



JUL 27 2010

Alan Johnson
SunOpta Aseptic
555 Mariposa Road
Modesto, CA 95354

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1101483

Dear Mr. Johnson:

Enclosed for your review and comment is the District's analysis of SunOpta Aseptic's application for an Authority to Construct for an increase in the CO emission limit for the boiler operating under District permit N-2236-2, at 555 Mariposa Road in Modesto, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Mark Schonhoff of Permit Services at (209) 557-6448.

Sincerely,



David Warner
Director of Permit Services

DW: MJS/cm

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



JUL 27 2010

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: N-1101483

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of SunOpta Aseptic's application for an Authority to Construct for an increase in the CO emission limit for the boiler operating under District permit N-2236-2, at 555 Mariposa Road in Modesto, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Mark Schonhoff of Permit Services at (209) 557-6448.

Sincerely,



David Warner
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Modesto Bee

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of an Authority to Construct permit to SunOpta Aseptic for an increase in the CO emission limit for the boiler operating under District permit N-2236-2, at 555 Mariposa Road in Modesto, CA.

The analysis of the regulatory basis for this proposed action, Project #N-1101483, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.**

Appendix A
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-2236-2-8

LEGAL OWNER OR OPERATOR: SUNOPTA ASEPTIC
MAILING ADDRESS: 555 MARIPOSA RD
MODESTO, CA 95354

LOCATION: 555 MARIPOSA RD
MODESTO, CA 95354

EQUIPMENT DESCRIPTION:

150.0 MMBTU/HR NEBRASKA MODEL NSG-99 NATURAL GAS FIRED BOILER WITH A COEN MODEL DAZ-36 BURNER, A BENZ AIR COMPU-NOX SYSTEM, A FLUE GAS RECIRCULATION SYSTEM AND A HALDOR TOPSOE MODEL BENZ AIR CATAMIZER SELECTIVE CATALYTIC REDUCTION SYSTEM (BOILER 1). MODIFICATION TO INCREASE THE CO EMISSIONS LIMIT FROM FROM 100 PPMVD @ 3% O2 TO 200 PPMVD @ 3% O2.

CONDITIONS

1. {3804} The permittee shall not emit more than one half of the major source threshold based on a rolling 12-month summary of actual emissions. [District Rule 2530, 6.1]
2. {3805} The permittee shall maintain a record of the rolling 12-month summary of actual emissions from permitted operations. This record shall be kept on site and made available to the District upon request. [District Rule 2530, 6.1]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {15} 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]
5. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. {2964} The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
7. Except during start-up and shutdown periods, the NOx emissions shall not exceed 5 ppmvd @ 3% O2 referenced as NO2 or 0.0062 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
8. During start-up and shutdown periods, the NOx emissions shall not exceed 30 ppmvd @ 3% O2 referenced as NO2. [District Rules 2201]
9. CO emissions shall not exceed 200 ppmvd @ 3% O2 or 0.074 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 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

DRAFT

DAVID WARNER, Director of Permit Services

N-2236-2-8 : Jul 28 2010 10:39AM - SCHOINHOM : Joint Inspection NOT Required

10. VOC emissions shall not exceed 0.0055 lb/MMBtu. [District Rule 2201]
11. SO_x emissions shall not exceed 0.00285 lb/MMBtu. [District Rules 2201 and 4801]
12. PM₁₀ emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]
13. Ammonia (NH₃) emissions shall not exceed 10.0 ppmvd @ 3% O₂. [District Rules 2201]
14. The duration of each startup and each shutdown shall not exceed 2.0 hours. The combined startup and shutdown duration shall not exceed 4.0 hours in any one day. [District Rules 2201, 4305, 4306 and 4320]
15. The total duration of startup and shutdown periods shall not exceed 200 hours in any one calendar year. [District Rule 2201]
16. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305, 4306 and 4320]
17. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 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 12 months. [District Rules 2201, 4305, 4306 and 4320]
18. All emissions measurements shall be made with the unit(s) 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]
19. {109} 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]
20. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
21. For emissions source testing, 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]
22. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
23. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 4305, 4306 and 4320]
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
25. NH₃ emissions for source test purposes shall be determined using BAAQMD method ST-1B. [District Rule 2201]
26. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
27. {4356} 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]
28. The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃ and O₂ at least once during each month in which source testing is not performed. NO_x, CO and O₂ monitoring shall be conducted utilizing either a portable analyzer or Compu-NO_x system that meets District specifications. NH₃ monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method at the time NO_x, CO and O₂ readings are taken. Monitoring shall not be required if unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit(s) unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

