

JUN 28 2016

Douglas Findley
Land O Lakes, Inc
400 South M St
Tulare, CA 93274

RE: Final - Authority to Construct / Certificate of Conformity (Significant Modification)
Facility Number: S-525
Project Number: S-1153671

Dear Mr. Findley:

The Air Pollution Control Officer has issued the Authority to Construct permit to Land O Lakes, Inc for a new boiler, at 400 South M St, Tulare, California. Enclosed are the Authority to Construct permit and a copy of the notice of final action to be published approximately three days from the date of this letter.

Notice of the District's preliminary decision to issue the Authority to Construct permit was published on February 16, 2016. The District's analysis of the proposal was also sent to CARB and US EPA Region IX on February 10, 2016. All comments received following the District's preliminary decision on this project were considered.

Comments received by the District during the public notice period resulted in minor changes due to public comment. These comments and the District responses to comments are included as an enclosure. These changes were minor and did not trigger additional public notification requirements, nor did they have any impact upon the Best Available Control Technology determination or on the amount of offsets required for project approval.

Prior to operating with the modifications authorized by the Authority to Construct, you must submit an application to modify the Title V permit as an administrative amendment in accordance with District Rule 2520, Section 11.5. Application forms have been enclosed for your use. These forms may also be found on the District's website at www.valleyair.org.

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

Mr. Douglas Findley
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Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Leonard Scandura at (661) 392-5500.

Sincerely,



Arnaud Marjollet
Director of Permit Services

AM:rue

Enclosures

cc: Tung Le, CARB (w/enclosure) via email
cc: Gerardo C. Rios, EPA (w/enclosure) via email

Facility # S-525
LAND O' LAKES, INC.
400 SOUTH M STREET
TULARE, CA 93274

AUTHORITY TO CONSTRUCT (ATC)

QUICK START GUIDE

1. **Pay Invoice:** Please pay enclosed invoice before due date.
2. **Modify Your Title V Permit.** Prior to operating the equipment authorized under this ATC, submit an application to modify your Title V permit. See application forms at <http://www.valleyair.org/busind/pto/ptoforms/1ptoformidx.htm>.
3. **Fully Understand ATC:** Make sure you understand ALL conditions in the ATC prior to construction, modification and/or operation.
4. **Follow ATC:** You must construct, modify and/or operate your equipment as specified on the ATC. Any unspecified changes may require a new ATC.
5. **Notify District:** You must notify the District's Compliance Department, at the telephone numbers below, upon start-up and/or operation under the ATC. Please record the date construction or modification commenced and the date the equipment began operation under the ATC. You may NOT operate your equipment until you have notified the District's Compliance Department. A startup inspection may be required prior to receiving your Permit to Operate.
6. **Source Test:** Schedule and perform any required source testing. See http://www.valleyair.org/busind/comply/source_testing.htm for source testing resources.
7. **Maintain Records:** Maintain all records required by ATC. Records are reviewed during every inspection (or upon request) and must be retained for at least 5 years.

By operating in compliance, you are doing your part to improve air quality for all Valley residents.

**For assistance, please contact District Compliance staff at
any of the telephone numbers listed below.**

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
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Southern Region
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Bakersfield, CA 93308-9725
Tel: 661-392-6500 FAX: 661-392-5585

AUTHORITY TO CONSTRUCT

PERMIT NO: S-525-51-0

ISSUANCE DATE: 05/26/2016

LEGAL OWNER OR OPERATOR: LAND O' LAKES, INC.
MAILING ADDRESS: 400 SOUTH M STREET
TULARE, CA 93274

LOCATION: 400 SOUTH "M" ST
TULARE, CA 93274

EQUIPMENT DESCRIPTION:

182 MMBTU/HR BABCOCK AND WILCOX COMPANY NATURAL GAS FIRED BOILER WITH COEN/TODD VARIFLAME LOW NOX BURNER (OR EQUIVALENT), CATASTAK SCR SYSTEM (OR EQUIVALENT), AND A PREDICTIVE EMISSION MONITORING SYSTEM (PEMS)

