



MAR 01 2013

Jason Thompson
CRES Inc. dba Dinuba Energy
6929 Ave 430
Reedley, CA 93654

**Re: Notice of Minor Title V Permit Modification
District Facility # S-285
Project # S-1122996**

Dear Mr. Thompson:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued ATC S-285-2-8 into the Title V operating permit. This Authority to Construct (ATC) permit was issued to install of the packed bed wet scrubber in line with the existing ESP and cyclone (downstream from both units) to comply with permitted PM10 permitted emission limit of at 5.76 lbs/hr.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC S-285-2-8, emission increases, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner
Director of Permit Services

Enclosures

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



MAR 01 2013

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: **Notice of Minor Title V Permit Modification**
District Facility # S-285
Project # S-1122996

Dear Mr. Rios:

Enclosed for you to review is an application for minor Title V permit modification for the facility identified above. CRES Inc. dba Dinuba Energy is proposing a Title V minor permit modification to incorporate the recently issued ATC S-285-2-8 into the Title V operating permit. This Authority to Construct (ATC) permit was issued to install of the packed bed wet scrubber in line with the existing ESP and cyclone (downstream from both units) to comply with permitted PM10 permitted emission limit of at 5.76 lbs/hr.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC S-285-2-8, emission increases, application, and previous Title V permit. Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter.

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Jim Swaney at (559) 230-5900.

Sincerely,



David Warner
Director of Permit Services

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TITLE V APPLICATION REVIEW

Minor Modification
Project #: S-1122996

Engineer: Kamaljit Sran
Date: February 25, 2013

Facility Number: S-285
Facility Name: CRES Inc. dba Dinuba Energy
Mailing Address: 6929 Ave 430
Reedley, CA 93654

Contact Name: Jason Thompson
Phone: (559) 591-8060

Responsible Official: Jason Thompson
Title: Plant Manager

I. PROPOSAL

Dinuba Energy is proposing a Title V minor permit modification to incorporate the recently issued S-285-2-8 into the Title V operating permit. This Authority to Construct (ATC) permit was issued to install the packed bed wet scrubber in line with the existing ESP and cyclone (downstream from both units) to comply with permitted PM₁₀ permitted emission limit of 5.76 lbs/hr.

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

II. FACILITY LOCATION

The facility is located at 6929- Ave 430 in Reedley, CA.

III. EQUIPMENT DESCRIPTION

S-285-2-10: 11.5 MW WOOD-FUELED COGENERATION FACILITY INCLUDING TRAVELING GRATE BOILER WITH FLUE GAS RECIRCULATION (FGR), AMMONIA INJECTION, STEAM TURBINE/GENERATOR, NATURAL GAS FIRED AUXILIARY BURNER, MULTICLONE DUST COLLECTOR, SINGLE

CHAMBER TWO CELL ELECTROSTATIC PRECIPITATOR,
AND PM WET SCRUBBER

IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

V. APPLICABLE REQUIREMENTS

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

VI. DESCRIPTION OF PROPOSED MODIFICATIONS

The facility has installed a new packed bed wet scrubber to be used in conjunction with the existing cyclone and ESP for the removal of PM₁₀. Emissions testing for this scrubber (note that parameter measured was total condensable and filterable PM, not limited to particulate less than 10 microns, using EPA method 5 for which the current PTO lists 0.016 gr/dscf @ 12% CO₂ and the average of three runs shows 0.0130) show, that this unit is capable of bringing stack PM emissions into compliance with permitted levels.

VII. COMPLIANCE

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and

- b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and
3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

VIII. ATTACHMENTS

- A. Proposed Modified Title V Operating Permit No. S-285-2-10
- B. Authorities to Construct No. S-285-2-8
- C. Emissions Increases
- D. Application
- E. Previous Title V Operating Permit No. S-285-2-9

ATTACHMENT A

Proposed Modified Title V Operating Permit No.
S-285-2-10

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-285-2-10

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

11.5 MW WOOD-FUELED COGENERATION FACILITY INCLUDING TRAVELING GRATE BOILER WITH FLUE GAS RECIRCULATION (FGR), AMMONIA INJECTION, STEAM TURBINE/GENERATOR, NATURAL GAS FIRED AUXILIARY BURNER, MULTICLONE DUST COLLECTOR, SINGLE CHAMBER TWO CELL ELECTROSTATIC PRECIPITATOR, AND PM WET SCRUBBER

