenance and Delivery Records |
| ATTACHMENT A607.G. | Asphalt Plant – Method 22 Opacity Reports |
| ATTACHMENT A707.B.a. | Beryllium – TA-03-0066 Beryllium Logs |
| ATTACHMENT A707.B.b. | Beryllium – TA-35-0213 Beryllium Operating Log |
| ATTACHMENT A707.C.a. | Beryllium – TA-03-0141 Beryllium HEPA Filter Differential Pressure Readings |
| ATTACHMENT A707.C.b. | Beryllium – TA-55-PF4 Annual HEPA Filter Challenge Test Reports |
| ATTACHMENT A707.C.c. | Beryllium – TA-55-PF4 HEPA Filtration Differential Pressure Readings |
| ATTACHMENT A806.A. | External Combustion – 20.2.61 NMAC Opacity |
| ATTACHMENT A806.C. | External Combustion – 20.2.61 NMAC Opacity – Units RLUOB-BHWs Fuel Oil-Fired |
| ATTACHMENT A807.A. | External Combustion – Natural Gas Usage and Rolling 12-Month Total |
| ATTACHMENT A807.B. | External Combustion – RLUOB Natural Gas and Fuel Oil Usage |
| ATTACHMENT A807.C. & D. | External Combustion – Fuel Oil Sulfur Content |
| ATTACHMENT A807.E. | External Combustion – Initial Compliance Testing (Unit RLUOB-BHW-4) |
| ATTACHMENT A807.F.a. | External Combustion – Operational Boiler Inspection |
| ATTACHMENT A807.F.b. | External Combustion – Revised Boiler Maintenance Procedures |
| ATTACHMENT A907.A. | Chemical Usage – Chemical Purchases (From ChemDB) |
| ATTACHMENT A907.B.a. | Chemical Usage – RLUOB-CHEM Chemical Purchases (From ChemDB) |
| ATTACHMENT A907.B.b. | Chemical Usage – RLUOB-CHEM Chemical Quantity Total |
| ATTACHMENT A1007.A.a. | Degreaser – Degreaser Solvent Usage (From Tracking Database) |
| ATTACHMENT A1007.A.b. | Degreaser – Completed Work Practice Checklists |
| ATTACHMENT A1104.A. | Internal Combustion – TA-33-G-1P Daily Operating Logs |
| ATTACHMENT A1104.B. | Internal Combustion – Permitted Generator Hours of Operation |

AI 856 | Los Alamos National Laboratory

Operating Permit P100-R2M5

Monitoring Period July 1–December 31, 2023

| | |
|-----------------------|--|
| ATTACHMENT A1106.A. | Internal Combustion – Method 9 Opacity Reports |
| ATTACHMENT A1107.A. | Internal Combustion – Operating Records for RLUOB Generators |
| ATTACHMENT A1107.B. | Internal Combustion – Operating Records for Permitted Emergency Generators |
| ATTACHMENT A1207.A. | Data Disintegrator – Operating Logs |
| ATTACHMENT A1207.B. | Data Disintegrator – Maintenance Performed |
| ATTACHMENT A1306.A. | TA-03 Power Plant – Opacity for Sources Combusting Natural Gas |
| ATTACHMENT A1306.B. | TA-03 Power Plant – Opacity for Boilers Combusting No. 2 Fuel Oil |
| ATTACHMENT A1307.A. | TA-03 Power Plant – Emission Rate Calculations |
| ATTACHMENT A1307.B. | TA-03 Power Plant – Boiler Fuel Use and Hours of Operation |
| ATTACHMENT A1307.C. | TA-03 Power Plant – Turbine Fuel Use and Hours of Operation |
| ATTACHMENT A1307.D. | TA-03 Power Plant – Turbine Operating Logs |
| ATTACHMENT A1307.E. | TA-03 Power Plant – FGR Fan Inspection and Maintenance |
| ATTACHMENT A1307.H. | TA-03 Power Plant – Combustion Turbine Emission Stack Test Report |
| ATTACHMENT A1407.A. | Open Burning |
| ATTACHMENT A1507.A.a. | Evaporative Sprayers – Analytical Data for Basin Water |
| ATTACHMENT A1507.A.b. | Evaporative Sprayers – Hours of Operation |
| ATTACHMENT A1507.B. | Evaporative Sprayers – Maintenance and Repair Requirements |

NOTE: The attachments included are for Title V Operating Permits P100-R2M4 and P100-R2M5, but for simplicity, are listed as P100-R2M5 which is the current permit number.