29. If the NO_x, CO or NH₃ concentrations, as measured by the portable analyzer or Compu-NO_x system and District approved ammonia monitoring equipment, exceed the permitted emission levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or ammonia monitoring equipment show that emissions continue to exceed the allowable levels after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]
30. All alternate monitoring parameter emission readings shall be taken with the units operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
31. The permittee shall maintain records of: (1) permit number of the unit(s) operating during monitoring, (2) the date and time of NO_x, CO, NH₃ and O₂ measurements, (3) the O₂ concentration in percent and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (4) make and model of exhaust gas analyzer, (5) exhaust gas analyzer calibration records, (6) the method of determining the NH₃ emission concentration, and (7) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
32. The permittee shall maintain records of startup and shutdown durations and the number of occurrences of each. [District Rules 2201, 4305, 4306 and 4320]
33. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

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Appendix B Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-2236-2-7

EXPIRATION DATE: 10/31/2010

EQUIPMENT DESCRIPTION:

150.0 MMBTU/HR NEBRASKA MODEL NSG-99 NATURAL GAS FIRED BOILER (BOILER #1) WITH A COEN MODEL DAZ-36 BURNER WITH A BENZ AIR COMPU-NOX SYSTEM AND FLUE GAS RECIRCULATION SYSTEM SERVED BY A HALDOR TOPSOE MODEL BENZ AIR CATAMIZER SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM.

PERMIT UNIT REQUIREMENTS

1. The permittee shall not emit more than one half of the major source threshold based on a rolling 12-month summary of actual emissions. [District Rule 2530, 6.1]
2. The permittee shall maintain a record of the rolling 12-month summary of actual emissions from permitted operations. This record shall be kept on site and made available to the District upon request. [District Rule 2530, 6.1]
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. 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]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201]
7. During start-up and shutdown periods, NOx emissions shall not exceed 30 ppmvd @ 3% O2 referenced as NO2. [District Rules 2201]
8. During start-up and shutdown periods, CO emissions shall not exceed 200 ppmvd @ 3% O2. [District Rule 2201]
9. The duration of each startup and each shutdown shall not exceed 2.0 hours. The total hours for startup and shutdown periods shall not exceed 4 hours in any one day. [District Rules 2201, 4305, 4306 and 4320]
10. The total duration of startup and shutdown periods shall not exceed 200 hours in any one calendar year. [District Rule 2201]
11. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during startup and shutdown. [District Rules 4305, 4306 and 4320]
12. Except during start-up and shutdown periods, NOx emissions shall not exceed 5 ppmvd @ 3% O2 referenced as NO2 or 0.0062 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
13. Except during start-up and shutdown periods, CO emissions shall not exceed 100 ppmvd @ 3% O2 or 0.074 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320]
14. VOC emissions shall not exceed 0.0055 lb/MMBtu. [District Rule 2201]
15. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rules 2201 and 4801]
16. PM10 emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]
17. Ammonia (NH3) emissions shall not exceed 10.0 ppmvd @ 3% O2. [District Rules 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

18. Source testing to measure NO_x and CO emissions from this unit shall be conducted at least once every 12 months. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every 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 12 months. [District Rules 2201, 4305, 4306 and 4320]
19. All emissions measurements shall be made with the unit(s) 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]
20. 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]
21. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]
22. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 4305, 4306 and 4320]
23. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
24. NH₃ emissions for source test purposes shall be determined using BAAQMD method ST-1B. [District Rule 2201]
25. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]
26. For emissions source testing, 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]
27. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
28. On and after January 1, 2014, the permittee shall submit an analysis showing the fuel's sulfur content at least once every year. Valid purchase contracts, supplier certifications, tariff sheets, or transportation contacts may be used to satisfy this requirement, provided they establish the fuel parameters mentioned above. [District Rule 4320]
29. The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃ and O₂ at least once during each month in which source testing is not performed. NO_x, CO and O₂ monitoring shall be conducted utilizing either a portable analyzer or Compu-NO_x system that meets District specifications. NH₃ monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method at the time NO_x, CO and O₂ readings are taken. Monitoring shall not be required if unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit(s) unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]
30. If the NO_x, CO or NH₃ concentrations, as measured by the portable analyzer or Compu-NO_x system and District approved ammonia monitoring equipment, exceed the permitted emission levels, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or ammonia monitoring equipment show that emissions continue to exceed the allowable levels after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE
These terms and conditions are part of the Facility-wide Permit to Operate.