PERMIT UNIT REQUIREMENTS

1. Ammonia injection system shall be operated and maintained in accordance with manufacturers specification. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Multiclone dust collector, electrostatic precipitator, and PM wet scrubber shall be operated and maintained in accordance with manufacturer's specifications whenever combustion is present in the boiler. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Electrostatic precipitator shall be equipped with an automatic rapping system. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Scrubber liquid pH shall be maintained between 5.0 and 8.0 and shall be continuously monitored. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubber, including sprays and nozzles, shall be maintained in optimum working condition. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule] Federally Enforceable Through Title V Permit
7. Combustion system shall be equipped with continuous emissions monitors (CEM) for NO_x, CO, CO₂, O₂, volumetric flowrate, and opacity. [District NSR Rule and 40 CFR part 64] Federally Enforceable Through Title V Permit
8. Continuous emissions monitors shall be operated in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 1, 2, 3, 4, and CFR Part 60, Appendix F. [District Rules 1080, 4352, and 40 CFR part 64] Federally Enforceable Through Title V Permit
9. Continuous emissions monitor for flue gas volume flow-rate shall meet EPA monitoring performance specifications appearing in 40 CFR, Part 52, Appendix E. [District Rules 4001, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
10. Ammonia shall be injected into boiler at a rate that results in compliance with the NO_x emissions limit. [District NSR Rule] Federally Enforceable Through Title V Permit
11. Nitrogen oxide emissions (as NO₂) shall not exceed 0.09 lbs/MMBtu based on a 24 hour average, except during periods of startup and shutdown as defined in Rule 4352. [District NSR Rule and 4352] Federally Enforceable Through Title V Permit
12. Nitrogen oxide emissions (as NO₂) shall not exceed 17.87 lb/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 70.44 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Carbon monoxide (CO) emissions shall not exceed 400 ppmv @ 3% O₂, except during periods of startup and shutdown, as defined in Rule 4352 (Amended May 18, 2006). [District Rule 4352] Federally Enforceable Through Title V Permit
14. Carbon monoxide (CO) emissions shall not exceed 99.3 lbs/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 249 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
15. PM₁₀ emissions shall not exceed 0.0144 grains/dscf corrected to 12% CO₂, 5.76 lbs/hr and 22.71 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
16. Volatile organic compound emissions shall not exceed 13.30 lbs/hr and 52.4 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Sulfur oxide emissions (as SO₂) shall not exceed 9.90 lbs/hr and 39.1 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Specific Limiting Condition (SLC) limiting the annual emissions from the boiler/generator listed under permit S-285-2 and the transportable IC engine listed under C-799-8, when the engine is operated at facility S-285, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 70.44 tons-NO_x/year, 39.1 tons-SO_x/year, 22.71 tons-PM₁₀/year, 249 tons-CO/year, or 52.4 tons-VOC/year. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Carbon monoxide (CO) emissions shall not exceed 249 tons for any consecutive 365 day period. Cumulative emissions from the previous 365 day consecutive period shall be summed daily and reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Combustion system shall not operate for more than 7884 hours per year unless Dinuba Energy demonstrates compliance with the yearly emissions limits listed above. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Only natural gas and wood fuels shall be burned in the boiler. Contamination of the wood fuel, as delivered to the boiler, shall not exceed 1.0% by weight total and limited to the following materials: metals, plastics, paper, painted wood, particle board, wood treated with preservatives, and roofing materials. None of the contaminants allowed by this condition shall contain asbestos. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
22. Facility shall not burn in the combustion system more than 240 lbs/hr nor 1051.2 tons/yr of non-wood material. [District Rule 4102]
23. "Wood" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removals, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Wood does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
24. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
25. Compliance with wood fuel contamination limits shall be demonstrated by sorting a District selected 5 ton representative sample of wood fuel as requested by the District compliance division. [District Rule 4102]
26. Data collected during sorting of 5 ton sample of wood fuel shall be in pounds of material per ton of wood fuel, by category as identified in fuel contamination limit condition, and official test results and field data shall be submitted within 30 days after collection. [District Rule 4102]
27. Source testing for PM₁₀ emissions shall be conducted by an independent testing laboratory within 60 days of initial startup. [District NSR Rule]
28. NO_x, CO, and PM emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 4352, 1081, and 40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

29. Source testing for the following parameters shall be conducted using the stated test methods: NO_x - EPA Method 7 or ARB Method 100, CO - EPA Method 10 or ARB Method 100, CO₂ - EPA Method 3 or ARB Method 100, O₂ - EPA Method 3 or ARB Method 100, SO₂ - EPA Method 6 or ARB Method 100, PM₁₀ - EPA Methods 201A & 202, Stack Gas Flow Rate - EPA Method 2, Moisture Content - EPA Method 4, Ammonia - BAAQMD ST1B, & Fuel Heating Value - ASTM Method D2015 or E711. [District NSR Rule and 4352] Federally Enforceable Through Title V Permit
30. Official test results and field data from compliance testing shall be submitted within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
31. Dinuba Energy shall adjust rates of total air flow, overfire air flow, and ammonia injection to simultaneously meet all emissions limits, including visible emissions limit, and keep ammonia slip to a minimum. [District Rule 4102]
32. The auxiliary burner shall be fired exclusively with natural gas. A daily record of fuel gas consumption shall be maintained and submitted to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
33. Equipment breakdowns of the combustion or CEM systems shall be reported in accordance with District rules 1080 and 1100. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
34. Particulate matter concentration (including both filterable and condensable particulates) exiting the PM wet scrubber shall not exceed 0.016 grains/dscf corrected to 12% CO₂. [District NSR Rule] Federally Enforceable Through Title V Permit
35. Rapping frequency and duration shall be pre-programmed and identical for each location, and only one rapping location shall be energized at any one time. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Electrostatic precipitator shall be equipped with an opacity continuous emissions monitor (CEM), which shall be operated in accordance with the requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
37. Opacity readings shall be averaged over a 15 minute period. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Daily opacity reading of 20% or greater shall be reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Dinuba Energy shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of opacity CEM. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Dinuba Energy shall maintain records of the results of performance testing, evaluations, calibrations, checks, adjustments and maintenance of CEMs. [District NSR Rule, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
41. Annual audits of continuous emissions monitors shall be conducted pursuant to the requirements of Rule 1080 and in accordance with EPA guidelines, by an independent testing laboratory. The audits shall be District witnessed and the results submitted to the District within 30 days of completion of the audit. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
42. All quarterly reports shall be submitted to the District within 30 days of the end of each calendar quarter. Exceedance of any permit emissions limitation, including opacity, shall be noted on the quarterly report. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
43. All records shall be retained on site for a period of at least 5 years and made readily available to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
44. The permittee shall sample biomass fuel for metals and asbestos analysis quarterly and whenever directed by the District inspector. [District Rule 4102]
45. The permittee shall submit a written sampling plan to the District's Compliance Division at least 20 calendar days prior to sampling for metals analysis or asbestos. This plan shall include the date, name of lab, lab's certification # for conducting tests, copy of chain of custody form to be utilized for tracking samples, and method of sampling. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