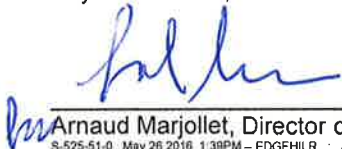
CONDITIONS

1. This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 3,402 lb, 2nd quarter - 3,402 lb, 3rd quarter - 3,402 lb, and fourth quarter - 3,402 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 1,229 lb, 2nd quarter - 1,230 lb, 3rd quarter - 1,230 lb, and fourth quarter - 1,230 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO



Arnaud Marjollet, Director of Permit Services

S-525-51-0, May 26 2016 1:39PM - EDGEHILR : Joint Inspection NOT Required

5. Prior to operating equipment under this Authority to Construct, permittee shall withdraw sufficient PM10 emission reduction credits to offset the following quantity of emission increases: 1st quarter - 3,006 lb, 2nd quarter - 3,007 lb, 3rd quarter - 3,007 lb, and fourth quarter - 3,007 lb. Offsets shall be provided at the applicable offset ratio specified in Table 4-2 of Rule 2201 (as amended 4/21/11). SOx ERCs may be used to offset PM10 at an interpollutant offset ratio of 1:1. [District Rule 2201] Federally Enforceable Through Title V Permit
6. ERC Certificate Number S-3326-2, S-3625-2, C-1059-2, N-1327-2, N-1329-2, S-3284-1, S-3625-1, C-1044-1, N-1326-1, N-1327-1, S-4396-1, S-3625-4, S-3625-5, S-3352-5, C-1304-5, N-1287-5, N-1326-4, N-1327-4, N-1326-5, and N-1327-5 (or a certificate split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The permittee shall obtain written District approval for the use of any equivalent equipment not specifically approved by this Authority to Construct. Approval of the equivalent equipment shall be made only after the District's determination that the submitted design and performance of the proposed alternate equipment is equivalent to the specifically authorized equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The permittee's request for approval of equivalent equipment shall include the make, model, manufacturer's maximum rating, manufacturer's guaranteed emission rates, equipment drawing(s), and operational characteristics/parameters. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Alternate equipment shall be of the same class and category of source as the equipment authorized by the Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
10. No emission factor and no emission shall be greater for the alternate equipment than for the proposed equipment. No changes in the hours of operation, operating rate, throughput, or firing rate may be authorized for any alternate equipment. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Permit to Operate S-525-2-8 shall be cancelled upon implementation of ATC. [District Rule 2201] Federally Enforceable Through Title V Permit
12. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
13. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4201] Federally Enforceable Through Title V Permit
15. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized, and maintained. [40 CFR 60.49 b(d)(1)] Federally Enforceable Through Title V Permit
16. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
17. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Upon completion of initial commissioning of boiler (i.e. installation of boiler, connection of gas pipelines, initiate fuel flow, installation of control systems, etc) initial PEMS training and testing period shall not exceed 30 consecutive days. [District Rule 2201] Federally Enforceable Through Title V Permit
19. NOx emissions during Prediction Emissions Monitoring System (PEMS) training period shall not exceed 106.1 lb/day. Record of lb/day NOx and CO emissions during PEMS training shall also be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
20. NOx emissions, including PEMS Training, shall not exceed 9725 lb/yr. [District Rule 2201]
21. NOx emissions shall not exceed 20 ppmv @ 3% O2 averaged over a 30-day PEMS initial training period. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