31. All alternate monitoring parameter emission readings shall be taken with the units operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
32. The permittee shall maintain records of: (1) permit number of the unit(s) operating during monitoring, (2) the date and time of NO_x, CO, NH₃ and O₂ measurements, (3) the O₂ concentration in percent and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (4) make and model of exhaust gas analyzer, (5) exhaust gas analyzer calibration records, (6) the method of determining the NH₃ emission concentration, and (7) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rules 4305, 4306 and 4320]
33. The permittee shall maintain records of startup and shutdown durations and the number of occurrences of each. [District Rules 2201, 4305, 4306 and 4320]
34. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306 and 4320]

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

Appendix C
RMR and Ambient Air Quality Analysis Summaries

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Kai Chan – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: June 14, 2010
 Facility Name: Sunopta Aseptic
 Location: 555 Mariposa Road, Modesto
 Application #(s): N-2236-2-8
 Project #: N-1101483

A. RMR SUMMARY

RMR Summary			
Categories	Natural Gas Boiler (Unit 2-8)	Project Totals	Facility Totals
Prioritization Score	0.29*	0.29	0.29
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	No		

*Project passed on prioritization with a score less than 1; therefore, no further analysis was required.

B. RMR REPORT

I. Project Description

Technical Services received a request on May 18, 2010, to perform an Ambient Air Quality Analysis and a Risk Management Review for a 150.0 MMBtu/hr natural gas boiler with a SCR System.

II. Analysis

For the Risk Management Review, toxic emissions from the boiler were calculated using Ventura County emission factors for natural gas external combustion. Ammonia emissions from the SCR System were calculated and supplied by the processing engineer. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the proposed project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was required or performed for the Risk Management Review.

The following parameters were used for the review:

Analysis Parameters Unit 2-8			
Source Type	Point	Closest Receptor (m)	165.2
Stack Height (m)	21.34	Closest Receptor Type	Business
Inside Diameter (m)	1.52	Project Location Type	Rural
Gas Exit Temperature (K)	314	Stack Gas Velocity (m/s)	7.91

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x, and PM₁₀, as well as the RMR. The emission rates used for criteria pollutant modeling were 22.5 lb/hr CO, 1.68 lb/hr NO_x, 0.43 lb/hr SO_x, and 1.14 lb/hr PM₁₀.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*
 Values are in µg/m³

Unit 4-1	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass	Pass

*Results were taken from the attached PSD spreadsheets.

¹The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The criteria modeling runs indicate the emissions from the proposed equipment will not cause or significantly contribute to a violation of a State or National AAQS.

The prioritization score for the project was not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).


These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

Appendix D
Top-Down BACT Analysis

District Intranet

AIRnet

Search

 Home Advanced Search

[Per » B A C T » Bact Guideline.asp?category Level1=1&category Level2=1&category Level3=2&last Update=3 » 14 :](#)

[Back](#)[Details Page](#)

Best Available Control Technology (BACT) Guideline 1.1.2
Last Update: 3/14/2002

Boiler: > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings.**

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Natural gas fuel with LPG backup		
NOx	9.0 ppmvd @ 3% O2 (0.0108 lb/MMBtu/hr) Ultra-Low NOx main burner system and a natural gas or LPG fired igniter system (if the igniter system is used to heat the boiler at low fire).	9.0 ppmvd @ 3% O2 (0.0108 lb/MMBtu/hr) Selective Catalytic Reduction, Low Temperature Oxidizer, or equal and a < 30 ppmv NOx@ 3% O2 igniter system (if the igniter system is used to heat the boiler at low fire).	
PM10	Natural gas fuel with LPG backup		
SO	Natural gas fuel with LPG backup		
VOC	Natural gas fuel with LPG backup		

**** For the purpose of this determination, "small load swings" are defined as normal operational load fluctuations which are within the operational response range of an Ultra-Low NOx burner system(s).**

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source - Permit Specific BACT Determinations on [Details Page](#).

BACT analysis for CO:

The BACT guideline that applies to this unit (1.1.2) is currently under revision, but no changes are expected to the CO determination. The guideline currently identifies only the use of natural gas fuel with LPG back-up as a CO control measure.

CO is generated by partial combustion of the fuel.

Step 1 - Identify All Possible Control Technologies

1. Natural gas fuel with LPG back up – Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options:

The above listed control technology is technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control effectiveness

1. Natural gas fuel with LPG back up – Achieved in Practice

Step 4 - Cost Effectiveness Analysis:

The above listed item is achieved in practice and is required regardless of cost. A cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for CO will be natural gas fuel with LPG back up. The applicant is proposing the use of natural gas fuel as the primary fuel and is not proposing a back-up fuel. Therefore, BACT will be satisfied.