46. The metals and asbestos samples shall be collected in accordance with a written plan for representative samples approved by the District. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
47. The permittee shall have the samples analyzed for metals by ASTM Method E885, or equivalent method approved by the District, using an independent testing laboratory certified to conduct the analysis. The metals to be quantified include Arsenic, Copper, Lead, Manganese, Nickel, Zinc, and Total Chromium. [District Rule 4102]
48. The results of the metals and asbestos analysis shall be reported in ppm (by weight). [District Rule 1081] Federally Enforceable Through Title V Permit
49. The results of metal and asbestos sampling analysis and evidence of chain of custody shall be submitted to the District Compliance Division within 30 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
50. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
51. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
52. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation $E=3.59 \times P^{0.62}$; P is less than or equal to 30 tons per hour, or $E=17.31 \times P^{0.16}$; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
53. Particulate matter emissions shall not exceed 0.10 lb/MMBtu. [40 CFR 60.43b(c)(1)] Federally Enforceable Through Title V Permit
54. Owner or operator shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)] Federally Enforceable Through Title V Permit
55. The particulate matter, and opacity standards shall apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g), 60.46b(a)] Federally Enforceable Through Title V Permit
56. The facility's annual capacity factor for natural gas shall be less than or equal to 10 percent (0.10). [40 CFR 60.44b(d)] Federally Enforceable Through Title V Permit
57. The owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system, [40 CFR 60.48b(a)] Federally Enforceable Through Title V Permit
58. The continuous monitoring systems shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)] Federally Enforceable Through Title V Permit
59. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent. [40 CFR 60.48b(e)] Federally Enforceable Through Title V Permit
60. The permittee shall record and maintain records of the amount of wood and natural gas fuel combusted each day, and calculate the annual capacity factor individually for wood and natural gas on a 12-month rolling average with a capacity factor calculated at the end of each month. [40 CFR 60.49b (d)] Federally Enforceable Through Title V Permit
61. The owner or operator shall submit excess emission reports of all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f) during the reporting period. [40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

62. At the time of each annual source test for PM, the permittee shall establish the acceptable range of primary and secondary current and voltage readings for the electrostatic precipitator. Minimum readings for each parameter shall be established at 15% below the average value measured during the PM source test. Maximum readings for each parameter shall be established at 15% above the average value measured during the PM source test. [40 CFR part 64] Federally Enforceable Through Title V Permit
63. During each day of operation, the permittee shall record electrostatic precipitator voltage and current readings and compare the readings with the acceptable range of current and voltage levels established during the most recent annual PM source test. Upon detecting any excursion from the acceptable range of current or voltage readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit
64. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR part 64] Federally Enforceable Through Title V Permit
65. Scrubber Quench Temperature shall be monitored on the Scrubber Control Panel in the control room. Any excursion of scrubber quench temperature above 160 °F shall be recorded and immediate manual implementation of the scrubber deluge system shall be performed at 160°F and an automatic shutdown of the induced draft fan/boiler shall be triggered at 161°F. [District Rule 40 CFR part 64] Federally Enforceable Through Title V Permit
66. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
68. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
69. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District NSR Rule] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.

DRAFT

ATTACHMENT B

Authorities to Construct No.
S-285-2-8



AUTHORITY TO CONSTRUCT

PERMIT NO: S-285-2-8

ISSUANCE DATE: 02/03/2011

LEGAL OWNER OR OPERATOR: CRES INC DBA DINUBA ENERGY

MAILING ADDRESS: 6929 AVENUE 430
REEDLEY, CA 93654

LOCATION: 6929 AVENUE 430
REEDLEY, CA 93654

EQUIPMENT DESCRIPTION:

MODIFICATION OF 11.5 MW WOOD-FUELED COGENERATION FACILITY INCLUDING TRAVELING GRATE BOILER WITH FLUE GAS RECIRCULATION (FGR), AMMONIA INJECTION, STEAM TURBINE/GENERATOR, NATURAL GAS FIRED AUXILIARY BURNER, MULTICLONE DUST COLLECTOR, AND SINGLE CHAMBER TWO CELL ELECTROSTATIC PRECIPITATOR. INSTALL PM WET SCRUBBER TO COMPLY WITH PM10 EMISSION LIMIT

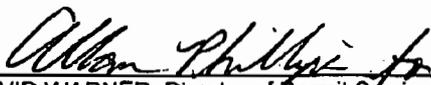
CONDITIONS

1. The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520. [District Rule 2520] Federally Enforceable Through Title V Permit
2. Ammonia injection system shall be operated and maintained in accordance with manufacturers specification. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Multiclone dust collector, electrostatic precipitator, and PM wet scrubber shall be operated and maintained in accordance with manufacturer's specifications whenever combustion is present in the boiler. [District NSR Rule]
4. Electrostatic precipitator shall be equipped with an automatic rapping system. [District NSR Rule] Federally Enforceable Through Title V Permit
5. Scrubber liquid pH shall be maintained between 5.0 and 8.0 and shall be continuously monitored. [District NSR Rule]
6. Scrubber, including sprays and nozzles, shall be maintained in optimum working condition. [District NSR Rule]
7. Scrubber liquid supply (at inlet to scrubber) shall have an operational flow meter. [District NSR Rule]
8. Combustion system shall be equipped with continuous emissions monitors (CEM) for NOx, CO, CO2, O2, volumetric flowrate, and opacity. [District NSR Rule and 40 CFR part 64] 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