22. Permittee shall monitor and record the stack concentration of NO_x continuously using CEMS during PEMS training period. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
23. Except during startup and shutdown and 30-day PEMS training period, emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 5 ppmv NO_x @ 3% O₂ or 0.0061 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmv CO @ 3% O₂ or 0.037 lb-CO/MMBtu, 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
24. NO_x emissions limits shall not exceed 0.1 lb NO_x/MMBtu for low heat release rate (< 70,000 Btu/hr ft²) and 0.2 lb NO_x/MMBtu for low heat release rate (> 70,000 Btu/hr ft²) pursuant to 40 CFR 60.44b(a). This limit applies at all times including startups, shutdowns, and malfunctions pursuant to CFR 60.42b(h). Compliance with these limits is determined on a 24-hr average basis for the initial performance test and on a 3 hour average basis for subsequent performance tests pursuant to 40 CFR 60.44b(j). [40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
25. The ammonia (NH₃) emissions shall not exceed 10 ppmvd @ 3% O₂. [District Rule 4102] Federally Enforceable Through Title V Permit
26. PEMS or Continuous Emissions Monitoring System (CEMS) shall be certified within 60 days of completion of PEMS training period. [NSPS Subparts A and Subpart Db] Federally Enforceable Through Title V Permit
27. During startup or shutdown, the emissions control system shall be in operation, and emissions shall be minimized to the extent technically possible. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
28. During initial PEMS training and testing period, the allowable duration of a start-up shall not exceed 12 hours per occurrence and the allowable duration of shutdown shall not exceed 9 hours per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
29. Except during initial PEMS training and testing period, startup and shutdown shall not exceed 2 hrs per occurrence. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
30. If CEMS is installed, unit shall comply with the emission monitoring requirements as specified in 40 CFR Part 60.48b. [District Rule 4001] Federally Enforceable Through Title V Permit
31. If PEMS is installed for NO_x and CO, PEMS shall meet the requirements in 40 CFR 60, Performance Specifications 16 (PS-16) except as modified by this permit, or shall meet equivalent specifications established by mutual agreement of the District, the ARB, and the EPA. [40 CFR Subpart Db, 40 CFR Part 64, Rule 4320, and, District Rule 1080] Federally Enforceable Through Title V Permit
32. Permittee shall submit to the District for approval a plan (PEMS plan) that identifies the operating conditions to be monitored under 40 CFR 60.48b (g)(2) and the records to be maintained under 60.49b and Rule 4320. This plan shall be submitted to the District for approval at least 30 days prior to the start of the PEMS training period. [40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
33. At all times the PEMS must be operated in accordance with the requirements contained in EPA Performance Specification 16 for Predictive Emissions Monitoring Systems and Amendments to Testing and Monitoring Provisions. [District Rule 1080] Federally Enforceable Through Title V Permit
34. The owner or operator shall install, certify, maintain, operate and quality-assure a PEMS which continuously predicts and records the exhaust gas NO_x, CO and O₂ concentrations. Predictive emissions monitor(s) shall be capable of predicting emissions during normal operating conditions. PEMS results during startup and shutdown events shall be predicted using startup emission rates obtained from the initial performance source testing to determine compliance with emission limits contained in this permit. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