DAVID WARNER, Director of Permit Services

6-285-2-8 : Feb 3 2011 1:43PM - RICKARDX : Joint Inspection NOT Required

9. Continuous emissions monitors shall be operated in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 1, 2, 3, 4, and CFR Part 60, Appendix F. [District Rules 1080, 4352, and 40 CFR part 64] Federally Enforceable Through Title V Permit
10. Continuous emissions monitor for flue gas volume flow-rate shall meet EPA monitoring performance specifications appearing in 40 CFR, Part 52, Appendix E. [District Rules 4001, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
11. Ammonia shall be injected into boiler at a rate that results in compliance with the NO_x emissions limit. [District NSR Rule] Federally Enforceable Through Title V Permit
12. Nitrogen oxide emissions (as NO₂) shall not exceed 0.09 lbs/MMBtu based on a 24 hour average, except during periods of startup and shutdown as defined in Rule 4352. [District NSR Rule and 4352] Federally Enforceable Through Title V Permit
13. Nitrogen oxide emissions (as NO₂) shall not exceed 17.87 lb/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 70.44 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
14. Carbon monoxide (CO) emissions shall not exceed 400 ppmv @ 3% O₂, except during periods of startup and shutdown, as defined in Rule 4352 (Amended May 18, 2006). [District Rule 4352]
15. Carbon monoxide (CO) emissions shall not exceed 99.3 lbs/hr (based on a 24-hr period between 12:00 am midnight to the following midnight) and 249 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
16. PM₁₀ emissions shall not exceed 0.0144 grains/dscf corrected to 12% CO₂, 5.76 lbs/hr and 22.71 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. Volatile organic compound emissions shall not exceed 13.30 lbs/hr and 52.4 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Sulfur oxide emissions (as SO₂) shall not exceed 9.90 lbs/hr and 39.1 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Specific Limiting Condition (SLC) limiting the annual emissions from the boiler/generator listed under permit S-285-2 and the transportable IC engine listed under C-799-8, when the engine is operated at facility S-285, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 70.44 tons-NO_x/year, 39.1 tons-SO_x/year, 22.71 tons-PM₁₀/year, 249 tons-CO/year, or 52.4 tons-VOC/year. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Carbon monoxide (CO) emissions shall not exceed 249 tons for any consecutive 365 day period. Cumulative emissions from the previous 365 day consecutive period shall be summed daily and reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Combustion system shall not operate for more than 7884 hours per year unless Dinuba Energy demonstrates compliance with the yearly emissions limits listed above. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Only natural gas and wood fuels shall be burned in the boiler. Contamination of the wood fuel, as delivered to the boiler, shall not exceed 1.0% by weight total and limited to the following materials: metals, plastics, paper, painted wood, particle board, wood treated with preservatives, and roofing materials. None of the contaminants allowed by this condition shall contain asbestos. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
23. Facility shall not burn in the combustion system more than 240 lbs/hr nor 1051.2 tons/yr of non-wood material. [District Rule 4102]
24. "Wood" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removals, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Wood does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

25. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
26. Compliance with wood fuel contamination limits shall be demonstrated by sorting a District selected 5 ton representative sample of wood fuel as requested by the District compliance division. [District Rule 4102]
27. Data collected during sorting of 5 ton sample of wood fuel shall be in pounds of material per ton of wood fuel, by category as identified in fuel contamination limit condition, and official test results and field data shall be submitted within 30 days after collection. [District Rule 4102]
28. Source testing for PM10 emissions shall be conducted by an independent testing laboratory within 60 days of initial startup. [District NSR Rule]
29. NOx, CO, and PM emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 4352, 1081, and 40 CFR part 64] Federally Enforceable Through Title V Permit
30. Source testing for the following parameters shall be conducted using the stated test methods: NOx - EPA Method 7 or ARB Method 100, CO - EPA Method 10 or ARB Method 100, CO2 - EPA Method 3 or ARB Method 100, O2 - EPA Method 3 or ARB Method 100, SO2 - EPA Method 6 or ARB Method 100, PM10 - EPA Methods 201A & 202, Stack Gas Flow Rate - EPA Method 2, Moisture Content - EPA Method 4, Ammonia - BAAQMD ST1B, & Fuel Heating Value - ASTM Method D2015 or E711. [District NSR Rule and 4352] Federally Enforceable Through Title V Permit
31. Official test results and field data from compliance testing shall be submitted within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Dinuba Energy shall adjust rates of total air flow, overfire air flow, and ammonia injection to simultaneously meet all emissions limits, including visible emissions limit, and keep ammonia slip to a minimum. [District Rule 4102]
33. The auxiliary burner shall be fired exclusively with natural gas. A daily record of fuel gas consumption shall be maintained and submitted to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Equipment breakdowns of the combustion or CEM systems shall be reported in accordance with District rules 1080 and 1100. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
35. Particulate matter concentration (including both filterable and condensable particulates) exiting the PM wet scrubber shall not exceed 0.016 grains/dscf corrected to 12% CO2. [District NSR Rule]
36. Rapping frequency and duration shall be pre-programmed and identical for each location, and only one rapping location shall be energized at any one time. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Electrostatic precipitator shall be equipped with an opacity continuous emissions monitor (CEM), which shall be operated in accordance with the requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
38. Opacity readings shall be averaged over a 15 minute period. [District NSR Rule] Federally Enforceable Through Title V Permit
39. Daily opacity reading of 20% or greater shall be reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Dinuba Energy shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of opacity CEM. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Dinuba Energy shall maintain records of the results of performance testing, evaluations, calibrations, checks, adjustments and maintenance of CEMs. [District NSR Rule, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
42. Annual audits of continuous emissions monitors shall be conducted pursuant to the requirements of Rule 1080 and in accordance with EPA guidelines, by an independent testing laboratory. The audits shall be District witnessed and the results submitted to the District within 30 days of completion of the audit. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

43. All quarterly reports shall be submitted to the District within 30 days of the end of each calendar quarter. Exceedance of any permit emissions limitation, including opacity, shall be noted on the quarterly report. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
44. All records shall be retained on site for a period of at least 5 years and made readily available to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
45. The permittee shall sample biomass fuel for metals and asbestos analysis quarterly and whenever directed by the District inspector. [District Rule 4102]
46. The permittee shall submit a written sampling plan to the District's Compliance Division at least 20 calendar days prior to sampling for metals analysis or asbestos. This plan shall include the date, name of lab, lab's certification # for conducting tests, copy of chain of custody form to be utilized for tracking samples, and method of sampling. [District Rule 4102]
47. The metals and asbestos samples shall be collected in accordance with a written plan for representative samples approved by the District. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
48. The permittee shall have the samples analyzed for metals by ASTM Method E885, or equivalent method approved by the District, using an independent testing laboratory certified to conduct the analysis. The metals to be quantified include Arsenic, Copper, Lead, Manganese, Nickel, Zinc, and Total Chromium. [District Rule 4102]
49. The results of the metals and asbestos analysis shall be reported in ppm (by weight). [District Rule 1081] Federally Enforceable Through Title V Permit
50. The results of metal and asbestos sampling analysis and evidence of chain of custody shall be submitted to the District Compliance Division within 30 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
51. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
52. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
53. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation $E=3.59 \times P^{0.62}$; P is less than or equal to 30 tons per hour, or $E=17.31 \times P^{0.16}$; P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
54. Particulate matter emissions shall not exceed 0.10 lb/MMBtu. [40 CFR 60.43b(c)(1)] Federally Enforceable Through Title V Permit
55. Owner or operator shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)] Federally Enforceable Through Title V Permit
56. The particulate matter, and opacity standards shall apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g), 60.46b(a)] Federally Enforceable Through Title V Permit
57. The facility's annual capacity factor for natural gas shall be less than or equal to 10 percent (0.10). [40 CFR 60.44b(d)] Federally Enforceable Through Title V Permit
58. The owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system, [40 CFR 60.48b(a)] Federally Enforceable Through Title V Permit
59. The continuous monitoring systems shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

60. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent. [40 CFR 60.48b(e)] Federally Enforceable Through Title V Permit
61. The permittee shall record and maintain records of the amount of wood and natural gas fuel combusted each day, and calculate the annual capacity factor individually for wood and natural gas on a 12-month rolling average with a capacity factor calculated at the end of each month. [40 CFR 60.49b (d)] Federally Enforceable Through Title V Permit
62. The owner or operator shall submit excess emission reports of all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f) during the reporting period. [40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit
63. At the time of each annual source test for PM, the permittee shall establish the acceptable range of primary and secondary current and voltage readings for the electrostatic precipitator. Minimum readings for each parameter shall be established at 15% below the average value measured during the PM source test. Maximum readings for each parameter shall be established at 15% above the average value measured during the PM source test. [40 CFR part 64] Federally Enforceable Through Title V Permit
64. During each day of operation, the permittee shall record electrostatic precipitator voltage and current readings and compare the readings with the acceptable range of current and voltage levels established during the most recent annual PM source test. Upon detecting any excursion from the acceptable range of current or voltage readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit
65. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR part 64] Federally Enforceable Through Title V Permit
66. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
68. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
69. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District NSR Rule] Federally Enforceable Through Title V Permit

ATTACHMENT C

Emissions Increases

There are no emission increases associated with this project.

ATTACHMENT D

Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

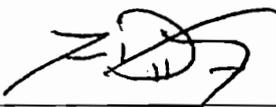
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AUG 01 2012

Permits Srvc
SJVAPCD

Permit Application For:

ADMINISTRATIVE AMENDMENT MINOR MODIFICATION SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: <u>Community Renewable Energy Services dba. Dinuba Energy</u>	
2. MAILING ADDRESS:	
STREET/P.O. BOX: <u>6929 ave 430</u>	
CITY: <u>Reedley</u>	STATE: <u>CA</u> 9-DIGIT ZIP CODE: <u>93654</u>
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED:	INSTALLATION DATE:
STREET: <u>Ave 430</u> CITY: <u>Reedley</u>	<u>6/11/2011 Installed</u>
<u> </u> ¼ SECTION TOWNSHIP RANGE <u> </u>	<u>8/1/2011 passed source test</u>
4. GENERAL NATURE OF BUSINESS: <u>Biomass Power Plant</u>	
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) <u>ATC# S-285-2-8 Addition of wet scrubber downstream or existing ESP. to meet title V pm10 emissions limits. See attached ATC-s-285-2-8</u>	
6. TYPE OR PRINT NAME OF APPLICANT: <u>Jason D Thompson</u>	TITLE OF APPLICANT: <u>Manager</u>
7. SIGNATURE OF APPLICANT: 	DATE: <u>7-30-12</u>
	PHONE: <u>(559)591-8060</u> FAX: <u>(559)591-8815</u> EMAIL: <u>Thompson@dinubaenergy.com</u>

For APCD Use Only:

DATE STAMP	FILING FEE RECEIVED: \$ <u>19.00</u> CHECK#: <u>Cash</u>
	DATE PAID: <u>8/1/12</u>
	PROJECT NO: <u>S-1122996</u> FACILITY ID: <u>S-285</u>

DINUBA ENERGY
WET SCRUBBER FOR PM CONTROL

Received
FEB 14 2013
COMPLIANCE
SJVUAPCD

COMPLIANCE ASSURANCE MONITORING PLAN

I. Background

A. Emissions Unit

Description:	Wet Scrubber
Identification:	Unit 1
Facility:	Dinuba Energy 6929 Ave 430 Reedley, CA

B. Applicable Regulation, Emission Limit, and Pre-CAM Monitoring Requirements

Regulation:	Permit S-285-2-8
CAM Emission limits	Particulate matter: 5.76 lb/hr
Pre-CAM monitoring requirements:	Annual EPA Methods 201A & 20Z

C. Control Technology, Capture System, Bypass, PTE

Controls:	Wet Scrubber
Capture System:	Counter Current Wet Scrubber
Bypass:	None
PTE before controls:	178.21 TPY (Based on Annual Source tests).
PTE after controls:	22.71 TPY permit limit

II. Monitoring Approach

The key element of the monitoring approach is quench temperature. Normal process operations will not produce conditions that adversely affect the scrubber without affecting scrubber quench temperature and therefore, quench temperature will be the primary operational parameter monitored. Temperature is measured with an RTD in the scrubber quench area exit. The RTD has an accuracy of .2% and will be calibrated annually. Temperature is monitored on the Scrubber Control Panel in the control room.