35. Details on the design of the PEMS (PEMS protocol) as specified in PS-16, Section 6.1 must be approved by the District prior to the start of the PEMS training period. This information must include number of input parameters, parameter operating envelope, source specific operating conditions affecting PEMS output, ambient conditions affecting PEMS operation, PEMS principal of operation including physical assumptions and mathematical manipulations supporting its operation, specific details on the testing to be performed for the PEMS training, data recorder scale, sensors to be used and sensor evaluation system, plan to detect and notify operator of parameter envelope exceedences, and recordkeeping. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
36. Initial Relative Accuracy Test Audit (RATA) must be conducted as specified in PS-16, Section 8.2 and must include 9 RM (Reference Method e.g. EPA Method 7c for NO_x) tests at each of low, medium, and high operating levels. Relative accuracy (RA) calculations using RM and PEMS data from the 3-level tests must be done using equations specified in PS-16, Section 12.2. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
37. The absolute mean difference between the PEMS measurements and the reference method measurements shall not exceed 2 ppmv. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
38. Permittee shall perform a relative accuracy audit (RAA) consisting of at least three 30-minute portable analyzer or RM (reference method) determinations each quarter a relative accuracy test audit (RATA) is not performed as specified in Section 9.3 of EPA Performance Specification 16. The average of the 3 portable analyzer determinations must not differ from the simultaneous PEMS average value by more than 2 ppmv. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
39. If a PEMS passes all quarterly RAAs in the first year and also passes the subsequent yearly (RATA) in the second year, the permittee may elect to perform a single mid-year RAA in the second year in place of the quarterly RAAs as specified in Section 9.3 of EPA Performance Specification 16. This option may be repeated, but only until the PEMS fails either a mid-year RAA or a yearly RATA. When such a failure occurs, permittee must resume quarterly RAAs in the quarter following the failure and continue conducting quarterly RAAs until the PEMS successfully passes both a year of quarterly RAAs and a subsequent RATA. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
40. Statistical tests as specified PS-16, Section 8.3 including bias test, F-test, and correlation analysis must be used to evaluate paired RA and RM data for demonstration of continual compliance. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
41. The PEMS data is considered biased and must be adjusted if the arithmetic mean (d) is greater than the absolute value of the confidence coefficient (cc) in Equations 16.1 and 16.3 of EPA Performance Specification 16. In such cases, a bias factor must be used to correct the PEMS data. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
42. The calculated F-value (as specified in Section 13.3 of EPA Performance Specification 16) shall not exceed the critical F-value at the 95-percent confidence level for the PEMS to be acceptable. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
43. Operator shall perform a correlation analysis using the RA paired data from all operating levels combined to determine how well the RM and PEMS correlate. Use the equations in Section 12.3.3. The correlation is waived if the process cannot be varied to produce a concentration change sufficient for a successful correlation test because of its technical design. In such cases, should a subsequent RATA identify a variation in the RM measured values by more than 30 percent, the waiver will not apply, and a correlation analysis test must be performed at the next RATA. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64]
44. If PEMS fails to pass a quarterly RAA or yearly RATA test, or if changes are made that could result in a significant change in the emissions rate (e.g. process modification, new process operating modes, or changes to emission controls) the PEMS must be recertified by the earlier of 60 operating days or 180 calendar days after the failed RATA or after the change that has caused a significant change in emission rate as specified in PS-16, Section 8.5. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

45. Source shall maintain a Quality Control Plan (QA plan) including the components specified by PS-16, Section 9.0 to verify that the system is generating quality assured data after the initial PEMS certification test. QA plan shall include QA/QC summary of ongoing tests (listed in PS-16 Section 9.1 Table), daily sensor evaluation checks, quarterly RAAs, and yearly RATA. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
46. The operator shall monitor the ammonia injection rate during PEMS breakdowns to demonstrate NOx emission compliance. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
47. The PEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period or shall meet equivalent specifications established by mutual agreement of the District, the ARB and the EPA. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
48. PEMS emission measurements shall be averaged over a period of 15 consecutive minutes to demonstrate compliance with the applicable emission limits. [District Rules 4306 and 4320] Federally Enforceable Through Title V Permit
49. The PEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
50. The nitrogen oxide NOx emission rates measured by the PEMS shall be expressed in lb/million Btu or ppmv @ 3% O₂. The 1-hour average emission rates shall be calculated using the data points required under Section 60.13(h)(2). The records shall also include a daily emission rate consisting of an averaged 24 hour rolling emission rate. [District Rule 2201; 40 CFR 60.48b (d) and 40 CFR Part 64] Federally Enforceable Through Title V Permit
51. The owner or operator shall maintain PEMS records that contain the following: the occurrence and duration of any start-up, shutdown or malfunction, performance testing, evaluations, calibrations, checks, adjustments, maintenance, duration of any periods during which a continuous monitoring system or monitoring device is inoperative, and emission measurements. [40 CFR 60.7(b), and District Rule 1080] Federally Enforceable Through Title V Permit
52. Permittee shall submit a PEMS written report for each calendar quarter to the District. The report is due on the 30th day following the end of the calendar quarter. Quarterly report shall include: time intervals, data and magnitude of excess emissions, nature and cause of excess (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting corresponding to the averaging period specified in the emission test period used to determine compliance with an emission standard; applicable time and date of each period during which the PEMS was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [40 CFR Subpart Db, 40 CFR Part 64, District Rule 1080 and District Rule 2520] Federally Enforceable Through Title V Permit
53. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
54. The initial PEMS training and testing and source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
55. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
56. For the initial RATA, source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of completion of PEMS training period. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Subpart Db, 40 CFR Part 64] Federally Enforceable Through Title V Permit
57. Source testing to measure NH₃ slip from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