III. Response to Excursion

- A. Excursion of scrubber quench temperature above 160^oF will trigger:
- Immediate manual implementation of the scrubber deluge system from the Control Room at 160^oF and an automatic shutdown of the induced draft fan/boiler at 161^oF.
 - Inspection of the scrubber fill and circulation system before placing the unit back in service.

JUSTIFICATION

I. Background

The counter current wet scrubber was installed to remove condensable particulate matter from the boiler flue gas. Its purpose is to capture the constituents of back half ammonia compounds so that total particulate emissions are reduced from about 20 pounds per hour to less than 5.76 pounds per hour. Flue gas is cooled in the quench section at the inlet to the scrubber. PH

controlled water is circulated from the top of the scrubber down through plastic fill to a sump in the bottom of the scrubber.

II. Rationale for Selection of Performance Indicators

The scrubber quench temperature is within a few degrees of the scrubber outlet temperature and was selected because it is the first indication of scrubber operation and adequate water flow. When the water flow rate is sufficient, contact between flue gas and the scrubber water in the quench area causes the temperature of the flue gas to drop. The incoming flue gas temperature is over 300 °F and without the cooling effect of the scrubber water in the quench area the flue gas would overheat and melt the plastic fill. The plastic fill starts melting at 180° F and the operating procedure requires that the deluge system be initiated at 160° F and the boiler shutdown until the scrubber is inspected.

III. Rationale for Selection of Indicator Ranges

The quench temperature was selected because it is the first indicator of scrubber miss operation and because it protects the scrubber fill.

The 160° F limit was established because of the temperature at which the fill would start melting.

**San Joaquin Valley
Unified Air Pollution Control District**

Certification of Truth and Accuracy

COMPANY NAME: CRES, INC. dba DINUBA ENERGY

FACILITY NAME: S-285

I declare, under penalty of perjury under the laws of the State of California that based on information and belief formed after reasonable inquiry, the statements and information provided in the document are true, accurate, and complete:



Signature of Responsible Official

2-13-13

Date

Jason Thompson

Name of Responsible Official (please print)

Plant Manager

Title of Responsible Official (please print)

ATTACHMENT E

Previous Title V Operating Permit No.'s
S-285-2-9

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-285-2-9

EXPIRATION DATE: 05/31/2017

EQUIPMENT DESCRIPTION:

11.5 MW WOOD-FUELED COGENERATION FACILITY INCLUDING TRAVELING GRATE BOILER WITH FLUE GAS RECIRCULATION (FGR), AMMONIA INJECTION, STEAM TURBINE/GENERATOR, NATURAL GAS FIRED AUXILIARY BURNER, MULTICLONE DUST COLLECTOR, AND SINGLE CHAMBER TWO CELL ELECTROSTATIC PRECIPITATOR

PERMIT UNIT REQUIREMENTS

1. Ammonia injection system shall be operated and maintained in accordance with manufacturers specification. [District NSR Rule] Federally Enforceable Through Title V Permit
2. Electrostatic precipitator shall be operated and maintained in accordance with manufacturer's specifications. [District NSR Rule] Federally Enforceable Through Title V Permit
3. Electrostatic precipitator shall be equipped with an automatic rapping system. [District NSR Rule] Federally Enforceable Through Title V Permit
4. Combustion system shall be equipped with continuous emissions monitors (CEM) for NO_x, CO, CO₂, O₂, volumetric flowrate, and opacity. [District NSR Rule and 40 CFR part 64] Federally Enforceable Through Title V Permit
5. Continuous emissions monitors shall be operated in accordance with the requirements of 40 CFR, Part 60, Appendix B, Performance Specifications 1, 2, 3, 4, and CFR Part 60, Appendix F. [District Rules 1080, 4352, and 40 CFR part 64] Federally Enforceable Through Title V Permit
6. The owner/operator shall operate, maintain and calibrate Continuous Emission Monitoring system pursuant to the requirements of 40 CFR 60.7 (c) and 60.13. CEMs must also satisfy the Performance Specifications of 40 CFR 60 Appendix B and the Relative Accuracy Test Audit of Appendix F. [40 CFR Part 64, District Rule 4352, 5.4] Federally Enforceable Through Title V Permit
7. Continuous emissions monitor for flue gas volume flow-rate shall meet EPA monitoring performance specifications appearing in 40 CFR, Part 52, Appendix E. [District Rules 4001, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
8. Ammonia shall be injected into boiler at a rate that results in compliance with the NO_x emissions limit. [District NSR Rule] Federally Enforceable Through Title V Permit
9. Shutdown is defined as the period of time during which a unit is taken from operational to nonoperational status by allowing it to cool down from its operating temperature and pressure to an ambient temperature, or to a hot standby condition. The duration of each shutdown shall not exceed 12 hours. [District Rule 4352]
10. Start-up is defined as the period of time during which a unit is heated to the operating temperature and pressure from a shutdown status or hot standby condition. The duration of each start-up shall not exceed 96 hours. [District Rule 4352]
11. Hot Standby Condition is defined as a condition in which all fuel feed has been curtailed and the boiler is secured at a temperature greater than the current ambient temperature. [District Rule 4352]
12. During startup and shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rule 4352] Federally Enforceable Through Title V Permit
13. Nitrogen oxide emissions (as NO₂) shall not exceed 0.09 lbs/MMBtu based on a 24 hour average, except during periods of startup and shutdown. [District NSR Rule and 4352] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