58. Source testing to measure NH₃ slip from this unit shall be conducted at least once every twelve months or shall meet the alternate monitoring method established by mutual agreement with the District . After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once 36 months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 4102, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
59. For the initial and subsequent RATA, NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
60. For the initial and subsequent RATA, CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
61. For the initial and subsequent RATA, stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
62. For the initial and subsequent RATA, fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
63. For the initial and subsequent RATA, source testing for ammonia slip shall be conducted utilizing BAAQMD method ST-1B. [District Rule 2201] Federally Enforceable Through Title V Permit
64. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
65. For the initial and subsequent RATA, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
66. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320] Federally Enforceable Through Title V Permit
67. Permittee shall record the daily startup and shutdown duration times of the boiler. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
68. All records related to the operation of the PEMS that are required by NSPS Subpart Db, 40 CFR Part 64 and EPA Performance Specification 16 must be kept in a form suitable for inspection for a period of at least five (5) years. [District Rule 1080] Federally Enforceable Through Title V Permit
69. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

EPA Comments for Proposed ATC/Title V Significant Modification Evaluation for Land O Lakes, Facility ID S-525, Project # S-1153671

Comment 1

Page 9 of the evaluation includes a table showing the PTE of the stationary source to determine if the source is a Major Source pursuant to Rule 2201. While the table indicates the answer is yes, the text following the table states that the facility is not an existing Major Source. Please correct this error to make clear that the source is a major source.

District Response

The Engineering Evaluation has been corrected accordingly.

Comment 2

Condition 19 limits NOx emissions to 106 lb/day during the 30 day PEMS training period. However, EPA could not locate any conditions in the permit which require any recordkeeping to verify compliance with this limit. Please review and if necessary, add a condition to record the days the boiler is operated in such a manner as to allow for PEMS training.

District Response

Condition # 19 has been revised to include the underlined words.

Permittee shall monitor and record the stack concentration of NOx continuously using CEMS during PEMS training period. Records of lb/day NOx and CO emissions during PEMS training period shall also be kept. [District Rules 2201 and 4320] Y

Comment 3

Condition 25 provides an ammonia slip limit of 10 ppm. It is EPA's understanding that ARB has set a BACT limit of 5 ppm for ammonia slip from SCR units. Given the District's PM_{2.5} nonattainment status, please explain in the evaluation why a lower limit is not being required.

District Response

According to District Rule 2201, BACT is applicable to an "emissions unit". The SCR system itself is control equipment and is not an emissions unit. As defined in District Rule 2201, section 3.17, an emissions unit is "*an identifiable operation or piece of process equipment such as a source operation which emits, may emit, or results in the*

emissions of any affected pollutant directly or as fugitive emissions". The SCR system is not a piece of process equipment nor is it a source operation (per the definition of "source operation" in District Rule 1020) and therefore, the SCR system cannot be an emissions unit. Ammonia emissions are not directly emitted by the boiler but rather are emitted by an SCR system. Since the SCR is not an emissions unit, District BACT requirements are not applicable to the ammonia emissions resulting from the application of SCR. This is not the same as saying that we allow excess ammonia emissions from SCR – in fact, we do require very low ammonia slip, but we do it in a way that does not interfere with the lowest possible NOx emissions operation of the equipment.