14. Nitrogen oxide emissions (as NO₂) shall not exceed 17.87 lb/hr and 70.44 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
15. Carbon monoxide (CO) emissions shall not exceed 400 ppmv @ 3% O₂, except during periods of startup and shutdown. [District Rule 4352] Federally Enforceable Through Title V Permit
16. Carbon monoxide (CO) emissions shall not exceed 99.3 lbs/hr and 249 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
17. PM₁₀ emissions shall not exceed 0.0144 grains/dscf corrected to 12% CO₂, 5.76 lbs/hr and 22.71 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
18. Volatile organic compound emissions shall not exceed 13.30 lbs/hr and 52.4 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
19. Sulfur oxide emissions (as SO₂) shall not exceed 9.90 lbs/hr and 39.1 tons/year. [District NSR Rule] Federally Enforceable Through Title V Permit
20. Specific Limiting Condition (SLC) limiting the annual emissions from the boiler/generator listed under permit S-285-2 and the transportable IC engine listed under C-799-8, when the engine is operated at facility S-285, calculated on a twelve consecutive month rolling basis, shall not exceed any of the following: 70.44 tons-NO_x/year, 39.1 tons-SO_x/year, 22.71 tons-PM₁₀/year, 249 tons-CO/year, or 52.4 tons-VOC/year. [District NSR Rule] Federally Enforceable Through Title V Permit
21. Carbon monoxide (CO) emissions shall not exceed 249 tons for any consecutive 365 day period. Cumulative emissions from the previous 365 day consecutive period shall be summed daily and reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
22. Combustion system shall not operate for more than 7,884 hours per year unless Dinuba Energy demonstrates compliance with the yearly emissions limits listed above. [District NSR Rule] Federally Enforceable Through Title V Permit
23. Only natural gas and wood fuels shall be burned in the boiler. Contamination of the wood fuel, as delivered to the boiler, shall not exceed 1.0% by weight total and limited to the following materials: metals, plastics, paper, painted wood, particle board, wood treated with preservatives, and roofing materials. None of the contaminants allowed by this condition shall contain asbestos. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
24. Facility shall not burn in the combustion system more than 240 lbs/hr nor 1051.2 tons/yr of non-wood material. [District Rule 4102]
25. "Wood" means any organic material not derived from fossil fuels, such as agricultural crop residue, orchard prunings and removals, stone fruit pits, nut shells, cotton gin trash, cotton stalks, vineyard prunings, cull logs, eucalyptus logs, bark, lawn, yard and garden clippings, leaves, silvicultural residue, tree and brush pruning, wood and wood chips, and wood waste. Wood does not include material containing sewage sludge or industrial, hazardous, radioactive or municipal solid waste. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
26. Wood waste includes clean, chipped wood products, plywood, wood products manufacturing wood materials, construction and demolition wood materials, and wood pallets, crates and boxes. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
27. Compliance with wood fuel contamination limits shall be demonstrated by sorting a District selected 5 ton representative sample of wood fuel as requested by the District compliance division. [District Rule 4102]
28. Data collected during sorting of 5 ton sample of wood fuel shall be in pounds of material per ton of wood fuel, by category as identified in fuel contamination limit condition, and official test results and field data shall be submitted within 30 days after collection. [District Rule 4102]
29. NO_x, CO, and PM emissions shall be measured with annual source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 4352, 1081, and 40 CFR part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

30. Source testing for the following parameters shall be conducted using the stated test methods: NO_x - EPA Method 7 or ARB Method 100; CO - EPA Method 10 or ARB Method 100; CO₂ - EPA Method 3 or ARB Method 100; O₂ - EPA Method 3 or 3A, or ARB Method 100; SO₂ - EPA Method 6 or ARB Method 100; PM₁₀ - EPA Methods 201A & 202; NO_x emission rate (Heat input basis) - EPA method 19; Stack Gas Velocities - EPA Method 2; Moisture Content - EPA Method 4; Ammonia - BAAQMD ST1B and Solid Fuel Higher Heating Value - ASTM Method D5865 or E711. [District NSR Rule & 4352] Federally Enforceable Through Title V Permit
31. Official test results and field data from compliance testing shall be submitted within 60 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
32. Dinuba Energy shall adjust rates of total air flow, overfire air flow, and ammonia injection to simultaneously meet all emissions limits, including visible emissions limit, and keep ammonia slip to a minimum. [District Rule 4102]
33. The auxiliary burner shall be fired exclusively with natural gas. A daily record of fuel gas consumption shall be maintained and submitted to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
34. Equipment breakdowns of the combustion or CEM systems shall be reported in accordance with District rules 1080 and 1100. [District Rules 1080 and 1100] Federally Enforceable Through Title V Permit
35. Multiclone collector shall be strictly maintained at all times. [District NSR Rule] Federally Enforceable Through Title V Permit
36. Particulate matter concentration exiting electrostatic precipitator shall not exceed 0.016 grains/dscf corrected to 12% CO₂. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Rapping frequency and duration shall be pre-programmed and identical for each location, and only one rapping location shall be energized at any one time. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Electrostatic precipitator shall be equipped with an opacity continuous emissions monitor (CEM), which shall be operated in accordance with the requirements of 40 CFR, Part 51, Appendix P, and Part 60, Appendix B. [District Rule 1080 and 40 CFR 63.11205(a)] Federally Enforceable Through Title V Permit
39. Opacity readings shall be averaged over a 15 minute period. [District NSR Rule] Federally Enforceable Through Title V Permit
40. Daily opacity reading of 20% or greater shall be reported to the District quarterly. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Dinuba Energy shall maintain records of the occurrence and duration of any start-up, shutdown or malfunction in the operation of opacity CEM. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Dinuba Energy shall maintain records of the results of performance testing, evaluations, calibrations, checks, adjustments and maintenance of CEMs. [District NSR Rule, 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
43. Annual audits of continuous emissions monitors shall be conducted pursuant to the requirements of Rule 1080 and in accordance with EPA guidelines, by an independent testing laboratory. The audits shall be District witnessed and the results submitted to the District within 30 days of completion of the audit. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
44. All quarterly reports shall be submitted to the District within 30 days of the end of each calendar quarter. Exceedance of any permit emissions limitation, including opacity, shall be noted on the quarterly report. [District Rule 1080, and 40 CFR part 64] Federally Enforceable Through Title V Permit
45. All records shall be retained on site for a period of at least 5 years and made readily available to the District upon request. [District NSR Rule] Federally Enforceable Through Title V Permit
46. The permittee shall sample biomass fuel for metals and asbestos analysis quarterly and whenever directed by the District inspector. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

47. The permittee shall submit a written sampling plan to the District's Compliance Division at least 20 calendar days prior to sampling for metals analysis or asbestos. This plan shall include the date, name of lab, lab's certification # for conducting tests, copy of chain of custody form to be utilized for tracking samples, and method of sampling. [District Rule 4102]
48. The metals and asbestos samples shall be collected in accordance with a written plan for representative samples approved by the District. [District NSR Rule and 4102] Federally Enforceable Through Title V Permit
49. The permittee shall have the samples analyzed for metals by ASTM Method E885, or equivalent method approved by the District, using an independent testing laboratory certified to conduct the analysis. The metals to be quantified include Arsenic, Copper, Lead, Manganese, Nickel, Zinc, and Total Chromium. [District Rule 4102]
50. The results of the metals and asbestos analysis shall be reported in ppm (by weight). [District Rule 1081] Federally Enforceable Through Title V Permit
51. The results of metal and asbestos sampling analysis and evidence of chain of custody shall be submitted to the District Compliance Division within 30 days after collection. [District Rule 1081] Federally Enforceable Through Title V Permit
52. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty-minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
53. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing [District Rule 1081] Federally Enforceable Through Title V Permit
54. Particulate matter emissions shall not exceed 0.10 lb/MMBtu. [40 CFR 60.43b(c)(1)] Federally Enforceable Through Title V Permit
55. Owner or operator shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [40 CFR 60.43b(f)] Federally Enforceable Through Title V Permit
56. The particulate matter, and opacity standards shall apply at all times, except during periods of startup, shutdown or malfunction. [40 CFR 60.43b(g), 60.46b(a)] Federally Enforceable Through Title V Permit
57. The facility's annual capacity factor for natural gas shall be less than or equal to 10 percent (0.10). [40 CFR 60.44b(d)] Federally Enforceable Through Title V Permit
58. The owner or operator shall install, calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system, [40 CFR 60.48b(a)] Federally Enforceable Through Title V Permit
59. The continuous monitoring systems shall be operated and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)] Federally Enforceable Through Title V Permit
60. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for a continuous monitoring system for measuring opacity shall be between 60 and 80 percent. [40 CFR 60.48b(e)] Federally Enforceable Through Title V Permit
61. The permittee shall record and maintain records of the amount of wood and natural gas fuel combusted each day, and calculate the annual capacity factor individually for wood and natural gas on a 12-month rolling average with a capacity factor calculated at the end of each month. [40 CFR 60.49b (d)] Federally Enforceable Through Title V Permit
62. The owner or operator shall submit excess emission reports of all 6-minute periods during which the average opacity exceeds the opacity standards under 40 CFR 60.43b(f) during the reporting period. [40 CFR 60.49b(h)] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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63. At the time of each annual source test for PM, the permittee shall establish the acceptable range of primary and secondary current and voltage readings for the electrostatic precipitator. Minimum readings for each parameter shall be established at 15% below the average value measured during the PM source test. Maximum readings for each parameter shall be established at 15% above the average value measured during the PM source test. [40 CFR part 64] Federally Enforceable Through Title V Permit
64. During each day of operation, the permittee shall record electrostatic precipitator voltage and current readings and compare the readings with the acceptable range of current and voltage levels established during the most recent annual PM source test. Upon detecting any excursion from the acceptable range of current or voltage readings, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [40 CFR part 64] Federally Enforceable Through Title V Permit
65. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR part 64] Federally Enforceable Through Title V Permit
66. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR part 64.7. [40 CFR part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the recordkeeping and reporting requirements of 40 CFR part 64.9. [40 CFR part 64] Federally Enforceable Through Title V Permit
68. If the District or EPA determine that a Quality improvement Plan is required under 40 CFR 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR part 64.8. [40 CFR part 64] Federally Enforceable Through Title V Permit
69. For each unit subject to the Specific Limiting Condition (SLC), the permittee shall maintain all necessary records in order to show compliance with the annual SLC limits. [District NSR Rule] Federally Enforceable Through Title V Permit
70. The owner/operator shall maintain an operating log that includes the type and quantity of fuel used and the hhv of each fuel as determined by District Rule 4352, section 6.3 (as amended 12/15/11), or as certified by a third party fuel supplier. [District Rule 4352] Federally Enforceable Through Title V Permit
71. The compliance determination shall not be established within two hours after a period in which fuel flow to the unit is zero, or is shut off for 30 minutes or longer. [District Rule 4352, 6.2.3] Federally Enforceable Through Title V Permit
72. The permittee shall conduct a performance tune-up of the boiler in accordance with 40 CFR 63.11223(b), and every two years thereafter. Permittee shall submit a signed statement of the Notification of Compliance Status report that a tune-up of the boiler was completed. [40 CFR 63.11214(b)] Federally Enforceable Through Title V Permit
73. By March 21, 2014, the permittee shall conduct a one-time energy assessment as described in 40 CFR 63, Subpart JJJJJ, Table 2. Permittee shall submit a signed statement in the Notification of Compliance Status report that the energy assessment was completed, and shall submit the energy assessment report upon request. [40 CFR 63.11214(c)] Federally Enforceable Through Title V Permit
74. Permittee shall submit the Notification of Compliance Status report by July 19, 2012. [40 CFR 63.11225(a)(4)] Federally Enforceable Through Title V Permit

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