As EPA is well aware, minimizing NOx emissions in the San Joaquin Valley Air Basin is paramount for the District's attainment of ozone and PM_{2.5} National Ambient Air Quality Standards (standards). In its 2012 and 2015 PM_{2.5} attainment plans for the 1997 and 2006 PM_{2.5} standards, the District provides a detailed analysis of the formation of PM_{2.5} emissions that exceed the standards in the Valley. In the analyses, the District identifies that ammonium nitrate, formed from nitric acid (NOx) and ammonia, is the predominant secondary PM_{2.5} species. The plan demonstrations identify there is an abundance of ammonia compared to NOx in the Valley and thus, NOx is the limiting factor in forming ammonium nitrate. Since NOx is the limiting factor, the District's attainment plans focus on effective and thorough control of NOx emissions in the Valley and no opportunity for NOx reductions is overlooked for compliance with both ozone and PM_{2.5} standards.

So, in conjunction with its sharp focus on NOx reductions, the District does require low-emitting controls. The 10 ppmv ammonia emissions limit represents a very low ammonia limit that has no adverse impacts. When compared to 5 ppmv, the limit of 10 ppmv has no adverse effect on the District's attainment of compliance with PM_{2.5} standards due to the ammonia-saturated nature of the San Joaquin Valley. In addition, the District has assessed the increased risk to the surrounding population due to the 10 ppm ammonia slip, and has found that no significant risk will be created. Lower ammonia slip limits, such as those EPA is suggesting, make it much more difficult for operators to achieve very low NOx limits. Operating the same piece of equipment at 5 ppm ammonia slip versus 10 ppm will almost always result in an increase in NOx. Since NOx reductions are so critical in the Valley, allowing a still low ammonia slip limit of 10 ppmv vs 5 ppmv provides the operator more flexibility in meeting a very low NOx limit. We have found this flexibility to result in decreased NOx emissions as the higher ammonia slip allows a greater margin of compliance with the NOx limit. As a hypothetical example for illustration purposes, an operator that operates at 5 ppm ammonia slip may JUST be able to achieve the 2.5 ppm NOx BACT on an ongoing basis, while the same operation at 10 ppm ammonia slip may be able to operate at 2.1 ppm NOx).

In addition to resulting in lower NOx emissions on an ongoing basis, allowing the higher ammonia slip has the added benefit of allowing the District, over time, to demonstrate lower achieved-in-practice NOx emission rates for future BACT determinations.

In conclusion, even if the District did require BACT on control device emissions in contradiction to the District's SIP approved Rule 2201, it would come to the same conclusion in consideration of the NOx/ammonia trade-off inherent in SCR systems. The District's dependence on NOx reduction to meet its attainment goals would drive our BACT determinations towards lower NOx at the expense of higher ammonia.

For the reasons stated above, condition # 25 has not been revised.

Comment 4

Several conditions contain timing requirements pertaining to certification and testing of the PEMS. For example, Condition 26 allows 180 days for PEMS unit certification, but Conditions 32 and 36 allow 360 days for the submittal of a PEMS plan and a PEMS protocol, respectively. Also, Condition 18 allows for a 30 day PEMS training and testing period and Condition 56 requires an initial RATA and source testing within 60 days of startup. While the NSPS Subpart Db provisions allow up to 360 days for the submittal of PEMS related documents, this is not appropriate for equipment subject to more stringent NSR emission limits. Adequate monitoring should be established as quickly as possible to allow for compliance verification as required by Part 70. EPA suggests requiring submittal of the PEMS plan and protocol at least 30 days prior to initial commissioning of the boiler and clarifying through Conditions 26 and 56 that both the PEMS unit certification and initial RATA and source testing must be performed within 30-60 days of completing the PEMS training period.

District Response

Condition #32 was revised to require submittal of the PEMS protocol 30 days prior to the start of the PEMS training period.

Condition # 26 has been revised to require PEMS certification within 60 days of completion of the PEMS training period.

Condition # 56 has been revised to require RATA source testing within 60 days of completion of the PEMS training period.

Comment 5

Condition 18 refers to "completion of initial commissioning" of the boiler and then allows a 30 day cumulative period for initial training and testing of the PEMS. Condition 56 requires initial compliance testing to be completed within 60 days of "startup." Please clarify in the permit whether this 60 day period starts at the end of "initial commissioning" or the end of PEMS training or some other period. Also, please clarify

whether the 30 day period allowed for PEMS training and testing is a consecutive 30 day period or 30 individual days.

District Response

Regarding Condition 56 please see the response to Comment 4. Condition 18 has been revised from 30 “cumulative” days to 30 “consecutive” days.

Comment 6

Condition 31 provides that any installed PEMS used to predict NOx and CO emissions must meet the requirements of PS-16. Because some of the other conditions in this permit make slight modifications to PS-16, please revise this condition to clarify that the installed PEMS must meet the requirements of PS-16, except as modified by the permit.

District Response

The words “except as been modified by this permit” after “(PS-16)” were added to Condition 31.

Comment 7

Condition 32 requires the permittee to submit a PEMS plan for approval to either the District or EPA for approval. Because the District is delegated NSPS Subpart Db, it is not necessary for the permittee to submit the PEMS plan for approval to EPA. Please revise this condition to require the submittal of the PEMS plan be made directly to the District for approval. As noted in earlier comments, the timeframe for submitting such a plan must be shorter than the 360 days allowed by NSPS Subpart Db.

District Response

Condition 32 has been revised to delete “EPA Administrator” and to replace “within 360 days” to “within 30 days prior to the start of PEMS training.”

Comment 8

The intent of Condition 34 is not clear. First it states that the PEMS “shall be capable of predicting emissions...during startups and shutdowns.” But then the next sentence states that PEMS results during startup and shutdown events shall be predicted using startup emission rates obtained from initial performance source testing to determine compliance with emission limits. Please clarify if the District intends the source to actually predict emissions during startup and shutdown using the PEMS, or compliance during these periods is only to be based on the annual source test results. If results will only be based on annual source test results, please provide an explanation as to why the PEMS unit cannot be used during these periods.

District Response

PEMs will not be able to predict emissions during startup and shutdowns. Condition # 34 is revised as follows:

The owner or operator shall install, certify, maintain, operate and quality-assure a PEMS which continuously predicts and records the exhaust gas NO_x, CO and O₂ concentrations. Predictive emissions monitor(s) shall be capable of predicting emissions during normal operating conditions ~~and during startups and shutdowns~~. PEMS results during startup and shutdown events shall be predicted using startup emission rates obtained from the initial performance source testing to determine compliance with emission limits contained in this permit. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

Comment 9

Please review the permit for consistent use of the abbreviations for Relative Accuracy Test Audit (RATA) and Relative Accuracy Audit (RAA). For example, in Condition 36 the term RA is used and it is not clear if this should be should be RATA or RA.

Comment 10

Condition 36 specifies the PEMS RATA testing requirements and states that it must include "9 portable analyzer readings (RM, reference method)".... This is incorrect. PS-16, Section 8.2 specifies that the RATA testing must be performed using the appropriate Reference Method (RM), not with a portable analyzer. The quarterly RAAs may be performed with a portable analyzer, but not the RATAs. Please revise this condition accordingly.

District Response

Condition 36 has been replaced by the following three conditions for clarity

Initial Relative Accuracy Test Audit (RATA) must be conducted as specified in PS-16, Section 8.2 and must include 9 RM (Reference Method e.g. EPA Method 7c for NO_x) tests at each of low, medium, and high operating levels. Relative accuracy (RA) calculations using RM and PEMS data from the 3-level tests must be done using equations specified in PS-16, Section 12.2. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

Permittee shall perform a relative accuracy audit (RAA) consisting of at least three 30-minute portable analyzer or RM determinations each quarter a RATA is not performed as specified in Section 9.3 of EPA Performance Specification 16. The average of the 3 portable analyzer or RM determinations must not differ from the simultaneous PEMS average value by more than 10 percent of the analyzer or RM value or the test is failed. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

If a PEMS passes all quarterly RAAs in the first year and also passes the subsequent yearly (RATA) in the second year, the permittee may elect to perform a single mid-year RAA in the second year in place of the quarterly RAAs as specified in Section 9.3 of EPA Performance Specification 16. This option may be repeated, but only until the PEMS fails either a mid-year RAA or a yearly RATA. When such a failure occurs, permittee must resume quarterly RAAs in the quarter following the failure and continue conducting quarterly RAAs until the PEMS successfully passes both a year of quarterly RAAs and a subsequent RATA. [District Rules 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

Comment 11

Conditions 37 and 38 include language specifying the allowable percent error based on the specific applicable emission limit. Since the District knows the applicable emission limit, it is not necessary to list all of the possible percentages as part of the permit condition. As EPA has discussed with the District previously, since PS-16 is intended to demonstrate compliance with the higher allowable emission rates of a NSPS, it should be modified to require a lower error margin than provided in PS-16 when used to verify compliance of lower NSR based emission limits. Otherwise, the 2 ppm variance allowed in PS-16 for an emission limit below 10 ppm, would allow the source a 40% variance from their emission limit of 5 ppm. The absolute mean difference between the PEMS measurements and the RM measurements should be limited to 20% of the emission limit to satisfy NSR requirements. Please revise the permit accordingly.

District Response

Condition 37 has been revised as follows:

The absolute mean difference between the PEMS measurements and the reference method measurements shall not exceed 2 ppmv. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

Condition 38 has been revised as follows:

Permittee shall perform a relative accuracy audit (RAA) consisting of at least three 30-minute portable analyzer or RM (reference method) determinations each quarter a relative accuracy test audit (RATA) is not performed as specified in Section 9.3 of EPA Performance Specification 16. The average of the 3 portable analyzer determinations must not differ from the simultaneous PEMS average value by more than 2 ppmv. [District Rules 1080, 2201, 4305, 4306, 4320 and 40 CFR Subpart Db, 40 CFR Part 64] Y

Please note that the 2 ppmv PEMS accuracy requirement for the proposed boiler NO_x emissions is consistent with PS-16. The NO_x limit for the proposed boiler is 5 ppmv, i.e. less than 10 ppmv. As such the 2 ppmv accuracy requirement is applicable.

Please note that, in its final action on PS-16, EPA considered and ultimately rejected a more stringent accuracy requirement of 20% for low emitters (units with emission limits less than 10 ppmv). The full discussion regarding this EPA's reasoning to support the justification for the 2 ppmv accuracy limit for low emitting units can be found here https://www3.epa.gov/ttn/caaa/t1/fr_notices/pems_spec16_fr_031609.pdf

Please note that in addition to demonstrating ongoing compliance with the PEMS, the facility will be required to demonstrate compliance the NOx and CO emission limits annually and periodically with RAA testing using a portable analyzer.

Comment 12

In Condition 39 please replace the term "you" with Permittee.

District Response

This correction was made to the ATC.

Comment 13

Condition 50 specifies that the NOx emission rates predicted by the PEMS shall be expressed in lb/MMBtu or ng/J, but the permit emission limit in Condition 23 is expressed in ppm @ 3% O₂ or lb/MMBtu. In addition, Condition. 64 allows the permittee to choose the basis (ppmv or lb/MMbtu) on which to perform the source test. It appears Condition 50 should be modified to also allow prediction of NOx emissions as ppm @ 3% O₂.

District Response

Condition 50 has been revised as follows: (words deleted in strikeout and words added underlined)

50. The nitrogen oxide NOx emission rates measured by the PEMS shall be expressed in lb/million Btu or in ~~ng/J~~ ppmv @ 3% O₂. The 1-hour average emission rates shall be calculated using the data points required under Section 60.13(h)(2). The records shall also include a daily emission rate consisting of an averaged 24 hour rolling emission rate. [District Rule 2201; 40 CFR 60.48b (d) and 40 CFR Part 64] Y

With the above change it is not necessary to revise Condition 64.